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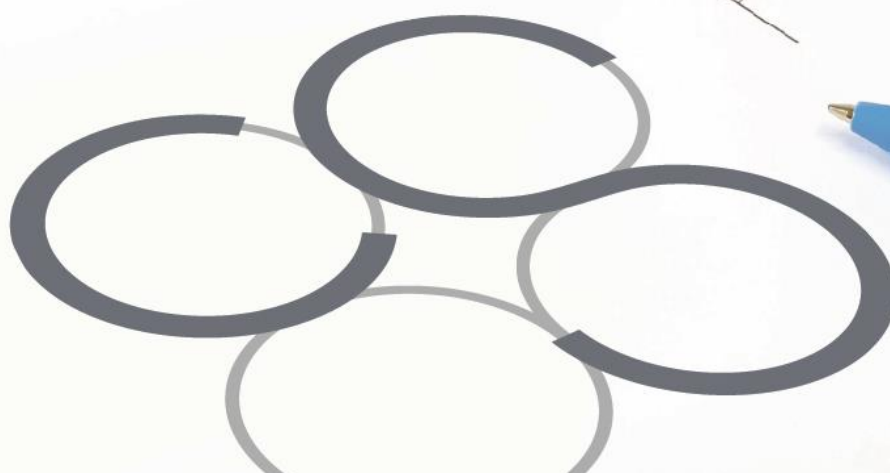
LIMERICK
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**Traffic and Transport Assessment
Block 5 and Block 6
Clongriffin, Dublin 13**

Client: The Land Development Agency

Job No. C216

August 2024



TRAFFIC AND TRANSPORT ASSESSMENT

BLOCK 5 AND BLOCK 6, CLONGRIFFIN, DUBLIN 13

CONTENTS

1.0	INTRODUCTION	1
2.0	SITE LOCATION, CONTEXT, AND PROPOSED DEVELOPMENT	6
3.0	RECEIVING ENVIRONMENT	13
4.0	TRIP GENERATION AND DISTRIBUTION	30
5.0	OPERATIONAL ASSESSMENT	45
6.0	PUBLIC TRANSPORT CAPACITY AND DEMAND	49
7.0	PARKING PROVISION	53
8.0	ACCESS, LAYOUT, PEDESTRIAN AND CYCLIST FACILITIES, SERVICING	61
9.0	FEEDBACK RECEIVED FROM PLANNING AUTHORITY	65
10.0	SUMMARY OF CONCLUSIONS	74

Appendix A: Traffic Survey Data

Appendix D: Junction Modelling Results

Appendix B: TRICS Data

Appendix E: Independent Quality Audit

Appendix C: Traffic Flow Matrices

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1.0 INTRODUCTION

Cronin & Sutton Consulting Engineers (CS Consulting) have been commissioned by the Land Development Agency (LDA) to prepare a Traffic and Transport Assessment (TTA) for a proposed standalone Large-scale Residential Development (LRD) at Block 5 and Block 6, Clongriffin, Dublin 13.

The TTA is to be read in conjunction with the engineering drawings and documents submitted by CS Consulting and with all other documentation submitted by other members of the project design team.

1.1 Applicable Reference Documents

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

- Dublin City Development Plan 2022-2028
- Sustainable Urban Housing: Design Standards for New Apartments (Guidelines for Planning Authorities) (2022)
- TII Project Appraisal Guidelines (2011)
- TII Traffic and Transport Assessment Guidelines (2014)
- DoT Traffic Signs Manual (2019-2024)
- Trip Rate Information Computer System (TRICS) database
- CSO 2022 Census data
- Tusla Quality and Regulatory Framework: Full Day Care Service and Part-Time Day Care Service (2018)
- Uisce Éireann Code of Practice for Water Infrastructure (2020)
- Design Manual for Urban Roads and Streets (DMURS) 2019
- IStructE Car Park Design Guide (2023)
- NDA Building for Everyone: A Universal Design Approach – External environment and approach (2012)
- Building Regulations 2010 Technical Guidance Document M



- NTA Cycle Design Manual (2023)
- Greater Dublin Area Cycle Network Plan (2022)

1.2 Objective

The principal objective of this report is to examine the proposed development's potential effects on the operation of the surrounding transportation infrastructure and nearby transport services. The report also examines the proposed development's vehicular access and servicing arrangements, car and bicycle parking provision, site layout, public transport availability, contribution to public transport demand, and facilities for pedestrians and cyclists.

1.3 Study Methodology

The methodology adopted in preparing this report corresponds to industry best practice and follows the guidance set out by Transport Infrastructure Ireland (TII) in its *Project Appraisal Guidelines* and its *Traffic and Transport Assessment Guidelines*. This methodology is summarised as follows:

- Receiving environment – A desktop study of the area surrounding the development site has been conducted, examining the nature of the surrounding existing transport infrastructure, the existing public transport services nearby, and proposed future improvements to transport infrastructure and services.
- Traffic flow data – 14-hour classified vehicular traffic count surveys were undertaken on Thursday the 11th of April 2024 by IDASO Ltd on behalf of CS Consulting. These surveys were conducted between 06:00 and 20:00 at 10no. existing road junction sites in Clongriffin and Belmayne.
- Trip generation – A multi-modal development trip generation assessment has been carried out using data extracted from the Trip

Rate Information Computer System (TRICS) database of traffic surveys, in conjunction with CSO national census data. This quantifies trips to and from the proposed development site, across several modes of transport.

- Vehicular trip distribution – Based upon existing traffic characteristics and the surrounding road network structure, appropriate distributions have been applied to vehicular trips to and from the proposed development.
- Junction operation assessment – Baseline year traffic flows and future year traffic forecasts were derived from surveyed traffic movements, using TII growth factors and development trip generation figures. These traffic flows were applied to a PICADY computer model of the existing junction of Park Avenue with Clongriffin Main Street, at which it was determined that the proposed development would result in the greatest proportion increases in total traffic movements. The performance of this junction was assessed for the development's proposed year of opening (2027), 5 years after opening (2032), and 15 years after opening (2042; the Design Year assessment).
- Public transport capacity and demand – The approximate capacity of existing public transport services close to the development site has been established, and the development's projected public transport demand at peak times has been calculated and compared to the existing capacity.
- Parking – Car, motorcycle, and bicycle parking provisions within the proposed development have been assessed with reference to the parking standards set out in the *Dublin City Development Plan 2022–2028* and other applicable guidance documents.



1.4 Local Authority Consultation

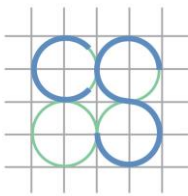
The applicant and project design team held a pre-planning meeting with Dublin City Council on the 8th of May, which was attended by representatives of the DCC Environment and Transportation Department. On the 18th of July 2024, following receipt of the DCC Opinion document (see Section 9.0), CS Consulting held a further consultation meeting with Messrs Seán Callaghan and John Carty of DCC's Transportation Planning Division, in which transportation-related items raised in this Opinion were discussed.

1.5 Structure of Report

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

- Section 2 describes the proposed development location, the existing land use, and the development proposals.
- Section 3 provides an overview of the existing local transportation infrastructure, existing traffic flows, and public transport services, as well as identifying relevant proposed improvements to local infrastructure and services.
- Sections 4 and 5 detail the analysis as described in the study methodology above. The analysis examines trip generation, trip distribution, and resulting junction operational performance with the development in place.
- Section 6 gives an estimate of nearby public transport service capacities and compares these to the development's predicted contribution to public transport demand.

- Section 7 assesses the proposed car and bicycle parking provisions for the development, with reference to Local Authority standards and national policy guidance.
- Section 8 examines the development's vehicular access arrangements, internal layout, pedestrian and cyclist facilities, and servicing arrangements.
- Section 9 summarises the transport-related points raised in the Local Authority's formal Opinion document, issued following Stage 2 of the LRD planning process, and gives responses to these.
- Section 10 presents the conclusions of the report.



2.0 SITE LOCATION, CONTEXT, AND PROPOSED DEVELOPMENT

2.1 Site Location

The application site is located within zoned development lands to the north-west of Clongriffin railway station in Dublin 13. It is bounded to the north and west by recently completed residential developments, and to the east and south by undeveloped lands. The site has a total area of approx. 2.2ha and is in the administrative jurisdiction of Dublin City Council (DCC), adjacent to the City Council's boundary with Fingal County Council.

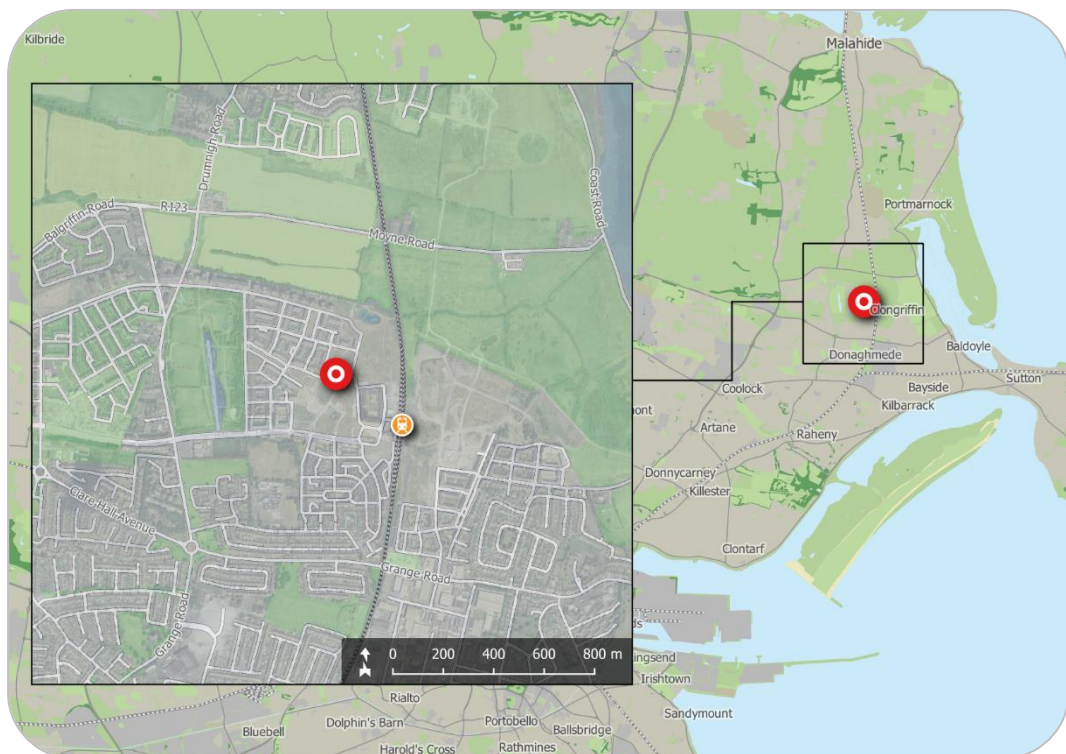


Figure 1 – Development site location
(sources: EPA, OSi, OSM Contributors, Google)

The location of the development site is shown in **Figure 1** above; its extents and environs are shown in more detail in **Figure 2**.

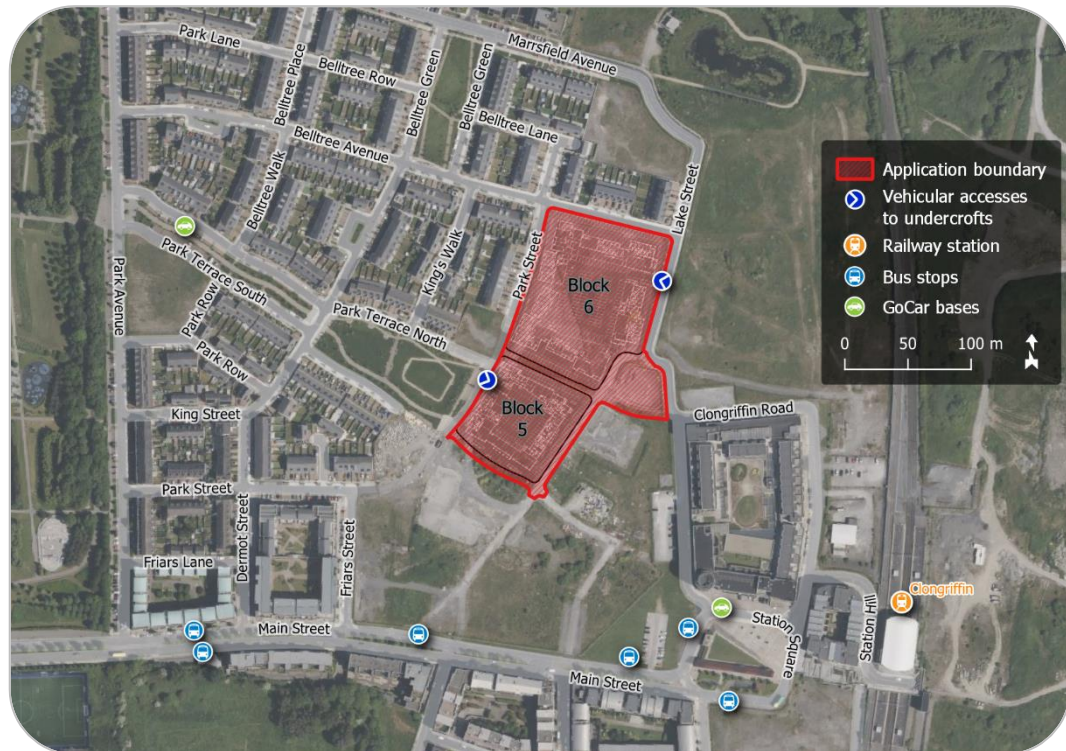


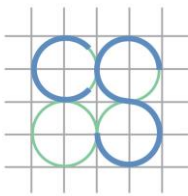
Figure 2 – Development site extents and environs
(sources: NTA, GoCar, OSi, OSM Contributors, Microsoft)

2.2 Previous Clongriffin Masterplan Development

Development of the wider Clongriffin area has thus far been carried out largely in accordance with a 10-year masterplan planning permission granted to Gannon Homes on the 27th of June 2003 under DCC Reg. Ref. 0132/02 (An Bord Pleanála ref. PL29N.131058). This provided for development consisting of a total of 3,576no. dwellings and 80,600m² of mixed retail, commercial, leisure, and community uses, associated car parking and engineering works, and provision for a new railway station.

These previously permitted development proposals (referred to hereafter as the 'masterplan parent permission') comprised:

- 838no. houses, 428no. duplex units, and 2,310no. apartments.
- Commercial uses including 73no. retail units, a supermarket, offices (44,036m²) and media-associated uses (8,386m²), 2no. banks, 2no.



restaurants, 3no. public houses, a 70-unit aparthotel, 2no. hot food take-aways, a cinemaplex (5,700m²), a gym-fitness centre, a pharmacy, 2no. off-licences, a betting office, motor showrooms, 3no. motor service units, and 19no. enterprise units (1,542m²).

- Medical facilities including a 25-bed day hospital with 2no. operating theatres, a doctor's/dentist's surgery, and a veterinary surgery.
- 4no. childcare facilities (875m² in total).
- A community centre and provision for a Garda Services unit.
- 3no. kerbside recycling centres.



Figure 3 – Approximate Clongriffin masterplan extents
(sources: OSi, OSM Contributors)

The masterplan parent permission also provided for the following associated infrastructure works:

- Services infrastructure including water supply, foul drainage, surface water drainage, and internal roads.

- A new access road to the development from the Hole in the Wall Road through Father Collins Park [Main Street] and a new east-west access road parallel to the Mayne River [Marrsfield Avenue].
- A public stairway and lift and escalator enclosure for the proposed over-track railway station.
- An underground town carpark and park and ride carpark (420no. spaces), taxi rank, drop off points, and a bus interchange associated with the railway station.
- Civic town squares and spaces, and a linear park along the south side of the Mayne River with attenuation pond.
- Site development works for reserved sites for future uses.

Much of this development has been constructed in the intervening years, whether under the original masterplan parent permission, amendments thereto, or separate planning permissions for individual sites within the masterplan area. Infrastructure so far completed includes:

- The 2no. access roads from the Hole in the Wall Road (Clongriffin Main Street and Marrsfield Avenue).
- The majority of the masterplan area's internal roads.
- Comprehensive internal foul drainage and surface water drainage networks, including a foul pumping station and a stormwater attenuation pond in the north-east corner of the masterplan area.
- A well-developed internal potable water supply network.

2.3 Existing Subject Site Condition

The subject development site itself is generally greenfield, although parts of it have been used for access and storage to facilitate construction on adjacent lands.

2.4 Description of Proposed Development

The proposed development will consist of the construction of two Blocks ranging in height between 3- to 7-storeys to provide 408 no. apartments (comprising 180 x 1 bed; 226 x 2 bed and 2 x 3 bed units) together with ancillary car- ; bicycle and motorcycle parking provision. Ancillary communal amenity spaces are provided at podium level within the respective courtyards and at 4th floor roof terrace level.

At ground floor level provision is made for 1,209 sq.m Community / Arts and Cultural floorspace and a childcare facility of 413 sq.m (with an ancillary play area of 125 sq.m). Other facilities provided at ground floor level include refuse / bin stores; energy centre, plant rooms and integrated ESB substations and associated switch rooms. On-street loading bays are provided along Lake Street and Dargan Street.

Other works include the provision of road infrastructure and green infrastructure (in the form of a public open space / landscaped pocket park extending to 1,433 sq.m in area) together with street planting and public lighting throughout plus all associated engineering and site works (including an external multi-functional community / arts and cultural events space of 315 sq.m along Market Street and all underground services and utility connections) necessary to serve the proposed development.

2.5 Previously Permitted Developments on Subject Site

The present application is for a standalone development, comprising 2no. apartment blocks only, and does not seek to amend or derive from any extant planning permission. It is however relevant to note that 2no. apartment blocks of very similar design (also referred to as Block 5 and Block 6) are currently permitted within the area subject to this application. These permissions have not been commenced, nor will they be. These permissions

expire in March 2025 and the proposed application for development is to replace these permissions.



Figure 4 – Previously permitted developments within application boundary
(sources: CCK Architects, OSM Contributors, Microsoft)

These permissions were granted on 13/12/2019 under separate but concurrent Strategic Housing Development (SHD) applications:

- Block 5 (138no. apartments) as part of the 500-unit SHD permitted under ABP ref. 305319, which also included blocks 4 and 14.
- Block 6 (270no. apartments) as part of the 1,030-unit SHD permitted under ABP ref. 305316, which also included blocks 8, 11, 17, 25, 26, 27, 28, and 29.



As permitted under ABP ref. 305319, Block 5 would comprise:

- 52no. 1-bedroom apartments.
- 83no. 2-bedroom apartments.
- 3no. 3-bedroom apartments.
- 4no. retail units with a combined GFA of 393m².
- 42no. on-street car parking spaces on Park Street, Dargan Street, and Lake Street.
- 54no. internal (undercroft) car parking spaces, with vehicular access from Park Street to the west.
- 194no. secure long term bicycle parking spaces.
- 30no. publicly accessible short stay bicycle parking spaces.

As permitted under ABP ref. 305316, Block 6 would comprise:

- 123no. 1-bedroom apartments.
- 147no. 2-bedroom apartments.
- A crèche with internal GFA of 418m², providing 59no. childcare spaces.
- 65no. on-street car parking spaces on Belltree Avenue, Lake Street, Dargan Street, and Park Street.
- 119no. internal (undercroft) car parking spaces, with vehicular access from Lake Street to the east.
- 550no. secure long term bicycle parking spaces.
- 22no. publicly accessible short stay bicycle parking spaces.

3.0 RECEIVING ENVIRONMENT

3.1 Clongriffin Masterplan Road Network

As previously described (see sub-section **2.2**), development of the wider Clongriffin area to date has been carried out generally in accordance with a masterplan planning permission granted under DCC Reg. Ref. 0132/02 (An Bord Pleanála ref. PL29N.131058). This masterplan parent permission provided for a comprehensive network of internal roads for the masterplan area, with two principal link streets (Main Street and Marrsfield Avenue) that connect this network to the Hole in the Wall Road, to the west.



Figure 5 – Clongriffin masterplan road network (northern section)
(sources: CCK Architects, OSM Contributors, Microsoft)



As shown in **Figure 5**, the majority of this Clongriffin road network has already been constructed, including streets on the northern, eastern, and western sides of Block 6 (Belltree Avenue, Lake Street, and Park Street). As part of the proposed development:

- Dargan Street will be constructed, connecting Park Street to Clongriffin Road and running between Block 5 and Block 6.
- Lake Street will be extended southward along the eastern side of Block 5, as far as its junction with Market Street.
- The initial section of Market Street will be constructed, extending from Park Street along the southern side of Block 5 as far as its junction with Lake Street.

Prior to construction of the proposed development, the remaining section of Park Street will also be completed, running along the western side of Block 5, as permitted under Reg. Ref. 0132/02. These works are to be carried by a third party under a condition of the land transfer by which the applicant acquired the development site.

The existing Clongriffin internal road network comprises local streets with carriageway widths of between 5.0m and 6.0m. The majority of car parking is within dwelling curtilages, with some parallel on-street parking spaces. Extensive on-street parking is however provided along Marrsfield Avenue, Park Avenue, and Park Terrace. Raised footpaths are in place along all completed streets, with a minimum width of 2.0m generally. On-road cycle lanes are in place on Marrsfield Avenue only, terminating where this becomes Lake Street.

3.2 Main Street Extension

Clongriffin Main Street was initially constructed between Station Square and the Hole in the Wall Road, extending only some 200m westward beyond the Hole in the Wall Road. In the context of wider development in the

Balgriffin area, Main Street is currently being extended some 800m further westward, to connect with the Malahide Road. This creates new 4-arm junctions on the Malahide Road and Belmayne Avenue, which have been constructed but are not yet in full operation.



Figure 6 – Clongriffin Main Street extension
(sources: OSi, OSM Contributors, Microsoft)

3.3 Existing Local Vehicular Traffic Flows

Full turning movement classified traffic counts were carried out by IDASO Ltd, on behalf of CS Consulting, over a 14-hour period (06:00–20:00) on Thursday the 11th of April 2024. This traffic survey encompassed the following 10no. existing junction sites (see **Figure 7**):

- J1. R107 / R139
(4-arm signal-controlled junction)
- J2. R107 Malahide Road / Mayne River Avenue
(3-arm priority-controlled junction with 4th arm under construction)
- J3. R107 Malahide Road / Belmayne



(3-arm signal-controlled junction)

J4. R139 Clarehall Avenue / Belmayne Avenue / Clare Hall

(4-arm roundabout)

J5. Belmayne Avenue / Main Street

(3-arm signal-controlled junction with 4th arm under construction)

J6. R139 / R809 / Hole in the Wall Road

(4-arm roundabout)

J7. Hole in the Wall Road / Main Street

(4-arm signal-controlled junction)

J8. Hole in the Wall Road / Clongriffin Avenue / Marrsfield Avenue

(4-arm signal-controlled junction)

J9. Main Street / Park Avenue

(3-arm priority-controlled junction)

J10. Marrsfield Avenue / Park Avenue

(3-arm priority-controlled junction)

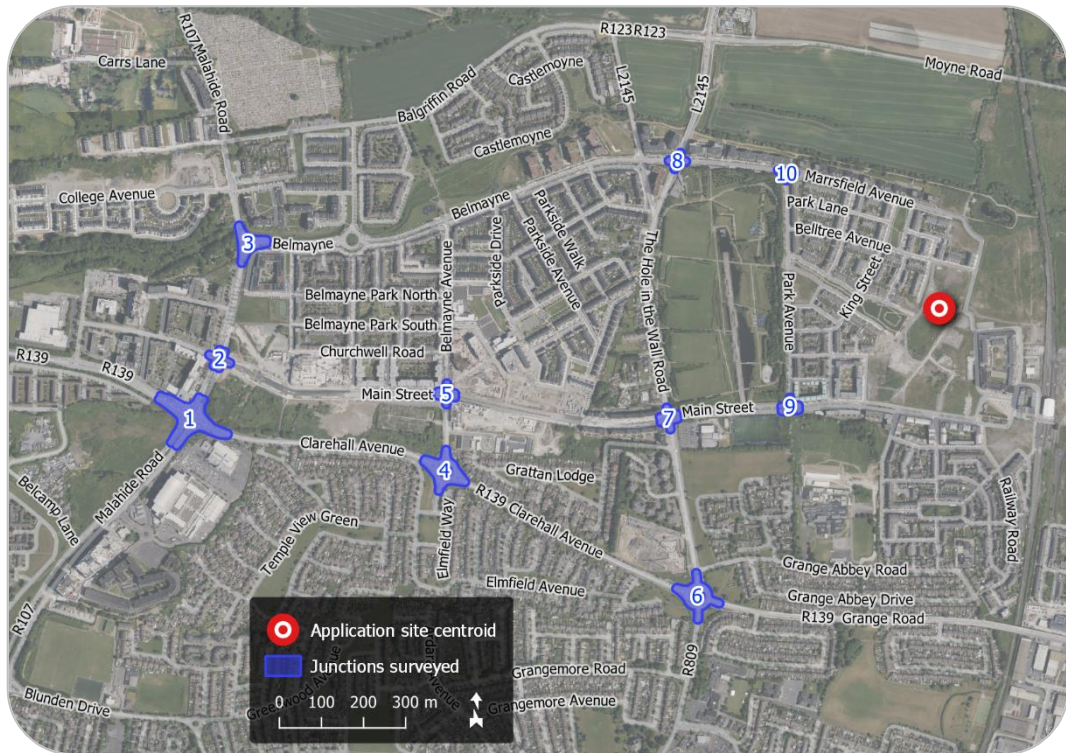


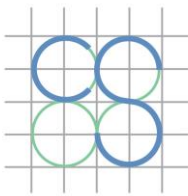
Figure 7 – Traffic survey sites
(sources: OSM Contributors, Microsoft)

The peak hour traffic flows across all ten survey sites were found to occur between 08:00 and 09:00 (AM peak hour) and between 17:00 and 18:00 (PM peak hour).

Raw data from this traffic survey are provided in **Appendix A**. The recorded traffic movements at each of the surveyed junctions during the peak hours have been isolated from the count data and converted to Passenger Car Units. TII expansion factors have also been used to derive the Annual Average Daily Traffic (AADT) total traffic movements at each surveyed junction. Both the weekday peak hour totals and the AADT totals are given in **Table 1**.

Table 1 – Total Traffic Movements at Surveyed Junctions

Junction	Weekday Peak Hours	AADT
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Ref.	AM Peak (08:00-09:00)	PM Peak (17:00-18:00)	Light Vehicles	Heavy Vehicles	TOTAL
J1	4,528	4,676	56,404	3,076	59,480
J2	2,079	2,010	23,685	967	24,652
J3	2,200	2,159	24,258	1,006	25,264
J4	2,706	2,637	30,822	1,490	32,312
J5	698	597	5,811	342	6,153
J6	3,299	3,329	38,755	1,555	40,310
J7	1,023	1,287	13,034	412	13,446
J8	1,310	1,155	12,009	193	12,202
J9	516	628	5,797	276	6,073
J10	420	308	3,010	39	3,049

3.4 Pedestrian Accessibility

Figure 8 shows walking times to and from the development site, based on an average walking speed of 4.5km/h. The street network used for this assessment assumes completion of the street elements to be constructed as part of the proposed development (sections of Park Street, Dargan Street, Lake Street, and Market Street, as described in sub-section 3.1) but does not include the few remaining elements of the Clongriffin masterplan road network that are outside the scope of this application.

Clongriffin railway station is within a 5-minute walk of the development site, as are bus stops at Station Square and along Clongriffin Main Street. The section of Clongriffin Main Street that is within a 5-minute walk is home to several medical, commercial, and food/beverage premises, including a medical centre, a pharmacy, and a vet. The entirety of Father Collins Park is within a 10-minute walk, and the Donaghmede Shopping Centre is just over 20 minutes' walk away.

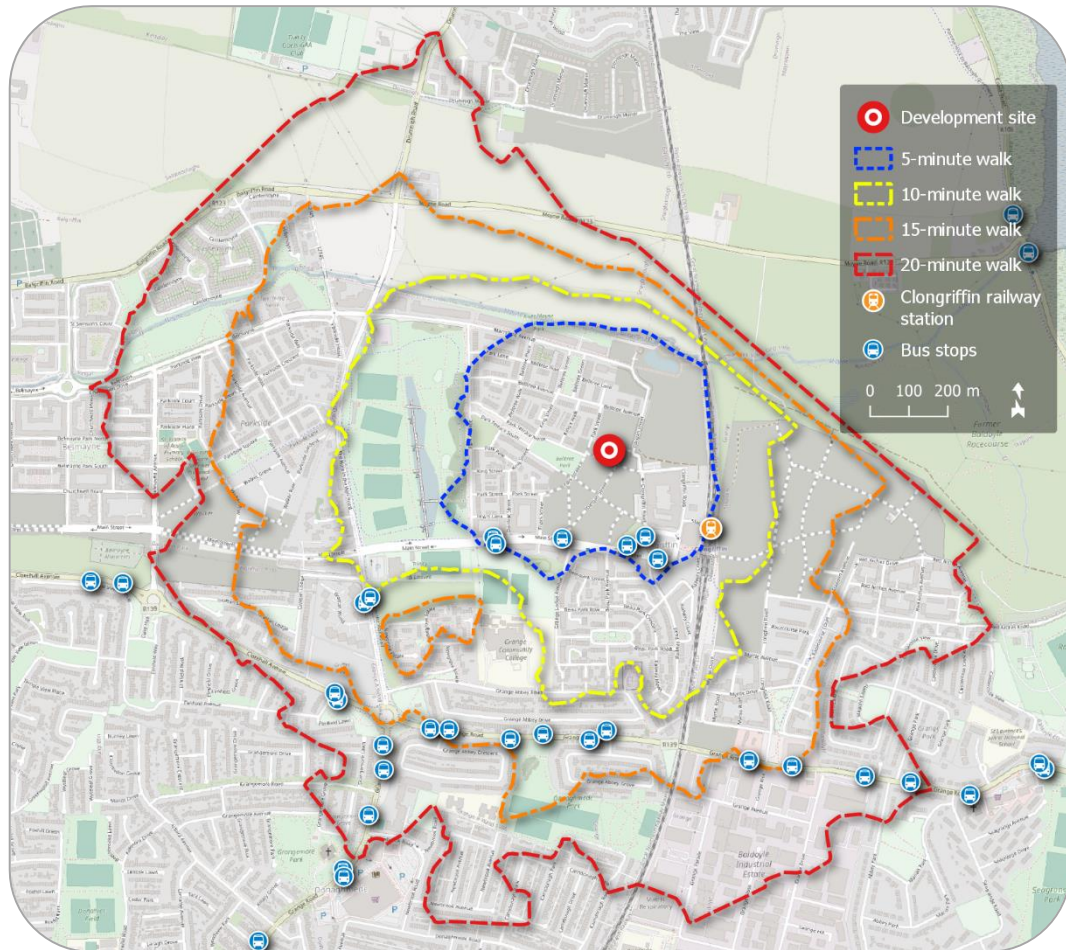


Figure 8 – Walking times to/from development site
(sources: NTA, OSi, OSM Contributors)

3.5 Bicycle Journey Times

Figure 8 shows bicycle journey times to and from the development site, based on an average cycling speed of 16km/h.

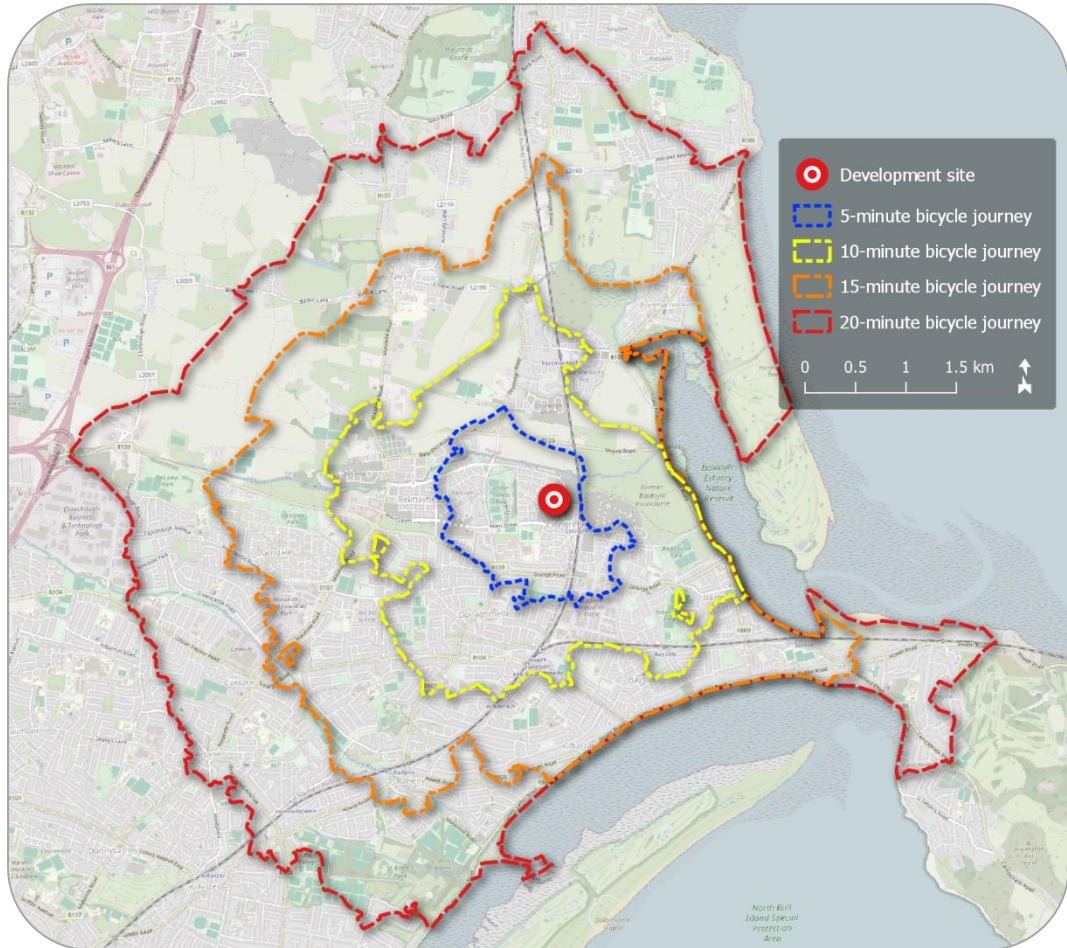
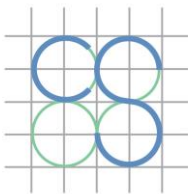


Figure 9 – Bicycle journey times to/from development site
(sources: NTA, OSi, OSM Contributors)

3.6 Existing Public Transport Services

Bus stops at Station Square and along Clongriffin Main Street, within a 5-minute walk of the development site, are served by Dublin Bus route no. 15. This is a high-frequency bus route that operates between Clongriffin and Ballycullen in south-west Dublin, via Dublin city centre.

Table 2 – Existing Adjacent Bus Service

Route No.	Operator	Destination	Weekday Services	Typical Peak Hour Interval
15	Dublin Bus	Ballycullen Road	120 (approx.)	4 min
		Clongriffin	120 (approx.)	10 min

Clongriffin railway station is approximately 300m south-east of the development site, within a 5-minute walk. This station is served principally by Dublin Area Rapid Transit (DART) trains operating between Malahide and Bray or Greystones, via Dublin city centre. Commuter rail services on the Drogheda/Dundalk to Dublin/Bray route also call at this station, though less frequently.

Table 3 – Rail Services at Clongriffin Station

Service Type	Direction (Destinations)	Weekday Services	Typical Peak Hour Interval
Dublin Area Rapid Transit (DART)	Northbound (Malahide)	47	15 min
	Southbound (Bray/Greystones via Dublin)	47	20 min
Commuter Rail	Northbound (Drogheda/Dundalk)	3	n/a
	Southbound (Dublin/Bray)	2	n/a

Figure 10 shows the reach of public transport journeys from the development site, by total journey time, based on a weekday departure time of 08:00. These journey times include service interchanges, as well as the time necessary to walk to and between public transport stops.

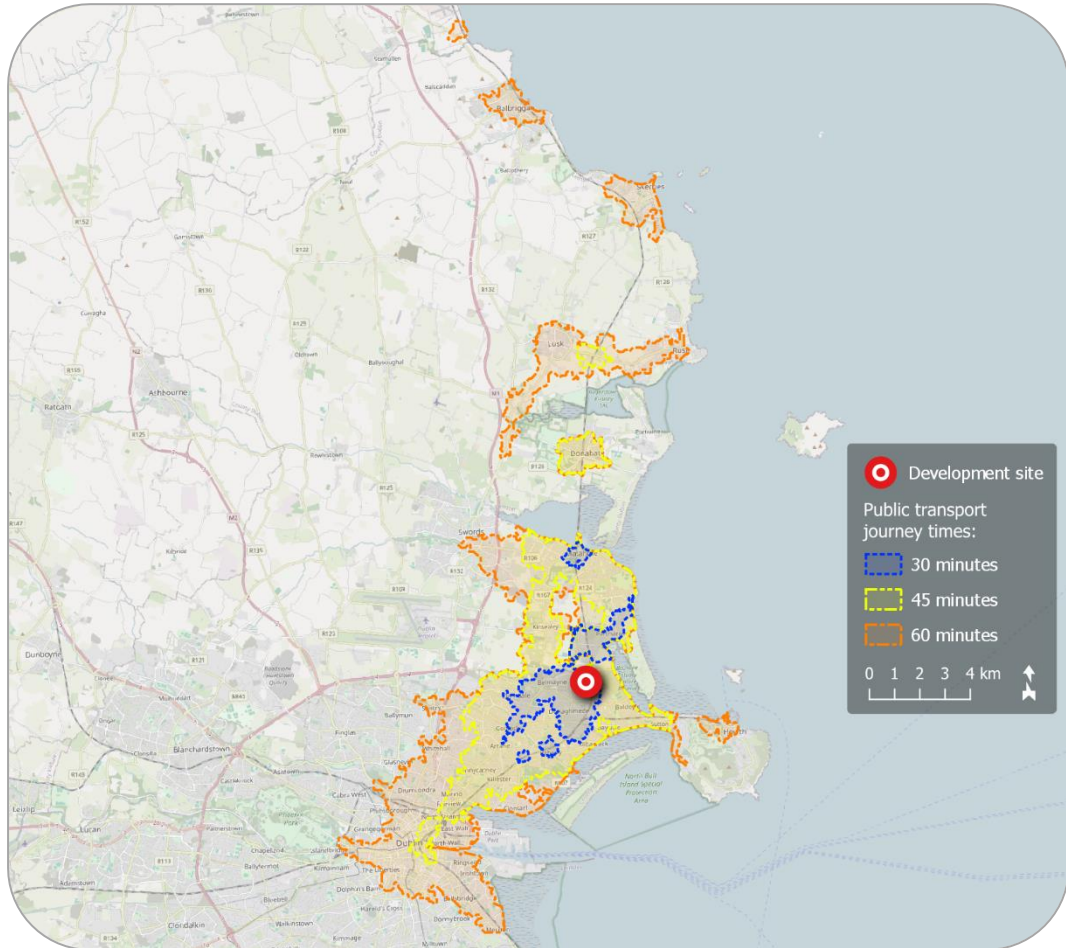
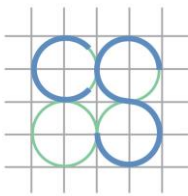


Figure 10 – Public transport journey times
(sources: TravelTime platform, OSM Contributors)

3.7 Proposed Transport Infrastructure and Service Improvements

3.7.1 BusConnects

The BusConnects Dublin Area Revised Bus Network initiative, which is currently undergoing staged implementation, seeks to improve the overall convenience and efficiency of the city's bus routes. As part of this reorganisation, the existing Dublin Bus route no. 15 – which currently serves stops at Station Square and on Clongriffin Main Street, in close proximity to the development site – is to be discontinued. Four new bus routes are instead to run to and from Clongriffin Station: the D1 and D3 arterial routes, passing through Dublin city centre, and the

N8 and L80 orbital/local routes to Blanchardstown Shopping Centre and Dublin City University.

In addition to these, it is proposed to extend the H1 arterial route, which currently runs between Dublin City Centre and Baldoyle, as far as Clongriffin Station. This is however contingent on the completion of a bus ramp over the railway line to provide a direct road connection between Station Square and Red Arches Road.



Figure 11 – BusConnects network redesign – Clarehall/Donaghmede
(background map source: NTA)

The other principal component of the BusConnects project comprises the Core Bus Corridors, one of which is to be implemented between Clongriffin Station and Dublin city centre. This will improve bus infrastructure and reinforce bus priority along this route, with the aim of reducing bus journey times and improving service reliability. In the immediate vicinity of the development site, this Core Bus Corridor (no.

1) is to run along Clongriffin Main Street and will for the most part make use of existing bus lanes.

Table 4 – Adjacent Bus Services Proposed Under BusConnects

Route No.	Route Type	Destination	Weekday Services	Typical Peak Hour Interval
D1	Spine (arterial)	Grange Castle	72	15 min
		Clongriffin	72	15 min
D3	Spine (arterial)	Clondalkin	72	15 min
		Clongriffin	72	15 min
N8	Orbital	Blanchardstown S.C.	36	30 min
		Clongriffin	36	30 min
L80	Local	Dublin City University	32	20 min
		Clongriffin	32	20 min
H1 *	Spine (arterial)	City Centre	72	15 min
		Clongriffin	72	15 min

3.7.2 DART+

DART+ is the NTA and Iarnród Éireann's programme for the expansion and modernisation of Dublin Area Rapid Transit (DART) medium rail services. This will extend the DART network from its current 50km in length to over 150km.

The DART+ programme involves the purchase of a new train fleet, as well as rail infrastructure improvements along the following network sections:

- Maynooth and M3 Parkway to the City Centre (DART+ West)
- Hazelhatch & Celbridge to the City Centre (DART+ South West)
- Drogheda to the City Centre (DART+ Coastal North)
- Greystones to the City Centre (DART+ Coastal South)

* Subject to extension of existing H1 service via Red Arches Road to Clongriffin Station.

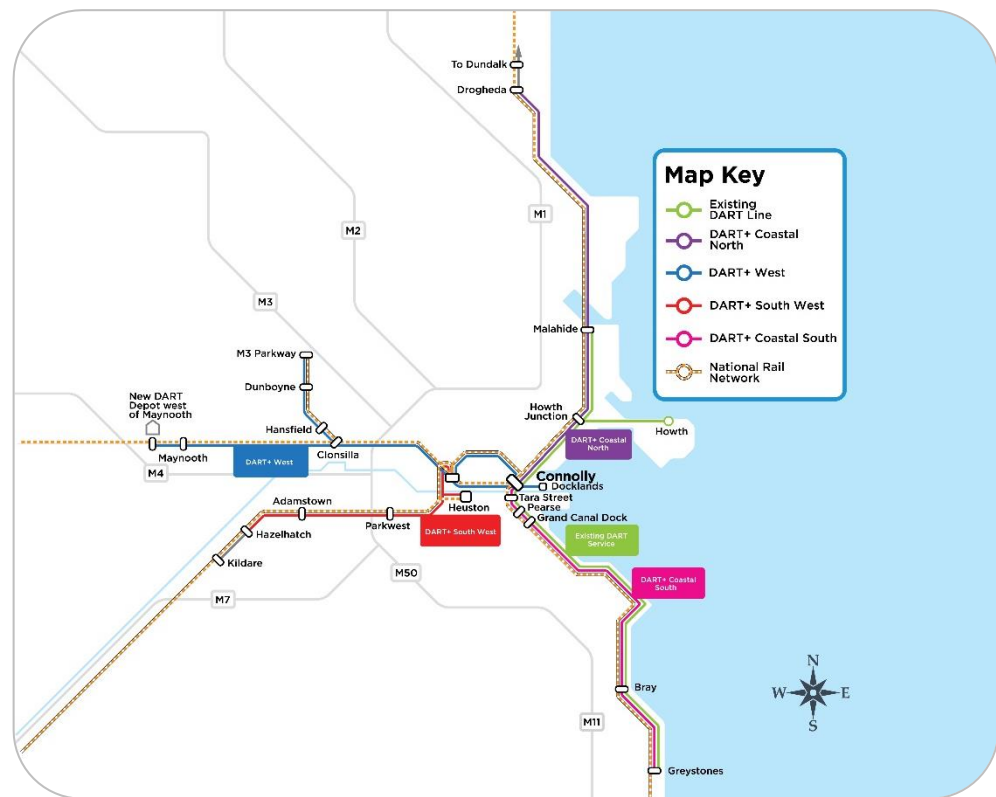


Figure 12 – DART+ proposal extents
(source: NTA / Iarnród Éireann)

The DART+ Coastal North Project will provide an extension of the existing electrified rail network from Malahide to Drogheda MacBride station, and will provide the infrastructure to facilitate increased rail capacity on the Northern Line between Dublin City Centre and Drogheda MacBride Station, including the Howth Branch. DART+ Coastal North will increase peak period train frequency between Drogheda and Dublin City Centre from 3.7 trains per hour to 8 trains per hour, and increase passenger capacity from 4,200 per hour to 8,900 per hour. Project elements also include track modifications at various locations and a new platform at Drogheda MacBride Station.

As additional rolling stock is required to support the planned expansion in rail services, provision is made for the purchase of up to 750 electric and battery/electric vehicles over the next decade.

Delivery of the first order of 95 cars is expected in 2024, with these entering service in 2025.

DART+ Coastal North remains in the later stages of the concept phase; this will be followed by the preliminary design phase and statutory planning approval phases. When the necessary permissions have been granted, the detailed design and procurement phases will be undertaken. Pending further approvals, the contract award for the construction phase is anticipated to be in 2025/26.

3.7.3 Greater Dublin Area Cycle Network Plan

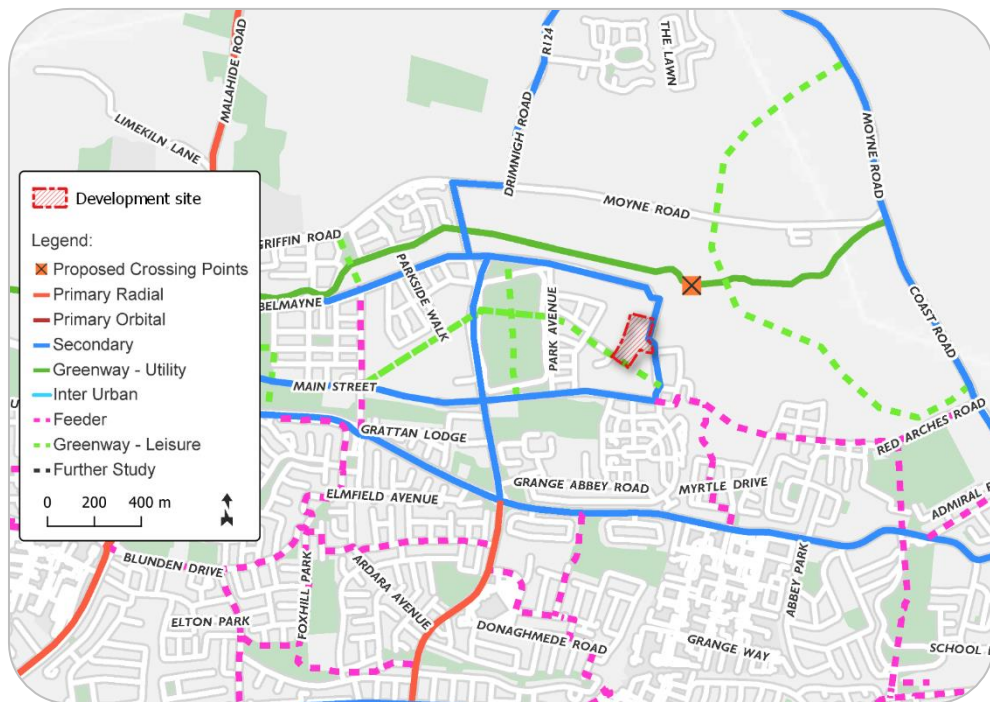


Figure 13 – GDA Cycle Network Plan map extract
(background map source: NTA)

As part of the Greater Dublin Area Cycle Network Plan, administered by the National Transport Authority, it is proposed that secondary cycle routes be implemented along the full length of Clongriffin Main Street, as well as along the Hole in the Wall Road, Marrsfield Avenue, Clongriffin Road, and Lake Street. A feeder route is proposed along Red Arches Road, and a utility greenway along the Mayne River. A

leisure greenway is shown traversing the subject lands from west to east.

No information is yet publicly available on the proposed design or delivery timeframe of these cycle infrastructure objectives.

3.8 Existing Shared Transport Facilities

The area surrounding the development site is well served by the GoCar, Yukō, and Driveyou commercial car-share services (see **Figure 14**):

- 2no. GoCar bases, with a total of 5no. vehicles, are located within a 5-minute walk of the development site. A further 4no. GoCar vehicles are located within a 10-minute walk.
- One Yukō base is located within a 10-minute walk of the site, and another within a 15-minute walk.
- One Driveyou base is located within a 15-minute walk of the site.

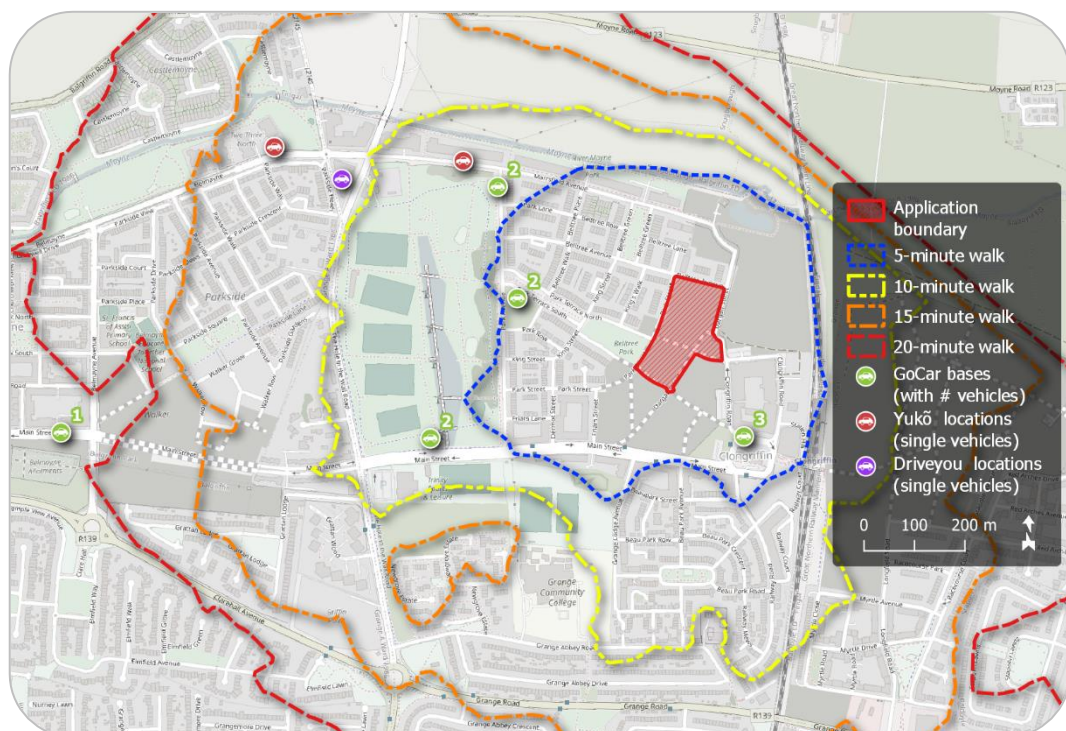


Figure 14 – Existing car-share service locations
(sources: GoCar, Toyota, Driveyou, OSM Contributors)



Note:

The above car sharing locations represent the most up to date information available on the publicly accessible GoCar, Yukō, and DriveYou bases at the time of preparing this report. These base locations are subject to periodic alteration by the scheme operators, in response to usage demand and to traffic management considerations.

3.9 Nearby Committed Developments

A review of extant planning permissions has identified no nearby committed developments that are of a nature and scale likely to significantly influence vehicular traffic flows on the local road network in the immediate vicinity of the subject development site.

3.10 Future Year Background Traffic Growth

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

- 2024 Baseline year (existing conditions)
- 2027 Opening year
- 2032 5 years after opening
- 2042 Design year (15 years after opening)

Unit 5.3 of the TII *Project Appraisal Guidelines* (PE-PAG-02017 *Travel Demand Projections*) shall be used to apply growth factors to the 2024 surveyed background traffic flows, to obtain traffic flows for future year assessment scenarios. The applicable TII annual growth rates are given in **Table 5**, and the resultant cumulative growth in background traffic for each assessment year is given in **Table 6**.

Table 5 – TII Central Growth Rates

NTpM † Zone No.	Vehicle Type	Annual Background Traffic Growth Factor		
		2016-2030	2030-2040	2040-2050
8612	Light / PCU	1.0247	1.0092	1.0038
	Heavy	1.0549	1.0230	1.0197

Table 6 – Calculated Background Traffic Growth ‡

Vehicle Type	2027 Year of opening	2032 Opening year +5	2042 Opening year +15
Light / PCU	+ 7.6%	+ 17.9%	+ 27.8%
Heavy	+ 17.4%	+ 44.2%	+ 79.9%

† TII/NTA National Transport Model

‡ Cumulative percentage increases over 2024 traffic levels.

4.0 TRIP GENERATION AND DISTRIBUTION

4.1 Modal Split

To establish indicative baseline modal splits for residents of (and visitors to) the development, reference has been made to CSO data derived from the 2022 census, in the form of Small Area Population Statistics (SAPS) that give modal splits for residents' trips to places of work or study. For the purposes of the present assessment, these splits are assumed to apply also to visitors. The development site is within Census Small Area (SA) no. 268072013/01 (see **Figure 15**), which is bordered by 9no. other SAs. The aggregate census modal splits for these 10no. SAs, which have a total combined census population of 2,542 people, are given in **Table 7**.

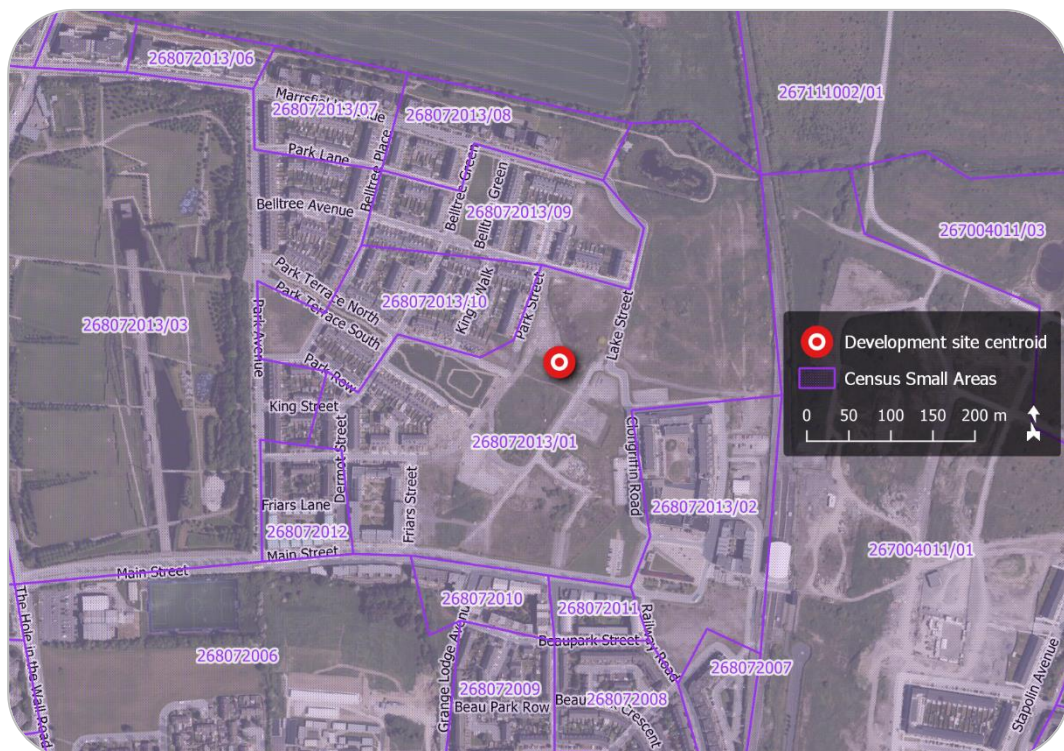


Figure 15 – Census Small Areas (SAs)
(sources: CSO, Microsoft)

Table 7 – CSO 2022 Census Data – Existing Modal Splits

Transport Mode	Local Area Census Modal Shares §
Driving a Car or Van	29%
Passenger in a Car	16%
Bicycle	6%
Motorcycle	1%
Bus	14%
Train or Tram	21%
Walking	13%

It should be noted that these modal shares refer to the greatest proportion (by distance) of each journey. A bus journey, for example, is likely to involve walking or cycling at one or both ends of the trip but will not be classified as a walking or cycling journey.

4.2 Development Resident and Visitor Person-Trip Generation

The proposed development comprises 408no. apartment units with a total of 638no. bedrooms, distributed as follows:

- 138no. dwellings (with 220no. bedrooms) in Block 5.
- 270no. dwellings (with 418no. bedrooms) in Block 6.

Trip generation factors from the Trip Rate Information Computer System (TRICS) database have been used to predict the total trip generation to and from the proposed development (across all modes) for the weekday AM and PM peak hour periods, as well as for an average full day (AADT). The TRICS survey database is maintained by a consortium of English County Councils but covers the entirety of Great Britain and Ireland. Full details of the TRICS information used are provided in **Appendix B**.

§ Excluding 'not stated' responses and those who work mainly from home.



The TRICS sub-category '03 Residential / C - Flats Privately Owned' has been employed, being the most appropriate to the proposed development. This is described in the TRICS land use category definitions as follows:

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

The TRICS trip rates for the proposed development have been selected from the above category, restricted insofar as possible to similar locations, and further refined with reference to 2022 CSO census data on the basis of:

- The population within 1 mile of the development site (26,000 approx.).
- The population within 5 miles of the development site (200,000 approx.).
- The mean car ownership rate within 5 miles of the development site (1.2 cars per household).

The selected TRICS person-trip rates are given in **Table 8**. These account for all trips to and from the proposed development's dwellings, the majority of which shall be made by residents and their visitors .

Table 8 – TRICS Person-Trip Generation Rates for Apartments

Time Period	Arrivals per bedroom	Departures per bedroom
Weekday AM Peak (08:00-09:00)	0.089	0.383
Weekday PM Peak (17:00-18:00)	0.281	0.123
AADT** (24-hour period)	2.110	2.110

** Annual Average Daily Traffic

The total residential person-trip generation figures obtained for the proposed development are given in **Table 9**.

Table 9 – Development Residential Person-Trip Generation from TRICS

Time Period	Arrivals	Departures	Total Trips
Block 5			
Weekday AM Peak	20	84	104
Weekday PM Peak	62	27	89
AADT (24hr)	464	464	928
Block 6			
Weekday AM Peak	37	160	197
Weekday PM Peak	117	51	168
AADT (24hr)	882	882	1764
Overall Development			
Weekday AM Peak	57	244	301
Weekday PM Peak	179	78	257
AADT (24hr)	1346	1346	2692

4.3 Development Resident and Visitor Trips by Mode

The local modal splits given in **Table 7** have been applied to all weekday peak hour and AADT person-trips to be generated by the proposed development, as given in **Table 9**. This produces the distribution of development trips across transport modes that is presented in **Table 10**.



Table 10 – Development Trip Generation by Mode

Transport Mode	Direction and Time Period					
	Arrivals			Departures		
	Weekday AM Peak	Weekday PM Peak	AADT	Weekday AM Peak	Weekday PM Peak	AADT
Block 5						
Driving a Car or Van	6	18	135	24	8	135
Passenger in a Car/Van/Taxi	3	10	74	13	4	74
Bicycle	1	4	28	5	2	28
Motorcycle	0	1	5	1	0	5
Bus	3	9	65	12	4	65
Train or Tram	4	13	97	18	6	97
Walking	3	8	60	11	4	60
TOTAL	20	63	464	84	28	464
Block 6						
Driving a Car or Van	11	34	256	46	15	256
Passenger in a Car/Van/Taxi	6	19	141	26	8	141
Bicycle	2	7	53	10	3	53
Motorcycle	0	1	9	2	1	9
Bus	5	16	123	22	7	123
Train or Tram	8	25	185	34	11	185
Walking	5	15	115	21	7	115
TOTAL	37	117	882	161	52	882
Overall Development						
Driving a Car or Van	17	52	391	70	23	391
Passenger in a Car/Van/Taxi	9	29	215	39	12	215
Bicycle	3	11	81	15	5	81
Motorcycle	0	2	14	3	1	14
Bus	8	25	188	34	11	188
Train or Tram	12	38	282	52	17	282
Walking	8	23	175	32	11	175
TOTAL	57	180	1346	245	80	1346

4.4 Development Residential Servicing Vehicle Trip Generation

In addition to trips made to and from the site by residents and visitors, the proposed development shall also generate vehicular trips by servicing vehicles. These shall be required for operations such as deliveries, maintenance works, and refuse collection, and shall be made by either Ordinary Goods Vehicles (rigid or articulated lorries over 7.5t) or Light Goods Vehicles (vans).

To separate these trips from those made by development residents and visitors, specific OGV and LGV trip generation rates have been sourced from the TRICS database (also from the sub-category '03 Residential / C - Flats Privately Owned'); these are given in **Table 11**.

Table 11 – TRICS Residential Servicing Vehicle Trip Generation Rates

Time Period	Arrivals per bedroom		Departures per bedroom	
	OGVs	LGVs	OGVs	LGVs
Weekday AM Peak (08:00-09:00)	0.000	0.005	0.000	0.008
Weekday PM Peak (17:00-18:00)	0.000	0.003	0.002	0.000
AADT (24-hour period)	0.002	0.069	0.002	0.069

The development's resultant predicted servicing vehicle trip generation is given in **Table 12**.

It must be noted that the total person-trip generation figures already established for the development's residential component (**Table 9**) technically already include residential servicing trips, although these have not been removed from the trip numbers calculated for residents and visitors. It is further noted that some of the LGV trips accounted for by the TRICS rates under this vehicle category will in fact be made by residents or visitors driving their own vans, rather than representing additional servicing trips. As such, the trip generation methodology employed will very slightly overestimate the number of servicing vehicle trips to and from the

proposed development. This effect does however contribute to a more robust traffic assessment of the development and has therefore not been corrected for.

Table 12 – Development Residential Servicing Trips from TRICS

Time Period	Arrivals		Departures		Total Trips	
	OGVs	LGVs	OGVs	LGVs	OGVs	LGVs
Block 5						
Weekday AM Peak	0	1	0	2	0	3
Weekday PM Peak	0	1	0	0	0	1
AADT (24hr)	0	15	0	15	0	30
Block 6						
Weekday AM Peak	0	2	0	3	0	5
Weekday PM Peak	0	1	1	0	1	1
AADT (24hr)	1	29	1	29	2	58
Overall Development						
Weekday AM Peak	0	3	0	5	0	8
Weekday PM Peak	0	2	1	0	1	2
AADT (24hr)	1	44	1	44	2	88

4.5 Crèche Vehicular Trip Generation

In addition to the 408no. residential units, the proposed development also includes a crèche facility with the capacity for 99no. childcare places. This crèche is located in Block 6.

Crèche-specific trip generation factors for cars (including taxis), LGVs, and OGVs have been sourced from the TRICS database under the sub-category '04 Education / D – Nursery'. This is described in the TRICS land use category definitions as follows:

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

The selected TRICS vehicle trip rates for the crèche are given in **Table 13**. These account for crèche users (i.e. parents), crèche staff, and servicing vehicles.

Table 13 – TRICS Crèche Vehicle Trip Generation Rates

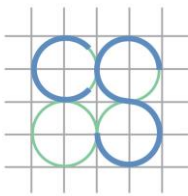
Time Period	Arrivals per pupil			Departures per pupil		
	Cars	LGVs	OGVs	Cars	LGVs	OGVs
Weekday AM Peak (08:00-09:00)	0.176	0.002	0.000	0.109	0.002	0.000
Weekday PM Peak (17:00-18:00)	0.117	0.000	0.000	0.176	0.002	0.000
AADT (24-hour period)	0.835	0.017	0.000	0.835	0.017	0.000

The resultant predicted vehicle trip generation for the crèche is given in **Table 14**.

Table 14 – Crèche Vehicle Trip Generation from TRICS

Time Period	Arrivals			Departures		
	Cars	LGVs	OGVs	Cars	LGVs	OGVs
Weekday AM Peak (08:00-09:00)	17	0	0	11	0	0
Weekday PM Peak (17:00-18:00)	12	0	0	17	0	0
AADT (24-hour period)	83	2	0	83	2	0

The proposed crèche is intended to serve the proposed development itself, as well as the immediately adjacent existing residential areas. This is a small catchment area, and the majority of crèche users are expected to live within easy walking or cycling distance. The true rates of car trip generation to and from the crèche are therefore likely to be markedly less than those obtained from the TRICS database. As for residential servicing vehicle trips, however, these higher TRICS car trip rates contribute to a more robust traffic assessment and have therefore not been reduced.



4.6 Maximum Potential Development Vehicular Trips

Table 15 gives the total projected maximum vehicular trip generation of the proposed development, obtained by combining the trip generation figures derived in sub-sections **4.3**, **4.4**, and **4.5**. Car passengers (as listed in **Table 10**) are assumed not to represent separate vehicle trips; these are already accounted for by corresponding car driver trips.

Table 15 – Maximum Potential Development Vehicular Trip Generation

Time Period	Arrivals (PCU)	Departures (PCU)	Total Trips (PCU)
Block 5			
Weekday AM Peak (08:00-09:00)	7	26	33
Weekday PM Peak (17:00-18:00)	19	8	27
AADT (24-hour period)	224	224	448
Block 6			
Weekday AM Peak (08:00-09:00)	30	60	90
Weekday PM Peak (17:00-18:00)	47	34	81
AADT (24-hour period)	513	513	1026
Overall Development			
Weekday AM Peak (08:00-09:00)	37	86	123
Weekday PM Peak (17:00-18:00)	66	42	108
AADT (24-hour period)	737	737	1474

The above vehicular trip generation figures include all motorised vehicles. For analysis and comparison purposes, all vehicle trips have been converted to Passenger Car Units (PCU) on the following basis:

- 1 car or LGV = 1 PCU
- 1 OGV = 2 PCU

4.7 Vehicular Trip Distribution

Vehicular traffic arriving to or departing from the proposed development is expected to leave or enter the local road network via one of the following origin/destination points (see **Figure 16**):

- (A) Grange Road (R139) to/from the east.
- (B) Grange Road (R809) to/from the south.
- (C) Malahide Road (R107) to/from the south.
- (D) R139 to/from the west.
- (E) Malahide Road (R107) to/from the north.
- (F) Hole in the Wall Road (L2145) to/from the north.

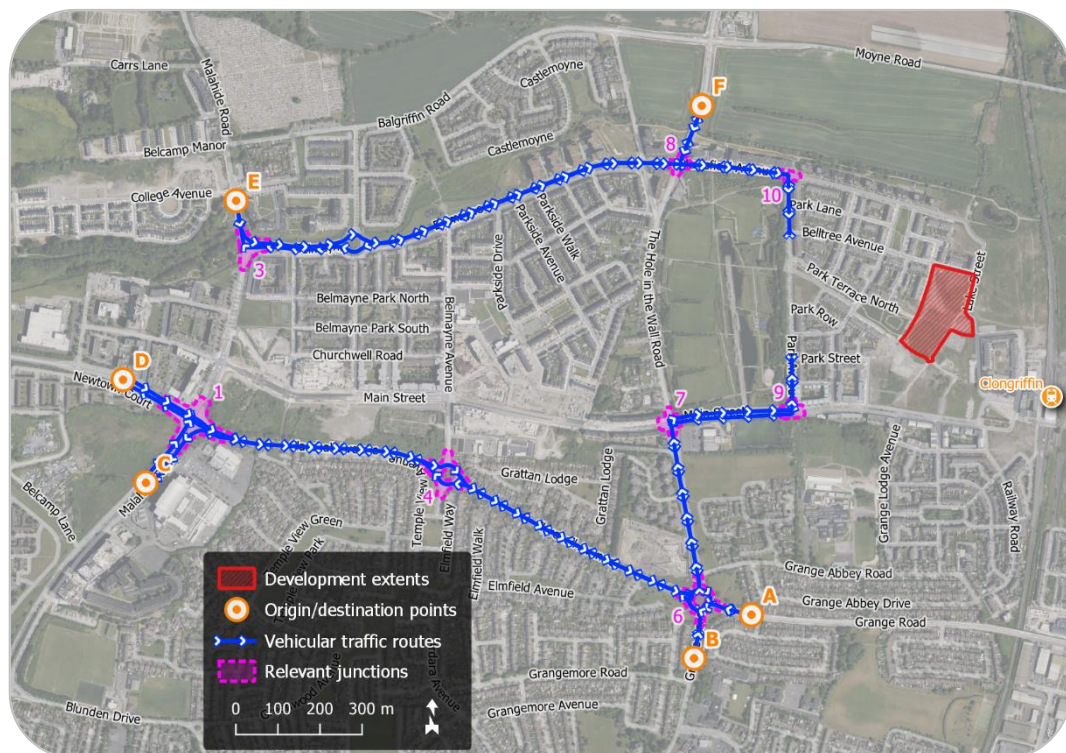
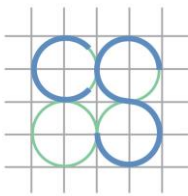


Figure 16 – Vehicular routes to and from development
(sources: OSi, OSM Contributors, Microsoft)

The projected distribution of vehicular trips to and from the subject development has been established following the proportions of the



surveyed inbound and outbound mainline traffic flows at these six points on the local road network; these are given in **Table 16** and **Table 17**.

Table 16 – Distribution of Existing Network Traffic – Weekday Peak Hours

O/D Network Point	Road Name and Direction	AM Peak Flow (as PCU)	PM Peak Flow (as PCU)	% of Total AM Flow	% of Total PM Flow
Inbound Traffic (towards development site)					
A	R139 Grange Rd (E)	732	821	14.4%	14.4%
B	R809 Grange Rd (S)	841	905	16.6%	15.9%
C	R107 Malahide Rd (S)	1,140	1,642	22.5%	28.8%
D	R139 (W)	1,210	1,334	23.9%	23.4%
E	R107 Malahide Rd (N)	794	630	15.7%	11.1%
F	L2145 HITW Rd (N)	354	365	7.0%	6.4%
Outbound Traffic (away from development site)					
A	R139 Grange Rd (E)	875	687	15.2%	12.7%
B	R809 Grange Rd (S)	925	907	16.1%	16.8%
C	R107 Malahide Rd (S)	1,648	1,413	28.7%	26.2%
D	R139 (W)	1,292	1,181	22.5%	21.9%
E	R107 Malahide Rd (N)	676	924	11.8%	17.1%
F	L2145 HITW Rd (N)	330	284	5.7%	5.3%

Table 17 – Distribution of Existing Network Traffic – AADT Flows

O/D Network Point	Road Name and Direction	Light Vehicles (LV)	Heavy Vehicles (HV)	% of Total LV Flow	% of Total HV Flow
Inbound Traffic (towards development site)					
A	R139 Grange Rd (E)	8,840	415	13.6%	13.5%
B	R809 Grange Rd (S)	10,443	279	16.1%	9.1%
C	R107 Malahide Rd (S)	17,388	813	26.8%	26.4%
D	R139 (W)	15,961	1,064	24.6%	34.5%
E	R107 Malahide Rd (N)	8,401	442	13.0%	14.3%
F	L2145 HITW Rd (N)	3,749	68	5.8%	2.2%
Outbound Traffic (away from development site)					
A	R139 Grange Rd (E)	8,799	428	13.6%	14.0%
B	R809 Grange Rd (S)	10,660	277	16.4%	9.0%
C	R107 Malahide Rd (S)	17,056	747	26.3%	24.4%
D	R139 (W)	16,184	1,086	24.9%	35.4%
E	R107 Malahide Rd (N)	9,143	470	14.1%	15.3%
F	L2145 HITW Rd (N)	3,052	57	4.7%	1.9%

Table 18 – Development Trip Distribution – Weekday Peak Hours

O/D Network Point	Relevant Junctions Passed Through	% of Total AM Trips	% of Total PM Trips	No. of AM Trips	No. of PM Trips
Vehicular ARRIVAL Trips (as PCU)					
A	6,7,9	14.4%	14.4%	5	10
B	6,7,9	16.6%	15.9%	6	10
C	1,4,6,7,9	22.5%	28.8%	8	19
D	1,4,6,7,9	23.9%	23.4%	9	15
E	3,8,10	15.7%	11.1%	6	7
F	8,10	7.0%	6.4%	3	4
Vehicular DEPARTURE Trips (as PCU)					
A	9,7,6	15.2%	12.7%	13	5
B	9,7,6	16.1%	16.8%	14	7
C	9,7,6,4,1	28.7%	26.2%	25	11
D	9,7,6,4,1	22.5%	21.9%	19	9
E	10,8,3	11.8%	17.1%	10	7
F	10,8	5.7%	5.3%	5	2

Table 19 – Development Trip Distribution – AADT

O/D Network Point	Relevant Junctions Passed Through	% of Total LV Trips	% of Total HV Trips	No. of LV Trips	No. of HV Trips
Vehicular ARRIVAL Trips (Light and Heavy Vehicles)					
A	6,7,9	13.6%	13.5%	100	0
B	6,7,9	16.1%	9.1%	118	0
C	1,4,6,7,9	26.8%	26.4%	197	0
D	1,4,6,7,9	24.6%	34.5%	181	0
E	3,8,10	13.0%	14.3%	95	0
F	8,10	5.8%	2.2%	43	0
Vehicular DEPARTURE Trips (Light and Heavy Vehicles)					
A	9,7,6	13.6%	14.0%	100	0
B	9,7,6	16.4%	9.0%	121	0
C	9,7,6,4,1	26.3%	24.4%	193	0
D	9,7,6,4,1	24.9%	35.4%	183	0
E	10,8,3	14.1%	15.3%	104	0
F	10,8	4.7%	1.9%	35	0

Table 18 and **Table 19** summarise the distribution of development arrival and departure trips according to the network point from which they arrive

or to which they depart, both as weekday peak hour figures (in PCU) and as AADT flows.

4.8 Proportional Increases in Vehicular Traffic

Table 20 and **Table 21** show the absolute and proportional increases in peak hour traffic flows that shall result from the proposed development at each of the 4no. relevant junctions shown in **Figure 16**.

Table 20 – Changes in Junction Traffic Flows – Weekday Peak Hours

Junction Ref.	2024 Baseline Total Traffic (PCU)		Development-Related Trips (PCU)		Proportional Increase	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
J1	4,528	4,676	61	54	1.3%	1.2%
J3	2,200	2,159	16	14	0.7%	0.6%
J4	2,706	2,637	61	54	2.3%	2.0%
J6	3,299	3,329	99	86	3.0%	2.6%
J7	1,023	1,287	99	86	9.7%	6.7%
J8	1,310	1,155	24	20	1.8%	1.7%
J9	516	628	99	86	19.2%	13.7%
J10	420	308	24	20	5.7%	6.5%

Table 21 – Changes in Junction Traffic Flows – AADT

Jnctn. Ref.	2024 Baseline Total Traffic			Development-Related Trips			Proportional Increase		
	LV	HV	TOTAL	LV	HV	TOTAL	LV	HV	TOTAL
J1	56,404	3,076	59,480	754	0	754	1.3%	0.0%	1.3%
J3	24,258	1,006	25,264	199	0	199	0.8%	0.0%	0.8%
J4	30,822	1,490	32,312	754	0	754	2.4%	0.0%	2.3%
J6	38,755	1,555	40,310	1,193	0	1,193	3.1%	0.0%	3.0%
J7	13,034	412	13,446	1,193	0	1,193	9.2%	0.0%	8.9%
J8	12,009	193	12,202	277	0	277	2.3%	0.0%	2.3%
J9	5,797	276	6,073	1,193	0	1,193	20.6%	0.0%	19.6%
J10	3,010	39	3,049	277	0	277	9.2%	0.0%	9.1%

The TII *Traffic and Transport Assessment Guidelines* (PE-PDV-02045) advise that Transport Assessments should generally be applied where traffic to and from a development is projected to exceed 10% of the existing background

traffic on the adjoining road (or 5% at sensitive locations). As shown in **Table 20** and **Table 21**, the subject development shall result in increases of more than 10% in peak hour traffic flows and total AADT traffic flows at only one junction: that of Park Avenue with Clongriffin Main Street (J9). Within the scope of this report, therefore, only this existing Junction 9 requires detailed operational assessment in the form of junction performance modelling. All other junctions are considered at low risk of detrimental effects as a result of the proposed development, given the generally lower proportional increases in traffic flows that it shall give rise to at these locations.

4.9 Committed Development Trip Generation and Distribution

A review of extant planning permissions has identified no nearby committed developments that are of a nature and scale likely to significantly influence vehicular traffic flows on the local road network in the immediate vicinity of the subject development site.

4.10 Influence of Clongriffin Main Street Extension

As described in sub-section **3.2**, outstanding sections of Main Street between the Hole in the Wall Road and the Malahide Road are currently under construction. Once operational, the completed road will provide a new east-west route that is expected to alter the existing distributions of vehicular traffic at surveyed junctions nos. 1 to 8 (see **Figure 17**). At Junction 9, however, no significant change in background traffic distribution is anticipated, nor will the new road link affect the distribution of traffic to and from the proposed development. As Junction 9 is the only junction for which operational assessment is required within the scope of this report, it has not been necessary to develop any projection of the background traffic redistribution that may result from the Clongriffin Main Street extension.



Figure 17 – Clongriffin Main Street extension and surveyed junctions
(sources: OSi, OSM Contributors, Microsoft)

5.0 OPERATIONAL ASSESSMENT

To quantify the projected traffic impact of the proposed development, operational assessments of the following junction have been undertaken using industry-standard TRL Junctions 8 modelling software, for both the weekday AM peak hour (08:00-09:00) and the weekday PM peak hour (17:00-18:00):

- J9. Clongriffin Main Street / Park Avenue
(existing 3-arm priority-controlled junction)



Figure 18 – Junction modelled
(sources: OSM Contributors, Microsoft)

Junction performance is assessed based upon the four metrics defined in sub-section 5.2. Full Junctions 8 outputs are provided in **Appendix D**.



5.1 Assessment Scenarios

The performance of this junction has been assessed under the following scenarios, using the existing and predicted traffic flows given in **Appendix C**:

- 2024 – current baseline traffic conditions
- 2027 (planned year of completion)
 - without subject development
 - with subject development operational-phase traffic
- 2032 (5 years after completion)
 - without subject development
 - with subject development operational-phase traffic
- 2042 (design year; 15 years after completion)
 - without subject development
 - with subject development operational-phase traffic

5.2 Definitions

Degree of Saturation (DoS):

The ratio of current traffic flow to ultimate capacity (also known as RFC) on a link or traffic stream. Effective capacity for a junction approach (or a junction as a whole) is reached at a DoS of 90%, beyond which a junction will not operate efficiently. A DoS of 100% represents ultimate capacity, beyond which significant operational problems will be experienced.

Mean Maximum Queue (MMQ):

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

Mean Delay per Vehicle:

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

Junction Residual Capacity:

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

5.3 Junction Assessment Results

Table 22 gives the Junctions 8 modelling results, for each of the assessment scenarios, at the existing 3-arm priority-controlled junction of Park Avenue with Clongriffin Main Street.

- Arm A: Clongriffin Main Street (west)
- Arm B: Park Avenue (north)
- Arm C: Clongriffin Main Street (east)

The assessment results show that this junction – considered in isolation – currently operates well within effective capacity on all approaches during both peak hour periods, and shall continue to do so past the year 2042. In any future assessment year, the addition of the vehicular traffic generated by the proposed development is projected to have a negligible impact, resulting in a maximum increase of 1 PCU in mean vehicle queue length on any junction approach, in either peak hour period, and a maximum increase of 3 seconds in mean delay per vehicle.

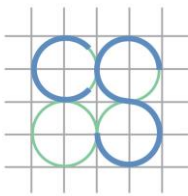


Table 22 – Junction Site J9 Assessment Results – Weekday Peak Hours

Junction Approach Arm	Degree of Saturation		Mean Maximum Queue (PCU)		Mean Delay per Vehicle (s)		Junction Residual Capacity	
	AM	PM	AM	PM	AM	PM	AM	PM
2024 – Baseline Assessment								
A	n/a	n/a	n/a	n/a	n/a	n/a	253%	237%
B	20%	17%	0	0	9	9		
C	4%	4%	0	0	5	5		
2027 – Opening Year Assessment – Without Proposed Development								
A	n/a	n/a	n/a	n/a	n/a	n/a	228%	213%
B	21%	19%	0	0	9	9		
C	4%	5%	0	0	5	5		
2027 – Opening Year Assessment – With Proposed Development in Operation								
A	n/a	n/a	n/a	n/a	n/a	n/a	107%	147%
B	38%	27%	1	0	12	11		
C	4%	5%	0	0	5	5		
2032 Assessment – Without Proposed Development								
A	n/a	n/a	n/a	n/a	n/a	n/a	199%	185%
B	24%	21%	0	0	9	10		
C	5%	5%	0	0	5	5		
2032 Assessment – With Proposed Development in Operation								
A	n/a	n/a	n/a	n/a	n/a	n/a	95%	129%
B	41%	29%	1	0	12	11		
C	5%	5%	0	0	5	5		
2042 – Design Year Assessment – Without Proposed Development								
A	n/a	n/a	n/a	n/a	n/a	n/a	176%	163%
B	26%	23%	0	0	10	10		
C	5%	6%	0	0	5	5		
2042 – Design Year Assessment – With Proposed Development in Operation								
A	n/a	n/a	n/a	n/a	n/a	n/a	85%	115%
B	43%	32%	1	0	13	12		
C	5%	6%	0	0	5	5		

6.0 PUBLIC TRANSPORT CAPACITY AND DEMAND

6.1 Local Public Transport Capacity

6.1.1 AM peak bus capacity

As previously described, bus stops at Station Square and along Clongriffin Main Street are served by Dublin Bus route no. 15, which operates towards Dublin city centre at typical intervals of 4 minutes in the AM peak period, representing an average of 15 buses per hour.

Bus capacity depends upon bus model, which in turn varies according to the operator, the bus route, the time of day, and other operational factors. The most common bus model currently used by Dublin Bus is the Volvo B5TL double-decker, with a capacity of 95no. passengers. Other buses in the Dublin Bus fleet have typical capacities ranging between 78no. passengers and 91no. passengers. For the purposes of estimating overall bus service capacity, an average capacity per bus of 90no. passengers has been assumed.

On this basis, the AM peak period capacity of the existing bus service from Clongriffin is estimated at 1,350no. passengers per hour.

6.1.2 AM peak rail capacity

DART services are operated using 8500-20 Class EMU (Electrical Multiple Unit) 4-car sets, each with a maximum capacity of approx. 400no. passengers (160no. seated and approx. 240no. standing), and 8100/8300 Class EMU 2-car sets, each with a capacity of up to approx. 320no. passengers (128no. seated and approx. 192no. standing). These can be coupled up to form a maximum 8-piece train, with an approximate capacity of either 800no. passengers or 1,280no. passengers. As the higher-capacity 8100/8300-based trains represent 55% of the current DART fleet (car for car), an average DART train capacity of 1,060no. passengers has been assumed, and a peak hour

capacity of 1,280no. passengers. This is consistent with the findings of the NTA National Rail Census report for 2022, which recorded a maximum DART train loading of 877no. passengers on the survey day of 10th November 2022.

Commuter rail services in the Greater Dublin Area are most commonly operated using 29000 Class DMU (Diesel Multiple Unit) 4-car sets, which can be coupled together to form a maximum 8-piece train. Each 4-car set has a maximum capacity of approx. 280no. passengers (185no. seated and approx. 95no. standing), giving a typical maximum train capacity of approx. 560no. passengers. However, the NTA National Rail Census report for 2022 recorded a maximum commuter train loading of 635no. passengers on the survey day of 10th November 2022. Accordingly, for the purposes of estimating peak hour commuter rail capacity, a maximum capacity per train of 650no. passengers has been assumed.

Clongriffin railway station, which is within a 5-minute walk of the development site, is served by the following southbound trains in the AM peak period of 08:00 to 09:00:

- 3no. DART services

On this basis, the AM peak period capacity of the existing southbound rail services from Clongriffin is estimated at 3,840no. passengers per hour. This agrees broadly with the published background information to the DART+ programme (see sub-section **3.7**), which gives a general passenger capacity figure on this line of approx. 4,200no. passengers per hour.

6.2 Contribution to Public Transport Service Demand

Table 23 summarises the total maximum one-way public transport capacities in the vicinity of the development site during the weekday AM peak hour, as set out previously. **Table 24** gives the proposed

development's projected operational-phase demand for public transport services, as previously established in sub-section **4.3**, in the context of the services considered when calculating existing capacities.

Table 23 – Relevant Weekday Peak Hour Public Transport Capacities

Transport Mode	Maximum One-Way AM Peak Capacity (passengers)
Bus	1,350
Rail	3,840
TOTAL	5,190

Table 24 – Development Weekday Peak Public Transport Demand

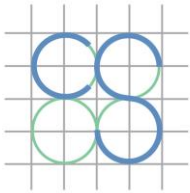
Transport Mode	Departures in AM Peak
Bus	34
Train or Tram	52
TOTAL	86

Table 25 contrasts the development's projected one-way AM peak public transport demand against the corresponding existing service capacities. This shows that the development's projected occupant and visitor use of public transport services during the AM peak represents less than 2% of the total existing service capacity.

Table 25 – Development Public Transport Demand Against Capacity

Transport Mode	Existing Capacity (passengers)	Development Demand (passengers)	Demand as Proportion of Capacity
Bus	1,350	34	2.5%
Train or Tram	3,840	52	1.4%
TOTAL	5,190	86	1.7%

It is therefore concluded that the existing public transport service capacity is sufficient to meet the demands of the proposed development, and that



the proposed development is not expected to contribute significant additional service demand.

It is further noted that, should additional public transport capacity be required on services in proximity to the development site, this can be provided by means of increased frequency on the existing services or by the use of higher-capacity trains or buses. Such a decision would be made on the basis of observed demand, of which regular monitoring is undertaken by the National Transport Authority.

7.0 PARKING PROVISION

The proposed development comprises the following elements:

- 180no. 1-bedroom apartments (58no. in Block 5 and 122no. in Block 6).
- 226no. 2-bedroom apartments (78no. in Block 5 and 148no. in Block 6).
- 2no. 3-bedroom apartments (all in Block 5).
- a crèche facility in Block 6 with a Gross Floor Area (GFA) of 413m², to provide 99no. childcare places.
- 1,209m² of Community/Arts/Cultural space (502m² in Block 5 and 707m² in Block 6).

The development shall provide:

- 260no. car parking spaces, of which –
 - 14no. spaces shall be disabled-accessible.
 - 130no. spaces shall be equipped with EV charging facilities.
- 13no. motorcycle parking spaces.
- 642no. long term bicycle parking spaces.
- 216no. short stay bicycle parking spaces.

Refer to architectural drawings for the locations and uses of all car, motorcycle, and bicycle parking spaces.

7.1 Overall Car Parking Provision

The car parking provision of the proposed development has been assessed with respect to the *Dublin City Development Plan 2022–2028*, which defines the standard maximum car parking provision for new developments by land use type. **Table 26** shows the car parking standards applicable to the proposed development and illustrates that the total car parking provision does not exceed the maximum number permitted by the Local Authority development plan.

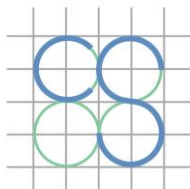


Table 26 – Overall Car Parking Provision

Land Use (Zone 2)	Car Parking Maxima	Quantum	Max. Parking Provision	Proposed Provision
Block 5				
Apartments	1 space per dwelling	138 dwellings	138 spaces	79 spaces
Block 6				
Apartments	1 space per dwelling	270 dwellings	270 spaces	181 spaces
Crèche	1 space per 100m ² GFA	413m ² GFA	4 spaces	
Overall Development				
TOTALS			412 spaces	260 spaces

The proposed development shall provide a total of 260no. car parking spaces, located as follows:

- 45no. internal spaces at ground floor (undercroft) level within Block 5.
- 34no. on-street spaces on Dargan Street and Lake Street, adjacent to Block 5.
- 118no. internal spaces at ground floor (undercroft) level within Block 6.
- 63no. on-street spaces on Dargan Street, Lake Street, Belltree Avenue, and Park Street, adjacent to Block 6.

The development's proposed overall car parking provision (excluding crèche spaces) equates to a ratio of 0.63 spaces per residential unit. All on-street car parking spaces shall however be offered for taking in charge by Dublin City Council, and therefore cannot be restricted to use by development residents. Further excluding these 97no. on-street spaces from the development's proposed residential car parking provision yields a ratio of 0.39 spaces per residential unit.

The policy document *Sustainable Urban Housing: Design Standards for New Apartments (Guidelines for Planning Authorities)*, published by the

Department of Housing, Planning and Local Government in December 2022 ('the Apartment Guidelines'), gives the following guidance on the provision of residential car parking:

"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 [as] rail and bus stations located in close proximity.

"These locations are most likely to be in cities, 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 detailed in sub-sections **3.6** and **3.7**, the development site is within a 5-minute walk both of DART rail services and of bus stops served by existing and future high-frequency bus routes. The proposed development is therefore considered a suitable candidate for a reduced car parking provision.

7.2 Disabled-Accessible Car Parking

The *Dublin City Development Plan 2022–2028* sets out the minimum requirement for the provision of disabled-accessible parking in new developments, as a proportion of the total development car parking provision. **Table 27** applies this requirement to the proposed development.

Table 27 – Accessible Car Parking Provision

Proposed Car Parking Provision	Minimum Required Proportion	Accessible Spaces Required	Accessible Spaces Proposed
Block 5			
79 spaces	5%	4	5
Block 6			
181 spaces	5%	9	9
Overall Development			
260 spaces	5%	13	14

The proposed development shall provide a total of 14no. disabled-accessible car parking spaces, thereby satisfying the requirements of the Local Authority development plan. These are located as follows:

- 4no. internally at ground floor (undercroft) level within Block 5.
- 1no. externally on Dargan Street, adjacent to Block 5.
- 7no. internally at ground floor (undercroft) level within Block 6.
- 2no. externally on Lake Street, adjacent to Block 6.

7.3 Electric Vehicle Charging Facilities

The *Dublin City Development Plan 2022–2028* requires that at least 50% of all car parking spaces in new developments be equipped with fully functional charging points for battery electric vehicles (BEVs), and that the remaining spaces be designed to facilitate the future installation of additional BEV charging infrastructure.

BEV charging points shall be provided from the outset at 130no. car parking spaces within the proposed development, all located at ground floor (undercroft) level within Block 5 and Block 6, representing 50% of the development's overall car parking provision. All remaining car parking spaces within the development shall be 'future-proofed' by the inclusion of

ducting and/or cabling to permit the rapid future installation of additional BEV charging points.

Table 28 – BEV Charging Point Provision

Proposed Car Parking Provision	Required Proportion	BEV Charge Points Required	BEV Charge Points Proposed
260 spaces	50%	130	130

7.4 Car Parking Management

All on-street car parking spaces to be provided as part of the development (including 3no. disabled-accessible spaces) are proposed to be taken in charge by Dublin City Council and be available for public use. The development's 2no. loading bays are also intended to be taken in charge. All internal car parking spaces are located within the buildings' undercroft car parking areas and so will remain in the ownership of the LDA.

All internal car parking spaces within the development (including the 11no. internal accessible spaces) shall be controlled by the development's Management Company. Residential parking spaces shall not be assigned to individual apartment units; spaces shall instead be allocated and/or leased to residents on the basis of availability and need, in part by means of a permit/lottery system, in order to optimise the use of parking spaces.

Access to each of the development's undercroft car parking areas shall be regulated by means of gates and/or barrier control systems. Authorised development occupants shall gain access by means of an RFID key fob or similar automated system. The development's Management Company shall implement suitable information and enforcement measures to prevent unauthorised or undisciplined vehicle parking within the undercroft car parking areas. The undercroft car park areas and their access control systems will be maintained as part of the buildings' common area maintenance regime.

7.5 Motorcycle Parking

The *Dublin City Development Plan 2022–2028* sets out the standard requirement for the provision of motorcycle parking in new developments, as a proportion of the total development car parking provision. **Table 29** applies this requirement to the proposed development.

Table 29 – Motorcycle Parking Provision

Proposed Car Parking Provision	Standard Required Proportion	Motorcycle Spaces Required	Motorcycle Spaces Proposed
Block 5			
79 spaces	5%	4	4
Block 6			
181 spaces	5%	9	9
Overall Development			
260 spaces	5%	13	13

The development includes 13no. motorcycle parking spaces, all located in designated, signposted areas at ground floor (undercroft) level within Block 5 and Block 6, thereby satisfying the requirements of the Local Authority development plan. Suitable rails, hoops, or posts shall be provided at their locations, allowing motorcycles to be secured using a chain or similar device. Motorcycle parking areas shall have limited gradients to enable easy manoeuvrability and parking.

7.6 Bicycle Parking

The proposed development's bicycle parking provision has been assessed with respect to the *Dublin City Development Plan 2022–2028*, which defines the minimum standard bicycle parking provision for new developments by land use type. **Table 30** shows the standards applicable to the proposed development, illustrating that the proposed bicycle parking provision for the development meets the requirements of the Local Authority

development plan. These bicycle parking standards are the same as those given in the *Sustainable Urban Housing: Design Standards for New Apartments (Guidelines for Planning Authorities)*.

Table 30 – Bicycle Parking Provision

Land Use	Dev. Plan Minima	Quantum	Min. Parking Provision	Proposed Provision
Long Term Bicycle Parking				
Residential Apartment	1 space per bedroom	638 bedrooms	638 spaces	638 spaces
Crèche	1 space per 5 staff	20 staff ††	4 spaces	4 spaces
Short Stay Bicycle Parking				
Residential Apartment	1 space per 2 apartments	408 apartments	204 spaces	206 spaces
Crèche	1 space per 10 children	99 children	10 spaces	10 spaces
Total Bicycle Parking				
TOTAL			856 spaces	858 spaces

The proposed development has a total bicycle parking provision of 858no. spaces. These include:

- 218no. standard residents' spaces in secure dedicated bicycle stores at ground floor (undercroft) level within Block 5.
- 2no. residents' oversized cycle spaces in a secure dedicated bicycle store at ground floor (undercroft) level within Block 5.
- 384no. standard residents' spaces in secure dedicated bicycle stores at ground floor (undercroft) level within Block 6.
- 34no. residents' oversized cycle spaces in secure dedicated bicycle stores at ground floor (undercroft) level within Block 6.

†† Provisional figure derived from Tusla Quality and Regulatory Framework standards



- 4no. long term spaces for crèche staff, provided in a dedicated bicycle and bin store at ground floor level within Block 6.
- 70no. standard visitor spaces provided externally within the Block 5 landscaping (in the form of 35no. Sheffield stands).
- 146no. standard visitor spaces provided externally within the Block 6 landscaping (in the form of 73no. Sheffield stands).

Oversized cycle spaces allow for a bicycle footprint of 3.5m long by 2.0m wide, to accommodate cargo bikes, tricycles, and adapted cycles. These spaces account for approximately 6% of the development's long term bicycle parking provision.

The design and layout of the development's long term and short-stay bicycle parking is consistent with the guidance given in the NTA *Cycle Design Manual*.

8.0 ACCESS, LAYOUT, PEDESTRIAN AND CYCLIST FACILITIES, SERVICING

8.1 Vehicular Access and Surrounding Streets

As previously described (see sub-section **3.1**), the proposed development includes the construction or extension of surrounding streets to enable access to the development via the existing Clongriffin road network. These street elements to be constructed include Dargan Street (located between Block 5 and Block 5), as well as sections of Lake Street and Market Street. Prior to construction of the proposed development, the remaining section of Park Street will also be completed, running along the western side of Block 5, as permitted under Reg. Ref. 0132/02. These works are to be carried by a third party under a condition of the land transfer by which the applicant acquired the development site. On-street parking to serve the proposed development will be constructed as part of this expansion of the existing Clongriffin road network; 2no. new loading bays will also be provided on the new sections of Lake Street and Dargan Street.

Each of the proposed blocks has an internal (undercroft) car parking area. The Block 5 undercroft shall be accessed from Park Street, at the development's western boundary. That of Block 6 shall be accessed from Lake Street, at the development's eastern boundary. Each access has an effective width of 5.5m, allowing two-way vehicular traffic into and out of the development, and shall be access-controlled by means of a gate or barrier. Kerb radii at these accesses are restricted to 3.0m, which shall discourage high vehicle speeds on entrance to or exit from the development. Unobstructed sight distances in excess of 24m in either direction along Park Street and Lake Street are achieved for vehicles exiting the development, as measured from a set-back of 2.4m from the public road edge, in accordance with the requirements of the *Design Manual for Urban Roads and Streets* (sections 4.4.4 and 4.4.5).

8.2 Internal Layout

The undercroft car parking areas within the proposed Block 5 and Block 6 comprise circulatory aisles 6.0m in width, along which are arranged perpendicular car parking spaces. Marked pedestrian walkways are provided, giving defined routes between parking spaces and internal access doors. The development's internal car parking layout complies with the recommendations of the *Design Manual for Urban Roads and Streets* and the *IStructE Car Park Design Guide* (refer to CS Consulting drawings **CLN-CSC-XX-XX-DR-C-0121** and **CLN-CSC-XX-XX-DR-C-0122**).

8.3 Swept Path Analysis

Swept path analyses of the proposed development have been carried out for cars accessing the development's undercroft car parks and circulating within them, as well as for a refuse collection vehicle servicing the development on the surrounding streets and a Light Goods Vehicle using the on-street loading bays. These analyses, shown on CS Consulting drawings **CLN-CSC-XX-XX-DR-C-0139** and **CLN-CSC-XX-XX-DR-C-0140**, indicate that the development's access design and layout can accommodate these vehicle movements where required.

8.4 Pedestrian and Cyclist Facilities

Pedestrian access to the proposed Block 5 and Block 6 shall be directly from the surrounding streets (including those street elements to be completed as part of the development). Access to internal long term bicycle parking shall be via the main accesses to the undercroft parking areas. Raised pedestrian footpaths with a minimum width of 2.0m shall be provided along all new street sections, in keeping with the design of the existing surrounding Clongriffin road network.

The development shall include a total of 858no. bicycle parking spaces, meeting the requirements of the *Dublin City Development Plan 2022–2028*.

8.5 Development Servicing and Waste Collection

Vehicular servicing of the proposed development – including deliveries and waste collection – shall be conducted on the existing and proposed streets surrounding Block 5 and Block 6, in common with other existing residential developments in the vicinity. To facilitate vehicular servicing of the development's residential units and non-residential spaces, 2no. new loading bays will be provided on the new sections of Lake Street and Dargan Street.

Domestic refuse collection shall be conducted kerbside; the development's Management Company shall be responsible for engaging the services of an authorised waste disposal contractor, for moving refuse bins to a suitable kerbside location for collection, and for returning bins promptly to internal waste storage areas after collection.

As noted in **sub-section 4.4**, it is projected that the proposed development will require a maximum of 44no. servicing vehicle visits on average in any given weekday. This figure includes deliveries, waste collection, and all other servicing requirements.

8.6 Independent Quality Audit

A full independent Quality Audit of the proposed development's layout and access arrangements has been conducted by PMCE Consulting Engineers on behalf of the design team. This incorporates the following components:

- Access Audit
- Walking Audit



- Cycle Audit
- Stage 1/2 Road Safety Audit

All observations made within the Stage 1/2 Road Safety Audit have been acknowledged by the design team and design changes made in response. Where these design response measures differ from those suggested by the audit, the alternative measures have been communicated to and accepted by the audit team. Refer to CS Consulting drawings nos. **CLN-CSC-XX-XX-DR-C-0141** and **CLN-CSC-XX-XX-DR-C-0142** for details. The independent Quality Audit report is attached as **Appendix E**.

9.0 FEEDBACK RECEIVED FROM PLANNING AUTHORITY

Dublin City Council has reviewed the planning documentation submitted in respect of the current development proposals during the pre-application consultation phase of the LRD process (including a previous version of the present Traffic and Transport Assessment). An LRD pre-application consultation meeting of the Council and the applicant's design team was held on the 8th of May 2024. An LRD Opinion document was issued by Dublin City Council on the 5th of July 2024. This concluded that:

“the documentation submitted in accordance with Section 32B of the [Planning and Development (Amendment) (Large-scale Residential Development) Act 2021] requires further consideration and amendment to constitute a reasonable basis for an application for Large- scale Residential Development.”

The DCC Opinion document further notes that:

“In the event that the applicant proceeds to submit a planning application, the applicant is advised that the LRD application should be accompanied in the first instance by:

- *“Statement of response to the issues set out in the LRD opinion.*
- *“Statement that in the applicant's opinion the proposal is consistent with the relevant objectives of the development plan for the area.”*

A Statement of Response has been prepared by Declan Brassil & Company Planning Consultants and is submitted under separate cover as part of this planning application. This document addresses all issues raised in the July 2024 DCC Opinion document. A response to each of the transportation-related items of the DCC Opinion is also given below.

9.1 Opinion Item 4.1 – BusConnects Proposed D3 Route

9.1.1 DCC Opinion Item

- *“The applicant is requested to provide revised plans and detailed information that ensures compliance with the requirement of the NTA Bus Connects D3 Bus Route on the adjoining road network from Marrsfield Avenue to Lake Street and Clongriffin Road. It is a requirement that this route be protected and the realignment of the road shall be identified within the planning application.*
- *“Further dialogue and consultation with the Transportation Planning Division to ensure compliance with the requirements of the NTA is required on this matter.”*

9.1.2 Response

- A meeting was held with the NTA on the 17th of July 2024, in which the NTA's current proposals for future BusConnects routes serving Clongriffin were presented and discussed. This meeting was attended by representatives of the LDA, CCK Architects, and CS Consulting. The meeting did not establish whether Lake Street remains the NTA's preferred alignment option for bus route D3 between Station Square and Marrsfield Avenue, and it is noted that the NTA has previously tabled an alternative alignment via Station Road and Marrsfield Crescent. The NTA's representative indicated that further internal consultation would be required before the current alignment preference could be confirmed.

In light of this uncertainty over the intended route D3 alignment, it is submitted that it is not possible within the scope of this planning application to provide a revised road design that meets NTA requirements. However, as illustrated on drawing no. **CLN-CSC-XX-XX-DR-C-0143** that accompanies this submission, the road realignment that may be required at the north-east corner of Grant

Park to facilitate bus movements along Lake Street and Clongriffin Road would not take place within the boundary of the present application but would instead take some land to the east of the existing road. These lands are also in the applicant's ownership, and will be the subject of separate forthcoming planning applications. Once the NTA's requirements for BusConnects routing are clarified, these will be considered as a priority in design preparation for development of these lands.

The submitted roads design for the present Block 5 & Block 6 development application therefore does not compromise any future road alignment changes that may be required to facilitate the D3 BusConnects route.

- On the 18th of July 2024, CS Consulting held a consultation meeting with Messrs Seán Callaghan and John Carty of DCC's Transportation Planning Division, in which the above NTA BusConnects route requirements were discussed, as well as all other transportation-related items raised in the DCC Opinion document.

9.2 Opinion Item 4.2 – Taking in Charge

9.2.1 DCC Opinion Item

- *“A Taking in Charge drawing should be submitted outlining proposed areas to be taken in charge. This plan should outline the public and private areas demarcated and provide footpath widths at 5m intervals on proposed footpath areas to be taken in charge in this regard. It is a requirement that the roads taking in charge proposal extends from back of footpath to back of footpath. Piecemeal taking in charge is not support by the Roads Authority.*



- *“The applicant shall be aware that all on-street parking spaces identified on the proposed layout will be taken into charge. On-street car parking spaces cannot be assigned to the development and will be for general public use.”*

9.2.2 Response

- A Taking in Charge Plan (drawing no. **CLN-CCK-LRD-SI-00-DR-A-000010**) has been prepared by CCK Architects and accompanies this submission.
- It is noted and accepted that all on-street parking spaces to be provided as part of the proposed development shall ultimately be taken in charge by Dublin City Council. As shown on the accompanying Parking Layout drawing (no. **CLN-CCK-LRD-SI-00-DR-A-000011**) prepared by CCK Architects, none of these spaces shall be assigned to specific residential units or allocated to individual residents.

9.3 **Opinion Item 4.3 – Internal Access and Works on Roadway**

9.3.1 DCC Opinion Item

- *“A Stage 1 Road Safety Audit should be provided which examines the proposed access roads within the development, and any impact with the existing road network.*
- *“All internal road proposals should demonstrate compliance with DMURS.*
- *“All access proposals require to be fully auto tracked. Auto tracking of access proposals e.g. cars, refuse, emergency, substation, deliveries etc. is required including junctions, turning areas, parking spaces and laybys and turning circles proposed. Swept path analysis should ensure that there is no overhanging onto footpath areas to ensure no impediment to pedestrians.*

- “Pedestrian priority should be provided across the site. Measures including contrasting materials, signing, and road marking, etc. should be incorporated to ensure that vehicles entering/leaving the development are aware that pedestrians/cyclists have priority across the site and that vehicles must yield right-of-way.”

9.3.2 Response

- A full independent Quality Audit of the proposed development (incorporating a Stage 1/2 Road Safety Audit) has been conducted by PMCE Consulting Engineers on behalf of the design team. Design changes have been made in response to the findings of this audit, and these have been accepted by the audit team. The Quality Audit report issued by PMCE is provided as **Appendix E** to this report. Quality Audit Response drawings (nos. **CLN-CSC-XX-XX-DR-C-0141** and **CLN-CSC-XX-XX-DR-C-0142**) are also provided as part of the planning application documentation.
- The proposed development's internal layout and access arrangements follow the guidance given in the Design Manual for Urban Roads and Streets (DMURS), as described in the accompanying *DMURS Statement of Consistency*.
- Swept path analyses of vehicle movements are shown on CS Consulting drawings **CLN-CSC-XX-XX-DR-C-0139** and **CLN-CSC-XX-XX-DR-C-0140**, which form part of the planning application documentation. These analyses encompass cars accessing and circulating within the development's undercroft car parks, delivery vehicles making use of the proposed loading bays, and a refuse collection vehicle servicing the development. They illustrate that the development's proposed layout can accommodate these vehicle movements, and that servicing vehicles (including refuse collection vehicles) do not intrude into pedestrian areas in their manoeuvres.

- The design of the development's vehicular accesses on Lake Street and Park Street incorporates contrasting materials to emphasise the interruption of the vehicular carriageway and the priority of pedestrian movement across these accesses. Both accesses are Stop-controlled on exit from the development, and kerb radii are restricted to 3.0m, both of which shall reduce vehicle speeds. Within the development's undercroft parking areas, marked pedestrian walkways are provided to guide pedestrian movement and to alert drivers to the presence of pedestrians.

9.4 Opinion Item 4.4 – Car Parking

9.4.1 DCC Opinion Item

- *“Submit a Car Parking Management Plan, in particular with details on how car parking will be managed on the site and how the set down/drop off areas and time constraints will be managed.*
- *“Details on the potential for car share spaces such as Go Car or similar should be examined. These shall be located on-street.*
- *“All car parking spaces should be provided on a site layout plan where the various uses are colour coded/numbered to differentiate between the areas for drop off/set down, uses as well as the accessible parking and EV parking spaces. All on-street spaces to be taken in charge shall be identified in line with the Taking in Charge drawing.”*

9.4.2 Response

- Sub-section **7.4** of this report describes the intended management strategy for car parking within the proposed development, including access control, parking allocation, and enforcement measures. A Parking Layout drawing (no. **CLN-CCK-LRD-SI-00-DR-A-000011**) prepared by CCK Architects is also provided as part of

the planning application documentation. As on-street car parking spaces are to be taken in charge by Dublin City Council, these shall not fall within the scope of this management strategy.

- As described in sub-section **3.8**, the wider Clongriffin area is currently well served by commercial car-share schemes that include GoCar and Yukō. The development's provision of on-street parking offers potential for further expansion of these services into the interior of Clongriffin; this would be subject to the agreement of Dublin City Council, which shall ultimately control these spaces. At the request of DCC's Transportation Planning Division, indicative suggested locations for future car-share spaces are nevertheless shown on the accompanying Parking Layout drawing (no. **CLN-CCK-LRD-SI-00-DR-A-000011**) prepared by CCK Architects.
- A Parking Layout drawing (no. **CLN-CCK-LRD-SI-00-DR-A-000011**) has been prepared by CCK Architects and is provided as part of the planning application documentation. This identifies car parking spaces that are to be taken in charge, and gives the intended uses or allocation of all other car parking spaces. Accessible parking spaces and EV charging facilities are also indicated on this drawing. The drawing gives indicative suggested locations for crèche drop-off spaces among the on-street car parking spaces; restricting these spaces to this use would however be subject to implementation and enforcement by Dublin City Council, which shall ultimately control these spaces.

9.5 Opinion Item 4.5 – Cycle Parking

9.5.1 DCC Opinion Item

- *“Detailed drawings of the bicycle stores to be provided outlining type and quantum per store/area, ensuring functionality and ease of access, including the type of bicycle stands proposed and*



distance between each stand. Ensure bicycle stores are located at the most convenient areas close to stairs/lifts in the undercroft area. Ensure the access doors to these stores are appropriately located.

- *“Revised site layout clearly delineating the location of all visitor bicycle parking, distances between each stand and shelter for bicycle parking.*
- *“Areas for Cargo bikes, and electric bicycle charging stations and quantum of spaces per area should be outlined in submitted drawings.*
- *“Details on how bicycle stores are to be managed should be provided i.e. with access to certain areas for residents.”*

9.5.2 Response

Please refer to the Statement of Response to DCC Opinion, prepared by Declan Brassil & Co. Ltd., which forms part of this planning submission.

9.6 Opinion Item 4.6 – Servicing and Operations

9.6.1 DCC Opinion Item

- *“Demarcated loading and servicing areas should be provided. This is to ensure that servicing can be carried out without impact on other road users.*
- *“Details on how waste will be transferred from storage areas to collection areas to be outlined.*
- *“A Servicing and Operations management plan should be submitted with any forthcoming LRD application and should include details of all anticipated servicing and operational requirements e.g. times for deliveries (weekly/daily or similar) for the*

residential components of the development, including set down location for servicing and delivery vehicles.

- “Swept path analysis should be examined to ensure that servicing vehicles do no overhang the footpath/pedestrian areas in their manoeuvres.”

9.6.2 Response

- A Servicing and Operations Management Plan has been prepared by CCK Architects and forms part of this planning submission.
- The swept path analyses shown on CS Consulting drawings **CLN-CSC-XX-XX-DR-C-0139** and **CLN-CSC-XX-XX-DR-C-0140**, which form part of the planning application documentation, illustrate that servicing vehicles (including refuse collection vehicles) do not intrude into pedestrian areas in their manoeuvres.

10.0 SUMMARY OF CONCLUSIONS

This report provides an assessment of a proposed standalone Large-scale Residential Development (LRD) at Block 5 and Block 6, Clongriffin, Dublin 13, with respect to its potential effects on the surrounding road network and transport facilities. The report also assesses the proposed development's internal layout, parking provisions, cyclist and pedestrian facilities, servicing arrangements, access to public transport services, and contribution to public transport demand.

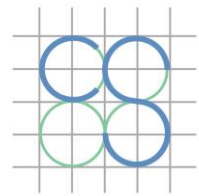
The main observations and conclusions of this study are as follows:

- The proposed development shall not generate excessive vehicular traffic flows in its operational phase. Total vehicle trips (arrivals and departures combined) of 123 PCU are predicted during the weekday AM peak hour, and total vehicle trips of 108 PCU in the PM peak hour.
- The proposed development shall result in negligible increases in total peak hour traffic flows at the majority of existing junctions on the surrounding street network.
- The proposed development shall result in increases of more than 10% in peak hour traffic flows and total AADT traffic flows at only one junction: that of Park Avenue with Clongriffin Main Street.
- The existing 3-arm priority-controlled junction of Park Avenue with Clongriffin Main Street currently operates well within effective capacity during weekday AM and PM peak hour periods, and shall continue to do so past the year 2042. In each of the future assessment years, the proposed development is shown to have a negligible influence on the performance of this junction.
- The development shall not place an undue burden on existing local public transport services. The development's projected demand for

these public transport services represents less than 2% of their existing capacity at peak times.

- The proposed development includes car and motorcycle parking provisions in compliance with Local Authority development plan standards and with the Apartment Guidelines recommendations. The provisions of disabled-accessible car parking spaces and EV charging facilities comply with Local Authority development plan standards.
- The development's proposed bicycle parking provision complies with Local Authority development plan standards and with the Apartment Guidelines recommendations.
- Swept path analyses of the proposed development have been carried out for cars accessing the development's undercroft car parks and circulating within them, as well as for a refuse collection vehicle servicing the development on the surrounding streets and a Light Goods Vehicle using the on-street loading bays. These analyses indicate that the development's access design and layout can accommodate these vehicle movements where required.
- An independent Quality Audit has been conducted by PMCE Consulting Engineers; design changes have been made in response to the recommendations made in this Audit and these have been accepted by the Audit Team.

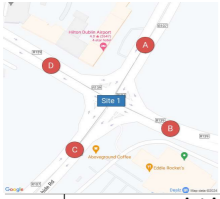
In summary, this assessment indicates that the proposed development can be supported by the existing road infrastructure, that existing public transport service capacity can cater for development demand, that the development includes appropriate car, motorcycle, and bicycle parking provisions, and that the development access design and internal layout are fit for purpose.



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Appendix A

Traffic Survey Data



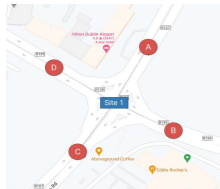
IDASO

Survey Name: 24260 - Belmayne and Clongriffin
Site: R107/R139
Location: R107/R139
Date: Thu 11-Apr-2024
AM Peak: 08:00 - 09:00
PM Peak: 17:15 - 18:15
15 Min Peak: 18:00 - 18:15

Arm A - R107 Malahide Road
Arm B - R139
Arm C - R107 Malahide Road
Arm D - R139

Total: 4395
Total: 4754
Total: 1229

Large data table with columns for time intervals (06:00 to 19:45) and traffic metrics (P/C, M/C, CAR, LGV, OGV1, OGV2, PSV, TOT, PCU) for different directions (A=>A, A=>B, A=>C, A=>D, B=>A, B=>B, B=>C, B=>D). Includes a final 14 TOT row.

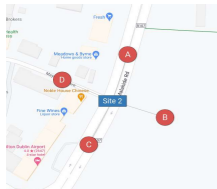


IDASO

Survey Name: 24260 - Belmayne and Clongriffin
Site: Site 1
Location: R107/R139
Date: Thu 11-Apr-2024
AM Peak: 08:00 - 09:00
PM Peak: 17:15 - 18:15
15 Min Peak: 08:00 - 09:00
Total: 4395
Total: 4754
Total: 1229

Arm A - R107 Malahide Road
Arm B - R139
Arm C - R107 Malahide Road
Arm D - R139

Table with columns for TIME, P/C, M/C, CAR, LGV, OGV1, OGV2, PSV, TOT, PCU, and various directional flow metrics (C=>A, C=>B, C=>C, C=>D, D=>A, D=>B, D=>C, D=>D) for each 15-minute interval from 06:00 to 14:00.



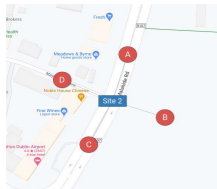
IDASO

Survey Name: 24260 - Belmayne and Clongriffin
Site: Site 2
Location: R107 Malahide Road / Main Street / Mayne River Avenue
Date: Thu 11-Apr-2024
AM Peak: 08:00 - 09:00
PM Peak: 17:30 - 18:30
15 Min Peak: 08:15 - 08:30

Arm A - R107 Malahide Road
Arm B - Main Street
Arm C - R107 Malahide Road
Arm D - Mayne River Avenue

Total: 2084
Total: 2064
Total: 553

Table with columns for TIME, P/C, M/C, CAR, LGV, OGV1, OGV2, PSV, TOT, PCU, and various flow directions (A=>A, A=>B, A=>C, A=>D, B=>A, B=>B, B=>C, B=>D). The table contains traffic flow data for 15-minute intervals from 06:00 to 19:45, including total counts and PCU values for each direction.



IDASO

Survey Name: 24260 - Belmayne and Clongriffin
Site: Site 2
Location: R107 Malahide Road / Main Street / Mayne River Avenue
Date: Thu 11-Apr-2024
AM Peak: 08:00 - 09:00
PM Peak: 17:30 - 18:30
15 Min Peak: 08:15 - 08:30

Arm A - R107 Malahide Road
Arm B - Main Street
Arm C - R107 Malahide Road
Arm D - Mayne River Avenue

Total: 2084
Total: 2064
Total: 553

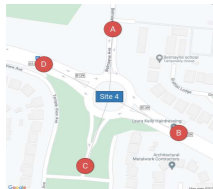
Table with columns for TIME, P/C, M/C, CAR, LGV, OGV1, OGV2, PSV, TOT, PCU, and various directional flow metrics (C=>A, C=>B, C=>C, D=>A, D=>B, D=>C, D=>D) for each time interval from 06:00 to 14:00.



IDASO

Survey Name: 24260 - Belmayne and Clongriffin
Site: 3
Location: R107 Malahide Road / Belmayne
Date: Thu 11-Apr-2024
AM Peak: 08:00 - 09:00
PM Peak: 17:00 - 18:00
15 Min Peak: 08:45 - 09:00
Arm A - Belmayne
Arm B - R107 Malahide Road
Arm C - R107 Malahide Road
Total: 2192
Total: 2168
Total: 578

Table with columns for TIME, P/C, M/C, CAR, LGV, OGV1, OGV2, PSV, TOT, and sub-sections for A=>A, A=>B, A=>C, B=>A, B=>B, B=>C, C=>A, C=>B, and C=>C. Each sub-section contains 15 columns of vehicle counts and a total column.

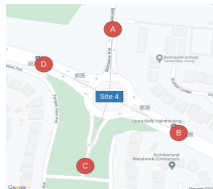


IDASO

Survey Name: 24260 - Belmayne and Clongriffin
Site: Site 4
Location: R139 Clarehall Avenue / Belmayne Avenue / Clare Hall
Date: Thu 11-Apr-2024
AM Peak: 07:45 - 08:45 Total: 2663
PM Peak: 17:30 - 18:30 Total: 2689
15 Min Peak: 08:15 - 08:30 Total: 741

Arm A - Belmayne Avenue
Arm B - R139
Arm C - Clare Hall
Arm D - R139

Table with columns for TIME, P/C, M/C, CAR, LGV, OGV1, OGV2, PSV, TOT, PCU, and various traffic flow metrics for arms A, B, C, and D. The table includes data for 15-minute intervals from 06:00 to 18:45, plus a 15-minute total row at the bottom.

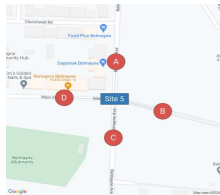


IDASO

Survey Name: 24260 - Belmayne and Clongriffin
Site: Site 4
Location: R139 Clarehall Avenue / Belmayne Avenue / Clare Hall
Date: Thu 11-Apr-2024
AM Peak: 07:45 - 08:45 Total: 2663
PM Peak: 17:30 - 18:30 Total: 2689
15 Min Peak: 08:15 - 08:30 Total: 741

Arm A - Belmayne Avenue
Arm B - R139
Arm C - Clare Hall
Arm D - R139

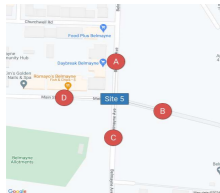
Table with columns for TIME, P/C, M/C, CAR, LGV, OGV1, OGV2, PSV, TOT, PCU, and various flow directions (C=>A, C=>B, C=>C, C=>D, D=>A, D=>B, D=>C, D=>D). Rows represent 15-minute intervals from 06:00 to 18:45, plus a final 14-TOT row.



IDASO

Survey Name: 24260 - Belmayne and Clongriffin
Site: Site 5
Location: Belmayne Avenue / Main Street
Date: Thu 11-Apr-2024
AM Peak: 08:00 - 09:00
PM Peak: 17:00 - 18:00
15 Min Peak: 08:15 - 08:30
Total: 690
Total: 597
Total: 217

Table with columns for Time, Direction (A=>A, A=>B, A=>C, B=>A, B=>B, B=>C, B=>D), and various traffic metrics (P/C, M/C, CAR, LGV, OGV1, OGV2, PSV, TOT, PCU). The table contains 15-minute intervals from 06:00 to 19:45, with a final 14:00-14:15 interval. Each interval lists counts for different vehicle types and a total count.



IDASO

Survey Name: 24260 - Belmayne and Clongriffin
Site: Site 5
Location: Belmayne Avenue / Main Street
Date: Thu 11-Apr-2024
AM Peak: 08:00 - 09:00
PM Peak: 17:00 - 18:00
15 Min Peak: 08:15 - 08:30
Total: 690
Total: 597
Total: 217

Arm A - Belmayne Avenue
Arm B - Main Street
Arm C - Belmayne Avenue
Arm D - Main Street

Table with columns for TIME, P/C, M/C, CAR, LGV, OGV1, OGV2, PSV, TOT, PCU, and various movement categories (C=>A, C=>B, C=>C, D=>A, D=>B, D=>C, D=>D) for each time interval from 06:00 to 14:00.

Summary row for 14:00 showing totals for all movement categories and PCU values.



IDASO

Survey Name: 24260 - Belmayne and Clongriffin
Site: Site 6
Location: R139 / R809 / Hole in the Wall Road
Date: Thu 11-Apr-2024
AM Peak: 08:15 - 09:15
PM Peak: 17:15 - 18:15
15 Min Peak: 08:15 - 08:30
Total: 3291
Total: 3336
Total: 865

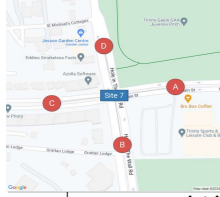
Table with columns for Time, P/C, M/C, CAR, LGV, OGV1, OGV2, PSV, TOT, PCU, and various flow directions (A=>B, A=>C, A=>D, B=>A, B=>B, B=>C, B=>D). The table contains detailed traffic flow data for each 15-minute interval from 06:00 to 14:00.



IDASO

Survey Name: 24260 - Belmayne and Clongriffin
Site: Site 6
Location: R139 / R809 / Hole in the Wall Road
Date: Thu 11-Apr-2024
AM Peak: 08:15 - 09:15
PM Peak: 17:15 - 18:15
15 Min Peak: 08:15 - 08:30
Total: 3291
Total: 3336
Total: 865

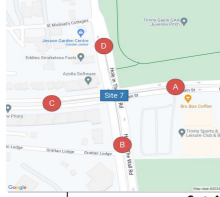
Table with columns for Time, Direction (C=>A, C=>B, C=>C, D=>A, D=>B, D=>C, D=>D), and various traffic flow metrics (P/C, M/C, CAR, LGV, OGV1, OGV2, PSV, TOT, PCU).



IDASO

Survey Name: 24260 - Belmayne and Clongriffin
Site: Site 7
Location: Hole in the Wall Road / Main Street
Date: Thu 11-Apr-2024
AM Peak: 07:45 - 08:45
PM Peak: 18:30 - 19:30
15 Min Peak: 19:00 - 19:15
Total: 1070
Total: 1325
Total: 344

Table with columns for Time, PCU, P/C, M/C, CAR, LGV, OGV1, OGV2, PSV, TOT, and PCU for various directions (A=>B, A=>C, A=>D, B=>A, B=>B, B=>C, B=>D). Rows represent 15-minute intervals from 06:00 to 19:45, plus a 14-TOT summary row.

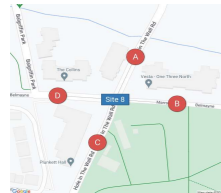


IDASO

Survey Name: 24260 - Belmayne and Clongriffin
Site: Site 7
Location: Hole in the Wall Road / Main Street
Date: Thu 11-Apr-2024
AM Peak: 07:45 - 08:45
PM Peak: 18:30 - 19:30
15 Min Peak: 19:00 - 19:15
Total: 1070
Total: 1325
Total: 344

Arm A - Main Street
Arm B - Hole in the Wall Road
Arm C - Main Street
Arm D - Hole in the Wall Road

Table with columns for Time, PCU, P/C, M/C, CAR, LGV, OGV1, OGV2, PSV, TOT, and various directional flow metrics (C=>B, C=>C, C=>D, D=>A, D=>B, D=>C, D=>D) for each 15-minute interval from 06:00 to 19:45.



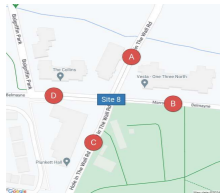
IDASO

Survey Name: 24260 - Belmayne and Clongriffin
Site: Site 8
Location: Hole in the Wall Road / Clongriffin Avenue / Marrsfield Avenue
Date: Thu 11-Apr-2024
AM Peak: 08:00 - 09:00
PM Peak: 17:00 - 18:00
15 Min Peak:

Total: 1327
Total: 1161
Total: 358

Arm A - Hole in the Wall Road
Arm B - Marrsfield Avenue
Arm C - Hole in the Wall Road
Arm D - Clongriffin Avenue

Table with columns: TIME, P/C, M/C, CAR, LGV, OGV1, OGV2, PSV, TOT, PCU, A=>B, A=>C, A=>D, B=>A, B=>B, B=>C, B=>D, PCU. Contains traffic flow data for various directions and times.



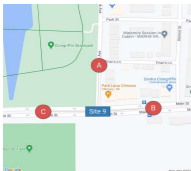
IDASO

Survey Name: 24260 - Belmayne and Clongriffin
Site: Site 8
Location: Hole in the Wall Road / Clongriffin Avenue / Marrsfield Avenue
Date: Thu 11-Apr-2024
AM Peak: 08:00 - 09:00
PM Peak: 17:00 - 18:00
15 Min Peak: 08:15 - 08:30

Arm A - Hole in the Wall Road
Arm B - Marrsfield Avenue
Arm C - Hole in the Wall Road
Arm D - Clongriffin Avenue

Total: 1327
Total: 1161
Total: 358

Table with columns for TIME, P/C, M/C, CAR, LGV, OGV1, OGV2, PSV, TOT, PCU, and various movement categories (C=>B, C=>C, C=>D, D=>A, D=>B, D=>C, D=>D) for each time interval from 06:00 to 14:00.



IDASO

Survey Name: 24260 - Belmont and Clongriffin
Site: Site 9
Location: Main Street / Park Avenue
Date: Thu 11-Apr-2024
AM Peak: 08:15 - 09:15
PM Peak: 17:00 - 18:00
15 Min Peak: 19:00 - 19:15
Total: 536
Total: 624
Total: 171

Arm A - Park Avenue
Arm B - Main Street
Arm C - Main Street

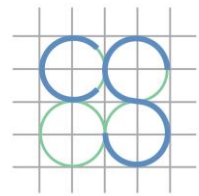
Table with columns for TIME, P/C, M/C, CAR, LGV, OGV1, OGV2, PSV, TOT, PCU, and sub-columns for directions A=>A, A=>B, A=>C, B=>A, B=>B, B=>C, C=>A, C=>B, and C=>C. The table contains traffic volume and occupancy data for various time intervals from 06:00 to 19:45.



IDASO

Survey Name: 24260 - Belmayne and Clongriffin
Site: Site 10
Location: Marrsfield Avenue / Park Avenue
Date: Thu 11-Apr-2024
AM Peak: 08:00 - 09:00
PM Peak: 17:30 - 18:30
15 Min Peak: 08:15 - 08:30
Arm A - Marrsfield Avenue
Arm B - Park Avenue
Arm C - Belmayne

Table with columns for Time, PCU, P/C, M/C, CAR, LGV, OGV1, OGV2, PSV, TOT, and sub-sections for A=>A, A=>B, A=>C, B=>A, B=>B, B=>C, C=>A, C=>B, and C=>C. The table contains detailed traffic flow data for various time intervals from 06:00 to 19:45.



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Appendix B

TRICS Data

Calculation Reference: AUDIT-656801-240417-0436

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

02	SOUTH EAST	
	HF HERTFORDSHIRE	3 days
	WS WEST SUSSEX	1 days
04	EAST ANGLIA	
	CA CAMBRIDGESHIRE	1 days
	NF NORFOLK	1 days
09	NORTH	
	TW TYNE & WEAR	1 days

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

Primary Filtering selection:

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

Parameter: Total Bedrooms
 Actual Range: 36 to 152 (units:)
 Range Selected by User: 10 to 1231 (units:)

Parking Spaces Range: All Surveys Included

Parking Spaces per Dwelling Range: All Surveys Included

Bedrooms per Dwelling Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/16 to 13/09/23

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

Selected survey days:

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

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

Selected survey types:

Manual count	7 days
Directional ATC Count	0 days

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

Selected Locations:

Suburban Area (PPS6 Out of Centre)	2
Edge of Town	3
Neighbourhood Centre (PPS6 Local Centre)	2

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

Selected Location Sub Categories:

Residential Zone	6
No Sub Category	1

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

Inclusion of Servicing Vehicles Counts:

Servicing vehicles Included	29 days - Selected
Servicing vehicles Excluded	8 days - Selected

Secondary Filtering selection:

Use Class:

C3 7 days

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

Population within 500m Range:

All Surveys Included

Secondary Filtering selection (Cont.):

Population within 1 mile:

20,001 to 25,000	5 days
25,001 to 50,000	2 days

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

Population within 5 miles:

125,001 to 250,000	7 days
--------------------	--------

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

Car ownership within 5 miles:

0.6 to 1.0	5 days
1.1 to 1.5	2 days

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

Travel Plan:

Yes	3 days
No	4 days

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

PTAL Rating:

No PTAL Present	7 days
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This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1	CA-03-C-03 CROMWELL ROAD CAMBRIDGE	BLOCKS OF FLATS		CAMBRI DGESHI RE
	Suburban Area (PPS6 Out of Centre) No Sub Category Total Total Bedrooms: 152 <i>Survey date: MONDAY 18/09/17</i>			
	<i>Survey Type: MANUAL</i>			
2	HF-03-C-06 FERNDOWN ROAD WATFORD SOUTH OXHEY	BLOCKS OF FLATS		HERTFORDSHIRE
	Edge of Town Residential Zone Total Total Bedrooms: 45 <i>Survey date: THURSDAY 08/06/23</i>			
	<i>Survey Type: MANUAL</i>			
3	HF-03-C-07 OXHEY DRIVE WATFORD SOUTH OXHEY	BLOCKS OF FLATS		HERTFORDSHIRE
	Neighbourhood Centre (PPS6 Local Centre) Residential Zone Total Total Bedrooms: 139 <i>Survey date: WEDNESDAY 07/06/23</i>			
	<i>Survey Type: MANUAL</i>			
4	HF-03-C-08 HAYLING ROAD WATFORD SOUTH OXHEY	BLOCKS OF FLATS		HERTFORDSHIRE
	Edge of Town Residential Zone Total Total Bedrooms: 38 <i>Survey date: TUESDAY 06/06/23</i>			
	<i>Survey Type: MANUAL</i>			
5	NF-03-C-02 HALL ROAD NORWICH LAKENHAM	MIXED FLATS & HOUSES		NORFOLK
	Suburban Area (PPS6 Out of Centre) Residential Zone Total Total Bedrooms: 143 <i>Survey date: MONDAY 18/11/19</i>			
	<i>Survey Type: MANUAL</i>			
6	TW-03-C-01 CAULDWELL AVENUE WHITLEY BAY MONKESEATON	BLOCKS OF FLATS		TYNE & WEAR
	Edge of Town Residential Zone Total Total Bedrooms: 90 <i>Survey date: FRIDAY 15/10/21</i>			
	<i>Survey Type: MANUAL</i>			
7	WS-03-C-01 GORING ROAD WORTHING GORING-BY-SEA	BLOCKS OF FLATS		WEST SUSSEX
	Neighbourhood Centre (PPS6 Local Centre) Residential Zone Total Total Bedrooms: 36 <i>Survey date: WEDNESDAY 11/05/22</i>			
	<i>Survey Type: MANUAL</i>			

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

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
 MULTI-MODAL TOTAL VEHICLES
 Calculation factor: 1 TOTBED
 BOLD print indicates peak (busiest) period
 Total People to Total Vehicles ratio (all time periods and directions): 2.34

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. TOTBED	Trip Rate	No. Days	Ave. TOTBED	Trip Rate	No. Days	Ave. TOTBED	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	7	92	0.011	7	92	0.104	7	92	0.115
08:00 - 09:00	7	92	0.048	7	92	0.121	7	92	0.169
09:00 - 10:00	7	92	0.053	7	92	0.058	7	92	0.111
10:00 - 11:00	7	92	0.042	7	92	0.061	7	92	0.103
11:00 - 12:00	7	92	0.054	7	92	0.053	7	92	0.107
12:00 - 13:00	7	92	0.051	7	92	0.048	7	92	0.099
13:00 - 14:00	7	92	0.050	7	92	0.070	7	92	0.120
14:00 - 15:00	7	92	0.062	7	92	0.050	7	92	0.112
15:00 - 16:00	7	92	0.103	7	92	0.054	7	92	0.157
16:00 - 17:00	7	92	0.078	7	92	0.059	7	92	0.137
17:00 - 18:00	7	92	0.117	7	92	0.053	7	92	0.170
18:00 - 19:00	7	92	0.076	7	92	0.036	7	92	0.112
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.745			0.767			1.512

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

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

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Parameter summary

Trip rate parameter range selected: 36 - 152 (units:)
 Survey date date range: 01/01/16 - 13/09/23
 Number of weekdays (Monday-Friday): 7
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys automatically removed from selection: 3
 Surveys manually removed from selection: 0

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

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

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. TOTBED	Trip Rate	No. Days	Ave. TOTBED	Trip Rate	No. Days	Ave. TOTBED	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	7	92	0.000	7	92	0.000	7	92	0.000
08:00 - 09:00	7	92	0.000	7	92	0.000	7	92	0.000
09:00 - 10:00	7	92	0.000	7	92	0.000	7	92	0.000
10:00 - 11:00	7	92	0.000	7	92	0.000	7	92	0.000
11:00 - 12:00	7	92	0.000	7	92	0.000	7	92	0.000
12:00 - 13:00	7	92	0.000	7	92	0.000	7	92	0.000
13:00 - 14:00	7	92	0.000	7	92	0.000	7	92	0.000
14:00 - 15:00	7	92	0.000	7	92	0.000	7	92	0.000
15:00 - 16:00	7	92	0.000	7	92	0.000	7	92	0.000
16:00 - 17:00	7	92	0.002	7	92	0.000	7	92	0.002
17:00 - 18:00	7	92	0.000	7	92	0.002	7	92	0.002
18:00 - 19:00	7	92	0.000	7	92	0.000	7	92	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.002			0.002			0.004

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
 MULTI-MODAL TOTAL PEOPLE

Calculation factor: 1 TOTBED

BOLD print indicates peak (busiest) period

Total People to Total Vehicles ratio (all time periods and directions): 2.34

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. TOTBED	Trip Rate	No. Days	Ave. TOTBED	Trip Rate	No. Days	Ave. TOTBED	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	7	92	0.016	7	92	0.255	7	92	0.271
08:00 - 09:00	7	92	0.089	7	92	0.383	7	92	0.472
09:00 - 10:00	7	92	0.100	7	92	0.151	7	92	0.251
10:00 - 11:00	7	92	0.079	7	92	0.134	7	92	0.213
11:00 - 12:00	7	92	0.118	7	92	0.128	7	92	0.246
12:00 - 13:00	7	92	0.114	7	92	0.118	7	92	0.232
13:00 - 14:00	7	92	0.112	7	92	0.149	7	92	0.261
14:00 - 15:00	7	92	0.140	7	92	0.114	7	92	0.254
15:00 - 16:00	7	92	0.255	7	92	0.103	7	92	0.358
16:00 - 17:00	7	92	0.188	7	92	0.112	7	92	0.300
17:00 - 18:00	7	92	0.281	7	92	0.123	7	92	0.404
18:00 - 19:00	7	92	0.201	7	92	0.076	7	92	0.277
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.693			1.846			3.539

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

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

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

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. TOTBED	Trip Rate	No. Days	Ave. TOTBED	Trip Rate	No. Days	Ave. TOTBED	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	7	92	0.002	7	92	0.005	7	92	0.007
08:00 - 09:00	7	92	0.005	7	92	0.008	7	92	0.013
09:00 - 10:00	7	92	0.006	7	92	0.003	7	92	0.009
10:00 - 11:00	7	92	0.006	7	92	0.008	7	92	0.014
11:00 - 12:00	7	92	0.006	7	92	0.005	7	92	0.011
12:00 - 13:00	7	92	0.006	7	92	0.003	7	92	0.009
13:00 - 14:00	7	92	0.003	7	92	0.008	7	92	0.011
14:00 - 15:00	7	92	0.006	7	92	0.005	7	92	0.011
15:00 - 16:00	7	92	0.008	7	92	0.002	7	92	0.010
16:00 - 17:00	7	92	0.003	7	92	0.008	7	92	0.011
17:00 - 18:00	7	92	0.003	7	92	0.000	7	92	0.003
18:00 - 19:00	7	92	0.003	7	92	0.003	7	92	0.006
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.057			0.058			0.115

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

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

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 04 - EDUCATION

Category : D - NURSERY

MULTI-MODAL TOTAL VEHICLES

Selected regions and areas:

02	SOUTH EAST	
	BH BRIGHTON & HOVE	1 days
05	EAST MIDLANDS	
	LN LINCOLNSHIRE	1 days
	NN NORTH NORTHAMPTONSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	DR DONCASTER	1 days
09	NORTH	
	TW TYNE & WEAR	1 days

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

Primary Filtering selection:

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

Parameter: Number of pupils
 Actual Range: 45 to 111 (units:)
 Range Selected by User: 37 to 138 (units:)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/16 to 07/06/22

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

Selected survey days:

Tuesday 3 days
 Friday 2 days

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

Selected survey types:

Manual count 5 days
 Directional ATC Count 0 days

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

Selected Locations:

Suburban Area (PPS6 Out of Centre) 4
 Neighbourhood Centre (PPS6 Local Centre) 1

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

Selected Location Sub Categories:

Residential Zone 5

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

Inclusion of Servicing Vehicles Counts:

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

Secondary Filtering selection:

Use Class:

E(f) 5 days

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

Population within 500m Range:

All Surveys Included

Population within 1 mile:

10,001 to 15,000 1 days
 15,001 to 20,000 2 days
 25,001 to 50,000 1 days
 50,001 to 100,000 1 days

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

Secondary Filtering selection (Cont.):

Population within 5 miles:

25,001 to 50,000	1 days
75,001 to 100,000	1 days
125,001 to 250,000	1 days
250,001 to 500,000	2 days

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

Car ownership within 5 miles:

0.5 or Less	1 days
0.6 to 1.0	1 days
1.1 to 1.5	2 days
2.1 to 2.5	1 days

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

Travel Plan:

No	5 days
----	--------

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

PTAL Rating:

No PTAL Present	5 days
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This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1	BH-04-D-01 NURSERY CONNAUGHT ROAD BRIGHTON HOVE Neighbourhood Centre (PPS6 Local Centre) Residential Zone Total Number of pupils: 45 <i>Survey date: FRIDAY 22/09/17</i>	BRIGHTON & HOVE <i>Survey Type: MANUAL</i>
2	DR-04-D-01 NURSERY BAWTRY ROAD DONCASTER Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of pupils: 111 <i>Survey date: FRIDAY 13/05/22</i>	DONCASTER <i>Survey Type: MANUAL</i>
3	LN-04-D-01 NURSERY NEWARK ROAD LINCOLN SWALLOW BECK Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of pupils: 49 <i>Survey date: TUESDAY 31/10/17</i>	LINCOLNSHIRE <i>Survey Type: MANUAL</i>
4	NN-04-D-01 NURSERY ROCKINGHAM ROAD KETTERING Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of pupils: 90 <i>Survey date: TUESDAY 07/06/22</i>	NORTH NORTHAMPTONSHIRE <i>Survey Type: MANUAL</i>
5	TW-04-D-03 NURSERY JUBILEE ROAD NEWCASTLE UPON TYNE GOSFORTH Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of pupils: 108 <i>Survey date: TUESDAY 21/05/19</i>	TYNE & WEAR <i>Survey Type: MANUAL</i>

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

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

MULTI-MODAL TOTAL VEHICLES

Calculation factor: 1

BOLD print indicates peak (busiest) period

Total People to Total Vehicles ratio (all time periods and directions): 2.44

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	81	0.114	5	81	0.032	5	81	0.146
08:00 - 09:00	5	81	0.181	5	81	0.114	5	81	0.295
09:00 - 10:00	5	81	0.060	5	81	0.047	5	81	0.107
10:00 - 11:00	5	81	0.007	5	81	0.005	5	81	0.012
11:00 - 12:00	5	81	0.002	5	81	0.002	5	81	0.004
12:00 - 13:00	5	81	0.065	5	81	0.084	5	81	0.149
13:00 - 14:00	5	81	0.067	5	81	0.087	5	81	0.154
14:00 - 15:00	5	81	0.012	5	81	0.020	5	81	0.032
15:00 - 16:00	5	81	0.037	5	81	0.035	5	81	0.072
16:00 - 17:00	5	81	0.055	5	81	0.057	5	81	0.112
17:00 - 18:00	5	81	0.119	5	81	0.181	5	81	0.300
18:00 - 19:00	5	81	0.010	5	81	0.065	5	81	0.075
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.729			0.729			1.458

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

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

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Parameter summary

Trip rate parameter range selected: 45 - 111 (units:)
 Survey date date range: 01/01/16 - 07/06/22
 Number of weekdays (Monday-Friday): 5
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys automatically removed from selection: 0
 Surveys manually removed from selection: 0

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

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

MULTI-MODAL TAXIS

Calculation factor: 1

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	81	0.000	5	81	0.000	5	81	0.000
08:00 - 09:00	5	81	0.002	5	81	0.002	5	81	0.004
09:00 - 10:00	5	81	0.000	5	81	0.000	5	81	0.000
10:00 - 11:00	5	81	0.000	5	81	0.000	5	81	0.000
11:00 - 12:00	5	81	0.000	5	81	0.000	5	81	0.000
12:00 - 13:00	5	81	0.007	5	81	0.007	5	81	0.014
13:00 - 14:00	5	81	0.000	5	81	0.000	5	81	0.000
14:00 - 15:00	5	81	0.000	5	81	0.000	5	81	0.000
15:00 - 16:00	5	81	0.000	5	81	0.000	5	81	0.000
16:00 - 17:00	5	81	0.000	5	81	0.000	5	81	0.000
17:00 - 18:00	5	81	0.002	5	81	0.002	5	81	0.004
18:00 - 19:00	5	81	0.000	5	81	0.000	5	81	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.011			0.011			0.022

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

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

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

MULTI-MODAL CYCLISTS

Calculation factor: 1

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	81	0.005	5	81	0.000	5	81	0.005
08:00 - 09:00	5	81	0.002	5	81	0.000	5	81	0.002
09:00 - 10:00	5	81	0.000	5	81	0.000	5	81	0.000
10:00 - 11:00	5	81	0.000	5	81	0.000	5	81	0.000
11:00 - 12:00	5	81	0.000	5	81	0.000	5	81	0.000
12:00 - 13:00	5	81	0.007	5	81	0.002	5	81	0.009
13:00 - 14:00	5	81	0.002	5	81	0.005	5	81	0.007
14:00 - 15:00	5	81	0.000	5	81	0.000	5	81	0.000
15:00 - 16:00	5	81	0.000	5	81	0.005	5	81	0.005
16:00 - 17:00	5	81	0.000	5	81	0.000	5	81	0.000
17:00 - 18:00	5	81	0.000	5	81	0.002	5	81	0.002
18:00 - 19:00	5	81	0.000	5	81	0.000	5	81	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.016			0.014			0.030

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

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

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

MULTI-MODAL TOTAL PEOPLE

Calculation factor: 1

BOLD print indicates peak (busiest) period

Total People to Total Vehicles ratio (all time periods and directions): 2.44

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	81	0.318	5	81	0.062	5	81	0.380
08:00 - 09:00	5	81	0.489	5	81	0.169	5	81	0.658
09:00 - 10:00	5	81	0.146	5	81	0.062	5	81	0.208
10:00 - 11:00	5	81	0.015	5	81	0.007	5	81	0.022
11:00 - 12:00	5	81	0.020	5	81	0.057	5	81	0.077
12:00 - 13:00	5	81	0.221	5	81	0.236	5	81	0.457
13:00 - 14:00	5	81	0.164	5	81	0.199	5	81	0.363
14:00 - 15:00	5	81	0.030	5	81	0.040	5	81	0.070
15:00 - 16:00	5	81	0.074	5	81	0.139	5	81	0.213
16:00 - 17:00	5	81	0.082	5	81	0.184	5	81	0.266
17:00 - 18:00	5	81	0.199	5	81	0.447	5	81	0.646
18:00 - 19:00	5	81	0.017	5	81	0.189	5	81	0.206
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.775			1.791			3.566

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

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

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

MULTI-MODAL CARS

Calculation factor: 1

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	81	0.114	5	81	0.032	5	81	0.146
08:00 - 09:00	5	81	0.176	5	81	0.109	5	81	0.285
09:00 - 10:00	5	81	0.060	5	81	0.047	5	81	0.107
10:00 - 11:00	5	81	0.005	5	81	0.005	5	81	0.010
11:00 - 12:00	5	81	0.000	5	81	0.000	5	81	0.000
12:00 - 13:00	5	81	0.055	5	81	0.072	5	81	0.127
13:00 - 14:00	5	81	0.065	5	81	0.087	5	81	0.152
14:00 - 15:00	5	81	0.010	5	81	0.017	5	81	0.027
15:00 - 16:00	5	81	0.037	5	81	0.032	5	81	0.069
16:00 - 17:00	5	81	0.052	5	81	0.057	5	81	0.109
17:00 - 18:00	5	81	0.117	5	81	0.176	5	81	0.293
18:00 - 19:00	5	81	0.010	5	81	0.065	5	81	0.075
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.701			0.699			1.400

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

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

TRIP RATE for Land Use 04 - EDUCATION/D - NURSERY
 MULTI-MODAL LGVS
 Calculation factor: 1
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	81	0.000	5	81	0.000	5	81	0.000
08:00 - 09:00	5	81	0.002	5	81	0.002	5	81	0.004
09:00 - 10:00	5	81	0.000	5	81	0.000	5	81	0.000
10:00 - 11:00	5	81	0.002	5	81	0.000	5	81	0.002
11:00 - 12:00	5	81	0.002	5	81	0.002	5	81	0.004
12:00 - 13:00	5	81	0.002	5	81	0.005	5	81	0.007
13:00 - 14:00	5	81	0.002	5	81	0.000	5	81	0.002
14:00 - 15:00	5	81	0.002	5	81	0.002	5	81	0.004
15:00 - 16:00	5	81	0.000	5	81	0.002	5	81	0.002
16:00 - 17:00	5	81	0.002	5	81	0.000	5	81	0.002
17:00 - 18:00	5	81	0.000	5	81	0.002	5	81	0.002
18:00 - 19:00	5	81	0.000	5	81	0.000	5	81	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.014			0.015			0.029

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

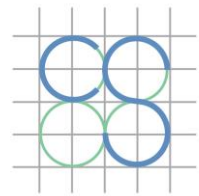
*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected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

TRIP RATE for Land Use 04 - EDUCATION/D - NURSERY
 MULTI-MODAL Servicing Vehicles
 Calculation factor: 1
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	81	0.000	5	81	0.000	5	81	0.000
08:00 - 09:00	5	81	0.002	5	81	0.002	5	81	0.004
09:00 - 10:00	5	81	0.000	5	81	0.000	5	81	0.000
10:00 - 11:00	5	81	0.002	5	81	0.000	5	81	0.002
11:00 - 12:00	5	81	0.002	5	81	0.002	5	81	0.004
12:00 - 13:00	5	81	0.002	5	81	0.005	5	81	0.007
13:00 - 14:00	5	81	0.002	5	81	0.000	5	81	0.002
14:00 - 15:00	5	81	0.000	5	81	0.000	5	81	0.000
15:00 - 16:00	5	81	0.000	5	81	0.002	5	81	0.002
16:00 - 17:00	5	81	0.000	5	81	0.000	5	81	0.000
17:00 - 18:00	5	81	0.000	5	81	0.000	5	81	0.000
18:00 - 19:00	5	81	0.000	5	81	0.000	5	81	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.010			0.011			0.021

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

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



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Appendix C

Traffic Flow Matrices

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

2024 AM Peak (08:00-09:00) SURVEYED TRAFFIC FLOWS. Table with columns: From, To, R107 South, R139 West, R107 North, R139 East, TOTALS. Values range from 0 to 1140.

2024 PM Peak (17:00-18:00) SURVEYED TRAFFIC FLOWS. Table with columns: From, To, R107 South, R139 West, R107 North, R139 East, TOTALS. Values range from 0 to 1642.

2024 AM Peak BASELINE TRAFFIC FLOWS (surveyed flows + TI growth factor). Table with columns: From, To, R107 South, R139 West, R107 North, R139 East, TOTALS. Values range from 0 to 1140.

2024 PM Peak BASELINE TRAFFIC FLOWS (surveyed flows + TI growth factor). Table with columns: From, To, R107 South, R139 West, R107 North, R139 East, TOTALS. Values range from 0 to 1642.

2026 AM Peak Other committed development flows. Table with columns: From, To, R107 South, R139 West, R107 North, R139 East, TOTALS. Values are mostly 0.

2026 PM Peak Other committed development flows. Table with columns: From, To, R107 South, R139 West, R107 North, R139 East, TOTALS. Values are mostly 0.

2027 AM Peak WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TI growth factor + committed development). Table with columns: From, To, R107 South, R139 West, R107 North, R139 East, TOTALS. Values range from 0 to 1227.

2027 PM Peak WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TI growth factor + committed development). Table with columns: From, To, R107 South, R139 West, R107 North, R139 East, TOTALS. Values range from 0 to 1767.

2027 AM Peak SUBJECT DEVELOPMENT FLOWS - OPERATIONAL PHASE. Table with columns: From, To, R107 South, R139 West, R107 North, R139 East, TOTALS. Values range from 0 to 8.

2027 PM Peak SUBJECT DEVELOPMENT FLOWS - OPERATIONAL PHASE. Table with columns: From, To, R107 South, R139 West, R107 North, R139 East, TOTALS. Values range from 0 to 19.

2027 AM Peak WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TI growth factor + committed dev. + subject dev.). Table with columns: From, To, R107 South, R139 West, R107 North, R139 East, TOTALS. Values range from 0 to 1235.

2027 PM Peak WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TI growth factor + committed dev. + subject dev.). Table with columns: From, To, R107 South, R139 West, R107 North, R139 East, TOTALS. Values range from 0 to 1786.

2032 AM Peak WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TI growth factor + committed development). Table with columns: From, To, R107 South, R139 West, R107 North, R139 East, TOTALS. Values range from 0 to 1444.

2032 PM Peak WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TI growth factor + committed development). Table with columns: From, To, R107 South, R139 West, R107 North, R139 East, TOTALS. Values range from 0 to 1936.

2032 AM Peak WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TI growth factor + committed dev. + subject dev.). Table with columns: From, To, R107 South, R139 West, R107 North, R139 East, TOTALS. Values range from 0 to 1352.

2032 PM Peak WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TI growth factor + committed dev. + subject dev.). Table with columns: From, To, R107 South, R139 West, R107 North, R139 East, TOTALS. Values range from 0 to 1955.

2042 AM Peak WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TI growth factor + committed development). Table with columns: From, To, R107 South, R139 West, R107 North, R139 East, TOTALS. Values range from 0 to 1546.

2042 PM Peak WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TI growth factor + committed development). Table with columns: From, To, R107 South, R139 West, R107 North, R139 East, TOTALS. Values range from 0 to 2099.

2042 AM Peak WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TI growth factor + committed dev. + subject dev.). Table with columns: From, To, R107 South, R139 West, R107 North, R139 East, TOTALS. Values range from 0 to 1466.

2042 PM Peak WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TI growth factor + committed dev. + subject dev.). Table with columns: From, To, R107 South, R139 West, R107 North, R139 East, TOTALS. Values range from 0 to 2118.

AADT Traffic Flow Matrices (Light and Heavy Vehicles) - Junction 1

2024 Light Vehicles		AADT SURVEYED TRAFFIC FLOWS				
From \ To	R107 South	R139 West	R107 North	R139 East	TOTALS	
R107 South	7	6132	6947	4302	17388	
R139 West	5391	1	3138	7431	15961	
R107 North	6543	2660	2	660	9865	
R139 East	5115	7391	684	0	13190	
TOTALS	17056	16184	10771	12393	56404	

2024 Heavy Vehicles		AADT SURVEYED TRAFFIC FLOWS				
From \ To	R107 South	R139 West	R107 North	R139 East	TOTALS	
R107 South	0	369	179	265	813	
R139 West	311	0	283	470	1064	
R107 North	161	263	0	25	449	
R139 East	275	454	21	0	750	
TOTALS	747	1086	483	760	3076	

2024 Light Vehicles		BASELINE TRAFFIC FLOWS (surveyed flows + TII growth factor)				
From \ To	R107 South	R139 West	R107 North	R139 East	TOTALS	
R107 South	7	6132	6947	4302	17388	
R139 West	5391	1	3138	7431	15961	
R107 North	6543	2660	2	660	9865	
R139 East	5115	7391	684	0	13190	
TOTALS	17056	16184	10771	12393	56404	

2024 Heavy Vehicles		BASELINE TRAFFIC FLOWS (surveyed flows + TII growth factor)				
From \ To	R107 South	R139 West	R107 North	R139 East	TOTALS	
R107 South	0	369	179	265	813	
R139 West	311	0	283	470	1064	
R107 North	161	263	0	25	449	
R139 East	275	454	21	0	750	
TOTALS	747	1086	483	760	3076	

2026 Light Vehicles		Other committed development flows				
From \ To	R107 South	R139 West	R107 North	R139 East	TOTALS	
R107 South	0	0	0	0	0	
R139 West	0	0	0	0	0	
R107 North	0	0	0	0	0	
R139 East	0	0	0	0	0	
TOTALS	0	0	0	0	0	

2026 Heavy Vehicles		Other committed development flows				
From \ To	R107 South	R139 West	R107 North	R139 East	TOTALS	
R107 South	0	0	0	0	0	
R139 West	0	0	0	0	0	
R107 North	0	0	0	0	0	
R139 East	0	0	0	0	0	
TOTALS	0	0	0	0	0	

2027 Light Vehicles		WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)				
From \ To	R107 South	R139 West	R107 North	R139 East	TOTALS	
R107 South	8	6598	7475	4629	18710	
R139 West	5800	1	3376	7995	17172	
R107 North	7040	2862	2	710	10614	
R139 East	5503	7952	736	0	14191	
TOTALS	18351	17413	11589	13334	60687	

2027 Heavy Vehicles		WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)				
From \ To	R107 South	R139 West	R107 North	R139 East	TOTALS	
R107 South	0	433	210	311	954	
R139 West	365	0	332	552	1249	
R107 North	189	309	0	29	527	
R139 East	323	533	25	0	881	
TOTALS	877	1275	567	892	3611	

2027 Light Vehicles		SUBJECT DEVELOPMENT FLOWS - OPERATIONAL PHASE				
From \ To	R107 South	R139 West	R107 North	R139 East	TOTALS	
R107 South	0	0	0	197	197	
R139 West	0	0	0	181	181	
R107 North	0	0	0	0	0	
R139 East	193	183	0	0	376	
TOTALS	193	183	0	378	754	

2027 Heavy Vehicles		SUBJECT DEVELOPMENT FLOWS - OPERATIONAL PHASE				
From \ To	R107 South	R139 West	R107 North	R139 East	TOTALS	
R107 South	0	0	0	0	0	
R139 West	0	0	0	0	0	
R107 North	0	0	0	0	0	
R139 East	0	0	0	0	0	
TOTALS	0	0	0	0	0	

2027 Light Vehicles		WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)				
From \ To	R107 South	R139 West	R107 North	R139 East	TOTALS	
R107 South	8	6598	7475	4826	18907	
R139 West	5800	1	3376	8176	17353	
R107 North	7040	2862	2	710	10614	
R139 East	5696	8135	736	0	14567	
TOTALS	18544	17596	11589	13712	61441	

2027 Heavy Vehicles		WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)				
From \ To	R107 South	R139 West	R107 North	R139 East	TOTALS	
R107 South	0	433	210	311	954	
R139 West	365	0	332	552	1249	
R107 North	189	309	0	29	527	
R139 East	323	533	25	0	881	
TOTALS	877	1275	567	892	3611	

2032 Light Vehicles		WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)				
From \ To	R107 South	R139 West	R107 North	R139 East	TOTALS	
R107 South	8	7230	8191	5072	20501	
R139 West	6356	1	3700	8762	18819	
R107 North	7715	3136	2	778	11631	
R139 East	6031	8714	806	0	15512	
TOTALS	20110	19081	12699	14612	66502	

2032 Heavy Vehicles		WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)				
From \ To	R107 South	R139 West	R107 North	R139 East	TOTALS	
R107 South	0	532	258	382	1172	
R139 West	449	0	408	678	1535	
R107 North	232	379	0	36	647	
R139 East	397	655	30	0	1082	
TOTALS	1078	1566	696	1096	4436	

2032 Light Vehicles		WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)				
From \ To	R107 South	R139 West	R107 North	R139 East	TOTALS	
R107 South	8	7230	8191	5269	20698	
R139 West	6356	1	3700	8943	19000	
R107 North	7715	3136	2	778	11631	
R139 East	6224	8897	806	0	15927	
TOTALS	20303	19264	12699	14990	67256	

2032 Heavy Vehicles		WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)				
From \ To	R107 South	R139 West	R107 North	R139 East	TOTALS	
R107 South	0	532	258	382	1172	
R139 West	449	0	408	678	1535	
R107 North	232	379	0	36	647	
R139 East	397	655	30	0	1082	
TOTALS	1078	1566	696	1096	4436	

2042 Light Vehicles		WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)				
From \ To	R107 South	R139 West	R107 North	R139 East	TOTALS	
R107 South	9	7839	8881	5499	22228	
R139 West	6892	1	4011	9499	20403	
R107 North	8364	3400	3	844	12611	
R139 East	6539	9448	874	0	16861	
TOTALS	21804	20688	13769	15842	72103	

2042 Heavy Vehicles		WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)				
From \ To	R107 South	R139 West	R107 North	R139 East	TOTALS	
R107 South	0	664	322	477	1463	
R139 West	559	0	509	845	1913	
R107 North	290	473	0	45	808	
R139 East	495	817	38	0	1350	
TOTALS	1344	1954	869	1367	5534	

2042 Light Vehicles		WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)				
From \ To	R107 South	R139 West	R107 North	R139 East	TOTALS	
R107 South	9	7839	8881	5696	22425	
R139 West	6892	1	4011	9680	20584	
R107 North	8364	3400	3	844	12611	
R139 East	6732	9631	874	0	17237	
TOTALS	21997	20871	13769	16220	72857	

2042 Heavy Vehicles		WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)				
From \ To	R107 South	R139 West	R107 North	R139 East	TOTALS	
R107 South	0	664	322	477	1463	
R139 West	559	0	509	845	1913	
R107 North	290	473	0	45	808	
R139 East	495	817	38	0	1350	
TOTALS	1344	1954	869	1367	5534	

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

2024 AM Peak (08:00-09:00)						2024 PM Peak (17:00-18:00)					
SURVEYED TRAFFIC FLOWS						SURVEYED TRAFFIC FLOWS					
From \ To	R107 South	Mayne River Ave (W)	R107 North	Main Street (E)	TOTALS	From \ To	R107 South	Mayne River Ave (W)	R107 North	Main Street (E)	TOTALS
R107 South	6	68	587	0	661	R107 South	12	78	948	0	1038
Mayne River Ave (W)	61	0	140	0	201	Mayne River Ave (W)	51	0	142	0	193
R107 North	974	222	21	0	1217	R107 North	575	177	27	0	779
Main Street (E)	0	0	0	0	0	Main Street (E)	0	0	0	0	0
TOTALS	1041	290	748	0	2079	TOTALS	638	255	1117	0	2010

2024 AM Peak						2024 PM Peak					
BASELINE TRAFFIC FLOWS (surveyed flows + TII growth factor)						BASELINE TRAFFIC FLOWS (surveyed flows + TII growth factor)					
From \ To	R107 South	Mayne River Ave (W)	R107 North	Main Street (E)	TOTALS	From \ To	R107 South	Mayne River Ave (W)	R107 North	Main Street (E)	TOTALS
R107 South	6	68	587	0	661	R107 South	12	78	948	0	1038
Mayne River Ave (W)	61	0	140	0	201	Mayne River Ave (W)	51	0	142	0	193
R107 North	974	222	21	0	1217	R107 North	575	177	27	0	779
Main Street (E)	0	0	0	0	0	Main Street (E)	0	0	0	0	0
TOTALS	1041	290	748	0	2079	TOTALS	638	255	1117	0	2010

2026 AM Peak						2026 PM Peak					
Other committed development flows						Other committed development flows					
From \ To	R107 South	Mayne River Ave (W)	R107 North	Main Street (E)	TOTALS	From \ To	R107 South	Mayne River Ave (W)	R107 North	Main Street (E)	TOTALS
R107 South	0	0	0	0	0	R107 South	0	0	0	0	0
Mayne River Ave (W)	0	0	0	0	0	Mayne River Ave (W)	0	0	0	0	0
R107 North	0	0	0	0	0	R107 North	0	0	0	0	0
Main Street (E)	0	0	0	0	0	Main Street (E)	0	0	0	0	0
TOTALS	0	0	0	0	0	TOTALS	0	0	0	0	0

2027 AM Peak						2027 PM Peak					
WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)						WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)					
From \ To	R107 South	Mayne River Ave (W)	R107 North	Main Street (E)	TOTALS	From \ To	R107 South	Mayne River Ave (W)	R107 North	Main Street (E)	TOTALS
R107 South	6	73	632	0	711	R107 South	13	84	1020	0	1117
Mayne River Ave (W)	66	0	151	0	217	Mayne River Ave (W)	55	0	153	0	208
R107 North	1048	239	23	0	1310	R107 North	619	190	29	0	838
Main Street (E)	0	0	0	0	0	Main Street (E)	0	0	0	0	0
TOTALS	1120	312	806	0	2238	TOTALS	687	274	1202	0	2163

2027 AM Peak						2027 PM Peak					
SUBJECT DEVELOPMENT FLOWS - OPERATIONAL PHASE						SUBJECT DEVELOPMENT FLOWS - OPERATIONAL PHASE					
From \ To	R107 South	Mayne River Ave (W)	R107 North	Main Street (E)	TOTALS	From \ To	R107 South	Mayne River Ave (W)	R107 North	Main Street (E)	TOTALS
R107 South	0	0	0	0	0	R107 South	0	0	0	0	0
Mayne River Ave (W)	0	0	0	0	0	Mayne River Ave (W)	0	0	0	0	0
R107 North	0	0	0	0	0	R107 North	0	0	0	0	0
Main Street (E)	0	0	0	0	0	Main Street (E)	0	0	0	0	0
TOTALS	0	0	0	0	0	TOTALS	0	0	0	0	0

2027 AM Peak						2027 PM Peak					
WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)						WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)					
From \ To	R107 South	Mayne River Ave (W)	R107 North	Main Street (E)	TOTALS	From \ To	R107 South	Mayne River Ave (W)	R107 North	Main Street (E)	TOTALS
R107 South	6	73	632	0	711	R107 South	13	84	1020	0	1117
Mayne River Ave (W)	66	0	151	0	217	Mayne River Ave (W)	55	0	153	0	208
R107 North	1048	239	23	0	1310	R107 North	619	190	29	0	838
Main Street (E)	0	0	0	0	0	Main Street (E)	0	0	0	0	0
TOTALS	1120	312	806	0	2238	TOTALS	687	274	1202	0	2163

2032 AM Peak						2032 PM Peak					
WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)						WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)					
From \ To	R107 South	Mayne River Ave (W)	R107 North	Main Street (E)	TOTALS	From \ To	R107 South	Mayne River Ave (W)	R107 North	Main Street (E)	TOTALS
R107 South	7	80	692	0	779	R107 South	14	92	1118	0	1224
Mayne River Ave (W)	72	0	165	0	237	Mayne River Ave (W)	60	0	167	0	227
R107 North	1148	262	25	0	1435	R107 North	678	209	32	0	919
Main Street (E)	0	0	0	0	0	Main Street (E)	0	0	0	0	0
TOTALS	1227	342	882	0	2451	TOTALS	752	301	1317	0	2370

2032 AM Peak						2032 PM Peak					
WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)						WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)					
From \ To	R107 South	Mayne River Ave (W)	R107 North	Main Street (E)	TOTALS	From \ To	R107 South	Mayne River Ave (W)	R107 North	Main Street (E)	TOTALS
R107 South	7	80	692	0	779	R107 South	14	92	1118	0	1224
Mayne River Ave (W)	72	0	165	0	237	Mayne River Ave (W)	60	0	167	0	227
R107 North	1148	262	25	0	1435	R107 North	678	209	32	0	919
Main Street (E)	0	0	0	0	0	Main Street (E)	0	0	0	0	0
TOTALS	1227	342	882	0	2451	TOTALS	752	301	1317	0	2370

2042 AM Peak						2042 PM Peak					
WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)						WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)					
From \ To	R107 South	Mayne River Ave (W)	R107 North	Main Street (E)	TOTALS	From \ To	R107 South	Mayne River Ave (W)	R107 North	Main Street (E)	TOTALS
R107 South	8	87	750	0	845	R107 South	15	100	1212	0	1327
Mayne River Ave (W)	78	0	179	0	257	Mayne River Ave (W)	65	0	182	0	247
R107 North	1245	284	27	0	1556	R107 North	735	226	35	0	996
Main Street (E)	0	0	0	0	0	Main Street (E)	0	0	0	0	0
TOTALS	1331	371	956	0	2658	TOTALS	815	326	1429	0	2570

2042 AM Peak						2042 PM Peak					
WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)						WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)					
From \ To	R107 South	Mayne River Ave (W)	R107 North	Main Street (E)	TOTALS	From \ To	R107 South	Mayne River Ave (W)	R107 North	Main Street (E)	TOTALS
R107 South	8	87	750	0	845	R107 South	15	100	1212	0	1327
Mayne River Ave (W)	78	0	179	0	257	Mayne River Ave (W)	65	0	182	0	247
R107 North	1245	284	27	0	1556	R107 North	735	226	35	0	996
Main Street (E)	0	0	0	0	0	Main Street (E)	0	0	0	0	0
TOTALS	1331	371	956	0	2658	TOTALS	815	326	1429	0	2570

AADT Traffic Flow Matrices (Light and Heavy Vehicles) - Junction 2

2024 Light Vehicles AADT SURVEYED TRAFFIC FLOWS						2024 Heavy Vehicles AADT SURVEYED TRAFFIC FLOWS															
From	To	R107 South	Mayne River Ave (W)	R107 North	Main Street (E)	TOTALS	From	To	R107 South	Mayne River Ave (W)	R107 North	Main Street (E)	TOTALS								
R107 South		123	801	9828	1	10753	R107 South		0	11	473	0	484								
Mayne River Ave (W)		572	0	1148	0	1720	Mayne River Ave (W)		2	0	13	0	15								
R107 North		9186	1731	290	2	11209	R107 North		447	21	0	0	468								
Main Street (E)		3	0	0	0	3	Main Street (E)		0	0	0	0	0								
TOTALS						9884	2532	11266	3	23685	TOTALS						449	32	486	0	967

2024 Light Vehicles BASELINE TRAFFIC FLOWS (surveyed flows + TII growth factor)						2024 Heavy Vehicles BASELINE TRAFFIC FLOWS (surveyed flows + TII growth factor)															
From	To	R107 South	Mayne River Ave (W)	R107 North	Main Street (E)	TOTALS	From	To	R107 South	Mayne River Ave (W)	R107 North	Main Street (E)	TOTALS								
R107 South		123	801	9828	1	10753	R107 South		0	11	473	0	484								
Mayne River Ave (W)		572	0	1148	0	1720	Mayne River Ave (W)		2	0	13	0	15								
R107 North		9186	1731	290	2	11209	R107 North		447	21	0	0	468								
Main Street (E)		3	0	0	0	3	Main Street (E)		0	0	0	0	0								
TOTALS						9884	2532	11266	3	23685	TOTALS						449	32	486	0	967

2026 Light Vehicles Other committed development flows						2026 Heavy Vehicles Other committed development flows															
From	To	R107 South	Mayne River Ave (W)	R107 North	Main Street (E)	TOTALS	From	To	R107 South	Mayne River Ave (W)	R107 North	Main Street (E)	TOTALS								
R107 South						0	R107 South						0								
Mayne River Ave (W)						0	Mayne River Ave (W)						0								
R107 North						0	R107 North						0								
Main Street (E)						0	Main Street (E)						0								
TOTALS						0	0	0	0	0	TOTALS						0	0	0	0	0

2027 Light Vehicles WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)						2027 Heavy Vehicles WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)															
From	To	R107 South	Mayne River Ave (W)	R107 North	Main Street (E)	TOTALS	From	To	R107 South	Mayne River Ave (W)	R107 North	Main Street (E)	TOTALS								
R107 South		132	862	10574	1	11569	R107 South		0	13	555	0	568								
Mayne River Ave (W)		615	0	1235	0	1850	Mayne River Ave (W)		2	0	15	0	17								
R107 North		9884	1862	312	2	12060	R107 North		525	25	0	0	550								
Main Street (E)		3	0	0	0	3	Main Street (E)		0	0	0	0	0								
TOTALS						10634	2724	12121	3	25482	TOTALS						527	38	570	0	1135

2027 Light Vehicles SUBJECT DEVELOPMENT FLOWS - OPERATIONAL PHASE						2027 Heavy Vehicles SUBJECT DEVELOPMENT FLOWS - OPERATIONAL PHASE															
From	To	R107 South	Mayne River Ave (W)	R107 North	Main Street (E)	TOTALS	From	To	R107 South	Mayne River Ave (W)	R107 North	Main Street (E)	TOTALS								
R107 South						0	R107 South						0								
Mayne River Ave (W)						0	Mayne River Ave (W)						0								
R107 North						0	R107 North						0								
Main Street (E)						0	Main Street (E)						0								
TOTALS						0	0	0	0	0	TOTALS						0	0	0	0	0

2027 Light Vehicles WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)						2027 Heavy Vehicles WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)															
From	To	R107 South	Mayne River Ave (W)	R107 North	Main Street (E)	TOTALS	From	To	R107 South	Mayne River Ave (W)	R107 North	Main Street (E)	TOTALS								
R107 South		132	862	10574	1	11569	R107 South		0	13	555	0	568								
Mayne River Ave (W)		615	0	1235	0	1850	Mayne River Ave (W)		2	0	15	0	17								
R107 North		9884	1862	312	2	12060	R107 North		525	25	0	0	550								
Main Street (E)		3	0	0	0	3	Main Street (E)		0	0	0	0	0								
TOTALS						10634	2724	12121	3	25482	TOTALS						527	38	570	0	1135

2032 Light Vehicles WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)						2032 Heavy Vehicles WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)															
From	To	R107 South	Mayne River Ave (W)	R107 North	Main Street (E)	TOTALS	From	To	R107 South	Mayne River Ave (W)	R107 North	Main Street (E)	TOTALS								
R107 South		145	944	11588	1	12678	R107 South		0	16	682	0	698								
Mayne River Ave (W)		674	0	1354	0	2028	Mayne River Ave (W)		3	0	19	0	22								
R107 North		10831	2041	342	2	13216	R107 North		645	30	0	0	675								
Main Street (E)		4	0	0	0	4	Main Street (E)		0	0	0	0	0								
TOTALS						11654	2985	13284	3	27926	TOTALS						648	46	701	0	1395

2032 Light Vehicles WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)						2032 Heavy Vehicles WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)															
From	To	R107 South	Mayne River Ave (W)	R107 North	Main Street (E)	TOTALS	From	To	R107 South	Mayne River Ave (W)	R107 North	Main Street (E)	TOTALS								
R107 South		145	944	11588	1	12678	R107 South		0	16	682	0	698								
Mayne River Ave (W)		674	0	1354	0	2028	Mayne River Ave (W)		3	0	19	0	22								
R107 North		10831	2041	342	2	13216	R107 North		645	30	0	0	675								
Main Street (E)		4	0	0	0	4	Main Street (E)		0	0	0	0	0								
TOTALS						11654	2985	13284	3	27926	TOTALS						648	46	701	0	1395

2042 Light Vehicles WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)						2042 Heavy Vehicles WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)															
From	To	R107 South	Mayne River Ave (W)	R107 North	Main Street (E)	TOTALS	From	To	R107 South	Mayne River Ave (W)	R107 North	Main Street (E)	TOTALS								
R107 South		157	1024	12564	1	13746	R107 South		0	20	851	0	871								
Mayne River Ave (W)		731	0	1468	0	2199	Mayne River Ave (W)		4	0	23	0	27								
R107 North		11743	2213	371	3	14330	R107 North		804	38	0	0	842								
Main Street (E)		4	0	0	0	4	Main Street (E)		0	0	0	0	0								
TOTALS						12635	3237	14403	4	30279	TOTALS						808	58	874	0	1740

2042 Light Vehicles WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)						2042 Heavy Vehicles WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)															
From	To	R107 South	Mayne River Ave (W)	R107 North	Main Street (E)	TOTALS	From	To	R107 South	Mayne River Ave (W)	R107 North	Main Street (E)	TOTALS								
R107 South		157	1024	12564	1	13746	R107 South		0	20	851	0	871								
Mayne River Ave (W)		731	0	1468	0	2199	Mayne River Ave (W)		4	0	23	0	27								
R107 North		11743	2213	371	3	14330	R107 North		804	38	0	0	842								
Main Street (E)		4	0	0	0	4	Main Street (E)		0	0	0	0	0								
TOTALS						12635	3237	14403	4	30279	TOTALS						808	58	874	0	1740

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

2024 AM Peak (08:00-09:00) SURVEYED TRAFFIC FLOWS

To		R107 North	Belmayne (East)	R107 South	TOTALS
From	R107 North	0	90	704	794
	Belmayne (East)	115	0	507	622
	R107 South	561	223	0	784
	TOTALS	676	313	1211	2200

2024 PM Peak (17:00-18:00) SURVEYED TRAFFIC FLOWS

To		R107 North	Belmayne (East)	R107 South	TOTALS
From	R107 North	0	86	544	630
	Belmayne (East)	89	0	222	311
	R107 South	835	383	0	1218
	TOTALS	924	469	766	2159

2024 AM Peak BASELINE TRAFFIC FLOWS (surveyed flows + TII growth factor)

To		R107 North	Belmayne (East)	R107 South	TOTALS
From	R107 North	0	90	704	794
	Belmayne (East)	115	0	507	622
	R107 South	561	223	0	784
	TOTALS	676	313	1211	2200

2024 PM Peak BASELINE TRAFFIC FLOWS (surveyed flows + TII growth factor)

To		R107 North	Belmayne (East)	R107 South	TOTALS
From	R107 North	0	86	544	630
	Belmayne (East)	89	0	222	311
	R107 South	835	383	0	1218
	TOTALS	924	469	766	2159

2026 AM Peak Other committed development flows

To		R107 North	Belmayne (East)	R107 South	TOTALS
From	R107 North				0
	Belmayne (East)				0
	R107 South				0
	TOTALS	0	0	0	0

2026 PM Peak Other committed development flows

To		R107 North	Belmayne (East)	R107 South	TOTALS
From	R107 North				0
	Belmayne (East)				0
	R107 South				0
	TOTALS	0	0	0	0

2027 AM Peak WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)

To		R107 North	Belmayne (East)	R107 South	TOTALS
From	R107 North	0	97	757	854
	Belmayne (East)	124	0	546	670
	R107 South	604	240	0	844
	TOTALS	728	337	1303	2368

2027 PM Peak WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)

To		R107 North	Belmayne (East)	R107 South	TOTALS
From	R107 North	0	93	585	678
	Belmayne (East)	96	0	239	335
	R107 South	898	412	0	1310
	TOTALS	994	505	824	2323

2027 AM Peak SUBJECT DEVELOPMENT FLOWS - OPERATIONAL PHASE

To		R107 North	Belmayne (East)	R107 South	TOTALS
From	R107 North	0	6	0	6
	Belmayne (East)	10	0	0	10
	R107 South	0	0	0	0
	TOTALS	10	6	0	16

2027 PM Peak SUBJECT DEVELOPMENT FLOWS - OPERATIONAL PHASE

To		R107 North	Belmayne (East)	R107 South	TOTALS
From	R107 North	0	7	0	7
	Belmayne (East)	7	0	0	7
	R107 South	0	0	0	0
	TOTALS	7	7	0	14

2027 AM Peak WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)

To		R107 North	Belmayne (East)	R107 South	TOTALS
From	R107 North	0	103	757	860
	Belmayne (East)	134	0	546	680
	R107 South	604	240	0	844
	TOTALS	738	343	1303	2384

2027 PM Peak WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)

To		R107 North	Belmayne (East)	R107 South	TOTALS
From	R107 North	0	100	585	685
	Belmayne (East)	103	0	239	342
	R107 South	898	412	0	1310
	TOTALS	1001	512	824	2337

2032 AM Peak WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)

To		R107 North	Belmayne (East)	R107 South	TOTALS
From	R107 North	0	106	830	936
	Belmayne (East)	136	0	598	734
	R107 South	661	263	0	924
	TOTALS	797	369	1428	2594

2032 PM Peak WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)

To		R107 North	Belmayne (East)	R107 South	TOTALS
From	R107 North	0	101	641	742
	Belmayne (East)	105	0	262	367
	R107 South	985	452	0	1437
	TOTALS	1090	553	903	2546

2032 AM Peak WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)

To		R107 North	Belmayne (East)	R107 South	TOTALS
From	R107 North	0	112	830	942
	Belmayne (East)	146	0	598	744
	R107 South	661	263	0	924
	TOTALS	807	375	1428	2610

2032 PM Peak WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)

To		R107 North	Belmayne (East)	R107 South	TOTALS
From	R107 North	0	108	641	749
	Belmayne (East)	112	0	262	374
	R107 South	985	452	0	1437
	TOTALS	1097	560	903	2560

2042 AM Peak WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)

To		R107 North	Belmayne (East)	R107 South	TOTALS
From	R107 North	0	115	900	1015
	Belmayne (East)	147	0	648	795
	R107 South	717	285	0	1002
	TOTALS	864	400	1548	2812

2042 PM Peak WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)

To		R107 North	Belmayne (East)	R107 South	TOTALS
From	R107 North	0	110	695	805
	Belmayne (East)	114	0	284	398
	R107 South	1067	490	0	1557
	TOTALS	1181	600	979	2760

2042 AM Peak WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)

To		R107 North	Belmayne (East)	R107 South	TOTALS
From	R107 North	0	121	900	1021
	Belmayne (East)	157	0	648	805
	R107 South	717	285	0	1002
	TOTALS	874	406	1548	2828

2042 PM Peak WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)

To		R107 North	Belmayne (East)	R107 South	TOTALS
From	R107 North	0	117	695	812
	Belmayne (East)	121	0	284	405
	R107 South	1067	490	0	1557
	TOTALS	1188	607	979	2774

AADT Traffic Flow Matrices (Light and Heavy Vehicles) - Junction 3

2024 Light Vehicles AADT SURVEYED TRAFFIC FLOWS

To		R107 North	Belmayne (East)	R107 South	TOTALS
From					
R107 North		0	804	7597	8401
Belmayne (East)		861	1	3444	4306
R107 South		8282	3268	1	11551
TOTALS		9143	4073	11042	24258

2024 Heavy Vehicles AADT SURVEYED TRAFFIC FLOWS

To		R107 North	Belmayne (East)	R107 South	TOTALS
From					
R107 North		0	20	422	442
Belmayne (East)		29	0	45	74
R107 South		441	49	0	490
TOTALS		470	69	467	1006

2024 Light Vehicles BASELINE TRAFFIC FLOWS (surveyed flows + TII growth factor)

To		R107 North	Belmayne (East)	R107 South	TOTALS
From					
R107 North		0	804	7597	8401
Belmayne (East)		861	1	3444	4306
R107 South		8282	3268	1	11551
TOTALS		9143	4073	11042	24258

2024 Heavy Vehicles BASELINE TRAFFIC FLOWS (surveyed flows + TII growth factor)

To		R107 North	Belmayne (East)	R107 South	TOTALS
From					
R107 North		0	20	422	442
Belmayne (East)		29	0	45	74
R107 South		441	49	0	490
TOTALS		470	69	467	1006

2026 Light Vehicles Other committed development flows

To		R107 North	Belmayne (East)	R107 South	TOTALS
From					
R107 North					0
Belmayne (East)					0
R107 South					0
TOTALS		0	0	0	0

2026 Heavy Vehicles Other committed development flows

To		R107 North	Belmayne (East)	R107 South	TOTALS
From					
R107 North					0
Belmayne (East)					0
R107 South					0
TOTALS		0	0	0	0

2027 Light Vehicles WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)

To		R107 North	Belmayne (East)	R107 South	TOTALS
From					
R107 North		0	865	8174	9039
Belmayne (East)		926	1	3706	4633
R107 South		8911	3516	1	12428
TOTALS		9837	4382	11881	26100

2027 Heavy Vehicles WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)

To		R107 North	Belmayne (East)	R107 South	TOTALS
From					
R107 North		0	23	495	518
Belmayne (East)		34	0	53	87
R107 South		518	58	0	576
TOTALS		552	81	548	1181

2027 Light Vehicles SUBJECT DEVELOPMENT FLOWS - OPERATIONAL PHASE

To		R107 North	Belmayne (East)	R107 South	TOTALS
From					
R107 North		0	95	0	95
Belmayne (East)		104	0	0	104
R107 South		0	0	0	0
TOTALS		104	95	0	199

2027 Heavy Vehicles SUBJECT DEVELOPMENT FLOWS - OPERATIONAL PHASE

To		R107 North	Belmayne (East)	R107 South	TOTALS
From					
R107 North		0	0	0	0
Belmayne (East)		0	0	0	0
R107 South		0	0	0	0
TOTALS		0	0	0	0

2027 Light Vehicles WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)

To		R107 North	Belmayne (East)	R107 South	TOTALS
From					
R107 North		0	960	8174	9134
Belmayne (East)		1030	1	3706	4737
R107 South		8911	3516	1	12428
TOTALS		9941	4477	11881	26299

2027 Heavy Vehicles WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)

To		R107 North	Belmayne (East)	R107 South	TOTALS
From					
R107 North		0	23	495	518
Belmayne (East)		34	0	53	87
R107 South		518	58	0	576
TOTALS		552	81	548	1181

2032 Light Vehicles WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)

To		R107 North	Belmayne (East)	R107 South	TOTALS
From					
R107 North		0	948	8957	9905
Belmayne (East)		1015	1	4061	5077
R107 South		9765	3853	1	13619
TOTALS		10780	4802	13019	28601

2032 Heavy Vehicles WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)

To		R107 North	Belmayne (East)	R107 South	TOTALS
From					
R107 North		0	29	609	638
Belmayne (East)		42	0	65	107
R107 South		636	71	0	707
TOTALS		678	100	674	1452

2032 Light Vehicles WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)

To		R107 North	Belmayne (East)	R107 South	TOTALS
From					
R107 North		0	1043	8957	10000
Belmayne (East)		1119	1	4061	5181
R107 South		9765	3853	1	13619
TOTALS		10884	4897	13019	28800

2032 Heavy Vehicles WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)

To		R107 North	Belmayne (East)	R107 South	TOTALS
From					
R107 North		0	29	609	638
Belmayne (East)		42	0	65	107
R107 South		636	71	0	707
TOTALS		678	100	674	1452

2042 Light Vehicles WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)

To		R107 North	Belmayne (East)	R107 South	TOTALS
From					
R107 North		0	1028	9712	10740
Belmayne (East)		1101	1	4403	5505
R107 South		10587	4178	1	14766
TOTALS		11688	5207	14116	31011

2042 Heavy Vehicles WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)

To		R107 North	Belmayne (East)	R107 South	TOTALS
From					
R107 North		0	36	759	795
Belmayne (East)		52	0	81	133
R107 South		793	88	0	881
TOTALS		845	124	840	1809

2042 Light Vehicles WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)

To		R107 North	Belmayne (East)	R107 South	TOTALS
From					
R107 North		0	1123	9712	10835
Belmayne (East)		1205	1	4403	5609
R107 South		10587	4178	1	14766
TOTALS		11792	5302	14116	31210

2042 Heavy Vehicles WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)

To		R107 North	Belmayne (East)	R107 South	TOTALS
From					
R107 North		0	36	759	795
Belmayne (East)		52	0	81	133
R107 South		793	88	0	881
TOTALS		845	124	840	1809

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

2024 AM Peak (08:00-09:00) SURVEYED TRAFFIC FLOWS						2024 PM Peak (17:00-18:00) SURVEYED TRAFFIC FLOWS					
From \ To	R139 West	Belmayne Ave (N)	R139 East	Clare Hall (S)	TOTALS	From \ To	R139 West	Belmayne Ave (N)	R139 East	Clare Hall (S)	TOTALS
R139 West	17	102	713	100	932	R139 West	12	126	713	191	1042
Belmayne Ave (N)	185	4	200	36	425	Belmayne Ave (N)	200	1	89	35	325
R139 East	717	125	4	69	915	R139 East	757	85	4	137	983
Clare Hall (S)	211	62	161	0	434	Clare Hall (S)	134	38	115	0	287
TOTALS	1130	293	1078	205	2706	TOTALS	1103	250	921	363	2637

2024 AM Peak BASELINE TRAFFIC FLOWS (surveyed flows + TII growth factor)						2024 PM Peak BASELINE TRAFFIC FLOWS (surveyed flows + TII growth factor)					
From \ To	R139 West	Belmayne Ave (N)	R139 East	Clare Hall (S)	TOTALS	From \ To	R139 West	Belmayne Ave (N)	R139 East	Clare Hall (S)	TOTALS
R139 West	17	102	713	100	932	R139 West	12	126	713	191	1042
Belmayne Ave (N)	185	4	200	36	425	Belmayne Ave (N)	200	1	89	35	325
R139 East	717	125	4	69	915	R139 East	757	85	4	137	983
Clare Hall (S)	211	62	161	0	434	Clare Hall (S)	134	38	115	0	287
TOTALS	1130	293	1078	205	2706	TOTALS	1103	250	921	363	2637

2026 AM Peak Other committed development flows						2026 PM Peak Other committed development flows					
From \ To	R139 West	Belmayne Ave (N)	R139 East	Clare Hall (S)	TOTALS	From \ To	R139 West	Belmayne Ave (N)	R139 East	Clare Hall (S)	TOTALS
R139 West	0	0	0	0	0	R139 West	0	0	0	0	0
Belmayne Ave (N)	0	0	0	0	0	Belmayne Ave (N)	0	0	0	0	0
R139 East	0	0	0	0	0	R139 East	0	0	0	0	0
Clare Hall (S)	0	0	0	0	0	Clare Hall (S)	0	0	0	0	0
TOTALS	0	0	0	0	0	TOTALS	0	0	0	0	0

2027 AM Peak WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)						2027 PM Peak WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)					
From \ To	R139 West	Belmayne Ave (N)	R139 East	Clare Hall (S)	TOTALS	From \ To	R139 West	Belmayne Ave (N)	R139 East	Clare Hall (S)	TOTALS
R139 West	18	110	767	108	1003	R139 West	13	136	767	206	1122
Belmayne Ave (N)	199	4	215	39	457	Belmayne Ave (N)	215	1	96	38	350
R139 East	771	134	4	74	983	R139 East	814	91	4	147	1056
Clare Hall (S)	227	67	173	0	467	Clare Hall (S)	144	41	124	0	309
TOTALS	1215	315	1159	221	2910	TOTALS	1186	269	991	391	2837

2027 AM Peak SUBJECT DEVELOPMENT FLOWS - OPERATIONAL PHASE						2027 PM Peak SUBJECT DEVELOPMENT FLOWS - OPERATIONAL PHASE					
From \ To	R139 West	Belmayne Ave (N)	R139 East	Clare Hall (S)	TOTALS	From \ To	R139 West	Belmayne Ave (N)	R139 East	Clare Hall (S)	TOTALS
R139 West	0	0	17	0	17	R139 West	0	0	34	0	34
Belmayne Ave (N)	0	0	0	0	0	Belmayne Ave (N)	0	0	0	0	0
R139 East	44	0	0	0	44	R139 East	20	0	0	0	20
Clare Hall (S)	0	0	0	0	0	Clare Hall (S)	0	0	0	0	0
TOTALS	44	0	17	0	61	TOTALS	20	0	34	0	54

2027 AM Peak WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)						2027 PM Peak WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)					
From \ To	R139 West	Belmayne Ave (N)	R139 East	Clare Hall (S)	TOTALS	From \ To	R139 West	Belmayne Ave (N)	R139 East	Clare Hall (S)	TOTALS
R139 West	18	110	784	108	1020	R139 West	13	136	801	206	1156
Belmayne Ave (N)	199	4	215	39	457	Belmayne Ave (N)	215	1	96	38	350
R139 East	815	134	4	74	1027	R139 East	834	91	4	147	1076
Clare Hall (S)	227	67	173	0	467	Clare Hall (S)	144	41	124	0	309
TOTALS	1259	315	1176	221	2971	TOTALS	1206	269	1025	391	2891

2032 AM Peak WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)						2032 PM Peak WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)					
From \ To	R139 West	Belmayne Ave (N)	R139 East	Clare Hall (S)	TOTALS	From \ To	R139 West	Belmayne Ave (N)	R139 East	Clare Hall (S)	TOTALS
R139 West	20	120	841	118	1099	R139 West	14	149	841	225	1229
Belmayne Ave (N)	218	5	236	42	501	Belmayne Ave (N)	236	1	105	41	383
R139 East	845	147	5	81	1078	R139 East	893	100	5	162	1160
Clare Hall (S)	249	73	190	0	512	Clare Hall (S)	158	45	136	0	339
TOTALS	1332	345	1272	241	3190	TOTALS	1301	295	1087	428	3111

2032 AM Peak WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)						2032 PM Peak WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)					
From \ To	R139 West	Belmayne Ave (N)	R139 East	Clare Hall (S)	TOTALS	From \ To	R139 West	Belmayne Ave (N)	R139 East	Clare Hall (S)	TOTALS
R139 West	20	120	858	118	1116	R139 West	14	149	875	225	1263
Belmayne Ave (N)	218	5	236	42	501	Belmayne Ave (N)	236	1	105	41	383
R139 East	889	147	5	81	1122	R139 East	913	100	5	162	1180
Clare Hall (S)	249	73	190	0	512	Clare Hall (S)	158	45	136	0	339
TOTALS	1376	345	1289	241	3251	TOTALS	1321	295	1121	428	3165

2042 AM Peak WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)						2042 PM Peak WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)					
From \ To	R139 West	Belmayne Ave (N)	R139 East	Clare Hall (S)	TOTALS	From \ To	R139 West	Belmayne Ave (N)	R139 East	Clare Hall (S)	TOTALS
R139 West	22	130	911	128	1191	R139 West	15	161	911	244	1331
Belmayne Ave (N)	236	5	256	46	543	Belmayne Ave (N)	256	1	114	45	416
R139 East	917	160	5	88	1170	R139 East	968	109	5	175	1257
Clare Hall (S)	270	79	206	0	555	Clare Hall (S)	171	49	147	0	367
TOTALS	1445	374	1378	262	3459	TOTALS	1410	320	1177	464	3371

2042 AM Peak WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)						2042 PM Peak WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)					
From \ To	R139 West	Belmayne Ave (N)	R139 East	Clare Hall (S)	TOTALS	From \ To	R139 West	Belmayne Ave (N)	R139 East	Clare Hall (S)	TOTALS
R139 West	22	130	928	128	1208	R139 West	15	161	945	244	1365
Belmayne Ave (N)	236	5	256	46	543	Belmayne Ave (N)	256	1	114	45	416
R139 East	961	160	5	88	1214	R139 East	988	109	5	175	1277
Clare Hall (S)	270	79	206	0	555	Clare Hall (S)	171	49	147	0	367
TOTALS	1489	374	1395	262	3520	TOTALS	1430	320	1211	464	3425

AADT Traffic Flow Matrices (Light and Heavy Vehicles) - Junction 4

2024 Light Vehicles AADT SURVEYED TRAFFIC FLOWS

From \ To	R139 West	Belmayne Ave (N)	R139 East	Clare Hall (S)	TOTALS
R139 West	11	1370	9316	1678	12375
Belmayne Ave (N)	1672	21	1153	330	3176
R139 East	9707	951	20	1196	11874
Clare Hall (S)	1840	355	1197	5	3397
TOTALS	13230	2697	11686	3209	30822

2024 Heavy Vehicles AADT SURVEYED TRAFFIC FLOWS

From \ To	R139 West	Belmayne Ave (N)	R139 East	Clare Hall (S)	TOTALS
R139 West	78	59	600	23	760
Belmayne Ave (N)	46	2	14	1	63
R139 East	601	9	2	15	627
Clare Hall (S)	23	6	11	0	40
TOTALS	748	76	627	39	1490

2024 Light Vehicles BASELINE TRAFFIC FLOWS (surveyed flows + TII growth factor)

From \ To	R139 West	Belmayne Ave (N)	R139 East	Clare Hall (S)	TOTALS
R139 West	11	1370	9316	1678	12375
Belmayne Ave (N)	1672	21	1153	330	3176
R139 East	9707	951	20	1196	11874
Clare Hall (S)	1840	355	1197	5	3397
TOTALS	13230	2697	11686	3209	30822

2024 Heavy Vehicles BASELINE TRAFFIC FLOWS (surveyed flows + TII growth factor)

From \ To	R139 West	Belmayne Ave (N)	R139 East	Clare Hall (S)	TOTALS
R139 West	78	59	600	23	760
Belmayne Ave (N)	46	2	14	1	63
R139 East	601	9	2	15	627
Clare Hall (S)	23	6	11	0	40
TOTALS	748	76	627	39	1490

2026 Light Vehicles Other committed development flows

From \ To	R139 West	Belmayne Ave (N)	R139 East	Clare Hall (S)	TOTALS
R139 West					0
Belmayne Ave (N)					0
R139 East					0
Clare Hall (S)					0
TOTALS	0	0	0	0	0

2026 Heavy Vehicles Other committed development flows

From \ To	R139 West	Belmayne Ave (N)	R139 East	Clare Hall (S)	TOTALS
R139 West					0
Belmayne Ave (N)					0
R139 East					0
Clare Hall (S)					0
TOTALS	0	0	0	0	0

2027 Light Vehicles WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)

From \ To	R139 West	Belmayne Ave (N)	R139 East	Clare Hall (S)	TOTALS
R139 West	12	1474	10024	1805	13315
Belmayne Ave (N)	1799	23	1241	355	3418
R139 East	10444	1023	22	1287	12776
Clare Hall (S)	1980	382	1288	5	3655
TOTALS	14235	2902	12575	3452	33164

2027 Heavy Vehicles WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)

From \ To	R139 West	Belmayne Ave (N)	R139 East	Clare Hall (S)	TOTALS
R139 West	92	69	704	27	892
Belmayne Ave (N)	54	2	16	1	73
R139 East	706	11	2	18	737
Clare Hall (S)	27	7	13	0	47
TOTALS	879	89	735	46	1749

2027 Light Vehicles SUBJECT DEVELOPMENT FLOWS - OPERATIONAL PHASE

From \ To	R139 West	Belmayne Ave (N)	R139 East	Clare Hall (S)	TOTALS
R139 West	0	0	378	0	378
Belmayne Ave (N)	0	0	0	0	0
R139 East	376	0	0	0	376
Clare Hall (S)	0	0	0	0	0
TOTALS	376	0	378	0	754

2027 Heavy Vehicles SUBJECT DEVELOPMENT FLOWS - OPERATIONAL PHASE

From \ To	R139 West	Belmayne Ave (N)	R139 East	Clare Hall (S)	TOTALS
R139 West	0	0	0	0	0
Belmayne Ave (N)	0	0	0	0	0
R139 East	0	0	0	0	0
Clare Hall (S)	0	0	0	0	0
TOTALS	0	0	0	0	0

2027 Light Vehicles WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)

From \ To	R139 West	Belmayne Ave (N)	R139 East	Clare Hall (S)	TOTALS
R139 West	12	1474	10402	1805	13693
Belmayne Ave (N)	1799	23	1241	355	3418
R139 East	10820	1023	22	1287	13152
Clare Hall (S)	1980	382	1288	5	3655
TOTALS	14611	2902	12953	3452	33918

2027 Heavy Vehicles WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)

From \ To	R139 West	Belmayne Ave (N)	R139 East	Clare Hall (S)	TOTALS
R139 West	92	69	704	27	892
Belmayne Ave (N)	54	2	16	1	73
R139 East	706	11	2	18	737
Clare Hall (S)	27	7	13	0	47
TOTALS	879	89	735	46	1749

2032 Light Vehicles WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)

From \ To	R139 West	Belmayne Ave (N)	R139 East	Clare Hall (S)	TOTALS
R139 West	13	1615	10984	1978	14590
Belmayne Ave (N)	1971	25	1359	389	3744
R139 East	11445	1121	24	1410	14000
Clare Hall (S)	2169	419	1411	6	4005
TOTALS	15598	3180	13778	3783	36339

2032 Heavy Vehicles WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)

From \ To	R139 West	Belmayne Ave (N)	R139 East	Clare Hall (S)	TOTALS
R139 West	112	85	865	33	1095
Belmayne Ave (N)	66	3	20	1	90
R139 East	867	13	3	22	905
Clare Hall (S)	33	9	16	0	58
TOTALS	1078	110	904	56	2148

2032 Light Vehicles WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)

From \ To	R139 West	Belmayne Ave (N)	R139 East	Clare Hall (S)	TOTALS
R139 West	13	1615	11362	1978	14968
Belmayne Ave (N)	1971	25	1359	389	3744
R139 East	11821	1121	24	1410	14376
Clare Hall (S)	2169	419	1411	6	4005
TOTALS	15974	3180	14156	3783	37093

2032 Heavy Vehicles WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)

From \ To	R139 West	Belmayne Ave (N)	R139 East	Clare Hall (S)	TOTALS
R139 West	112	85	865	33	1095
Belmayne Ave (N)	66	3	20	1	90
R139 East	867	13	3	22	905
Clare Hall (S)	33	9	16	0	58
TOTALS	1078	110	904	56	2148

2042 Light Vehicles WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)

From \ To	R139 West	Belmayne Ave (N)	R139 East	Clare Hall (S)	TOTALS
R139 West	14	1751	11909	2145	15819
Belmayne Ave (N)	2137	27	1474	422	4060
R139 East	12409	1216	26	1529	15180
Clare Hall (S)	2352	454	1530	6	4342
TOTALS	16912	3448	14939	4102	39401

2042 Heavy Vehicles WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)

From \ To	R139 West	Belmayne Ave (N)	R139 East	Clare Hall (S)	TOTALS
R139 West	140	106	1079	41	1366
Belmayne Ave (N)	83	4	25	2	114
R139 East	1081	16	4	27	1128
Clare Hall (S)	41	11	20	0	72
TOTALS	1345	137	1128	70	2680

2042 Light Vehicles WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)

From \ To	R139 West	Belmayne Ave (N)	R139 East	Clare Hall (S)	TOTALS
R139 West	14	1751	12287	2145	16197
Belmayne Ave (N)	2137	27	1474	422	4060
R139 East	12785	1216	26	1529	15556
Clare Hall (S)	2352	454	1530	6	4342
TOTALS	17288	3448	15317	4102	40155

2042 Heavy Vehicles WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)

From \ To	R139 West	Belmayne Ave (N)	R139 East	Clare Hall (S)	TOTALS
R139 West	140	106	1079	41	1366
Belmayne Ave (N)	83	4	25	2	114
R139 East	1081	16	4	27	1128
Clare Hall (S)	41	11	20	0	72
TOTALS	1345	137	1128	70	2680

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

2024 AM Peak (08:00-09:00) SURVEYED TRAFFIC FLOWS							2024 PM Peak (17:00-18:00) SURVEYED TRAFFIC FLOWS						
From \ To	Belmayne Ave North	Main Street East	Belmayne Ave South	Main Street West	TOTALS		From \ To	Belmayne Ave North	Main Street East	Belmayne Ave South	Main Street West	TOTALS	
Belmayne Ave North	0	5	381	0	386		Belmayne Ave North	2	2	234	0	238	
Main Street East	10	2	12	11	35		Main Street East	6	0	32	6	44	
Belmayne Ave South	234	24	2	5	265		Belmayne Ave South	243	5	6	1	255	
Main Street West	0	9	3	0	12		Main Street West	1	7	52	0	60	
TOTALS	244	40	398	16	698		TOTALS	252	14	324	7	597	

2024 AM Peak BASELINE TRAFFIC FLOWS (surveyed flows + TII growth factor)							2024 PM Peak BASELINE TRAFFIC FLOWS (surveyed flows + TII growth factor)						
From \ To	Belmayne Ave North	Main Street East	Belmayne Ave South	Main Street West	TOTALS		From \ To	Belmayne Ave North	Main Street East	Belmayne Ave South	Main Street West	TOTALS	
Belmayne Ave North	0	5	381	0	386		Belmayne Ave North	2	2	234	0	238	
Main Street East	10	2	12	11	35		Main Street East	6	0	32	6	44	
Belmayne Ave South	234	24	2	5	265		Belmayne Ave South	243	5	6	1	255	
Main Street West	0	9	3	0	12		Main Street West	1	7	52	0	60	
TOTALS	244	40	398	16	698		TOTALS	252	14	324	7	597	

2026 AM Peak Other committed development flows							2026 PM Peak Other committed development flows						
From \ To	Belmayne Ave North	Main Street East	Belmayne Ave South	Main Street West	TOTALS		From \ To	Belmayne Ave North	Main Street East	Belmayne Ave South	Main Street West	TOTALS	
Belmayne Ave North	0	0	0	0	0		Belmayne Ave North	0	0	0	0	0	
Main Street East	0	0	0	0	0		Main Street East	0	0	0	0	0	
Belmayne Ave South	0	0	0	0	0		Belmayne Ave South	0	0	0	0	0	
Main Street West	0	0	0	0	0		Main Street West	0	0	0	0	0	
TOTALS	0	0	0	0	0		TOTALS	0	0	0	0	0	

2027 AM Peak WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)							2027 PM Peak WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)						
From \ To	Belmayne Ave North	Main Street East	Belmayne Ave South	Main Street West	TOTALS		From \ To	Belmayne Ave North	Main Street East	Belmayne Ave South	Main Street West	TOTALS	
Belmayne Ave North	0	5	410	0	415		Belmayne Ave North	2	2	252	0	256	
Main Street East	11	2	13	12	38		Main Street East	6	0	34	6	46	
Belmayne Ave South	252	26	2	5	285		Belmayne Ave South	261	5	6	1	273	
Main Street West	0	10	3	0	13		Main Street West	1	8	56	0	65	
TOTALS	263	43	428	17	751		TOTALS	270	15	348	7	640	

2027 AM Peak SUBJECT DEVELOPMENT FLOWS - OPERATIONAL PHASE							2027 PM Peak SUBJECT DEVELOPMENT FLOWS - OPERATIONAL PHASE						
From \ To	Belmayne Ave North	Main Street East	Belmayne Ave South	Main Street West	TOTALS		From \ To	Belmayne Ave North	Main Street East	Belmayne Ave South	Main Street West	TOTALS	
Belmayne Ave North	0	0	0	0	0		Belmayne Ave North	0	0	0	0	0	
Main Street East	0	0	0	0	0		Main Street East	0	0	0	0	0	
Belmayne Ave South	0	0	0	0	0		Belmayne Ave South	0	0	0	0	0	
Main Street West	0	0	0	0	0		Main Street West	0	0	0	0	0	
TOTALS	0	0	0	0	0		TOTALS	0	0	0	0	0	

2027 AM Peak WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)							2027 PM Peak WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)						
From \ To	Belmayne Ave North	Main Street East	Belmayne Ave South	Main Street West	TOTALS		From \ To	Belmayne Ave North	Main Street East	Belmayne Ave South	Main Street West	TOTALS	
Belmayne Ave North	0	5	410	0	415		Belmayne Ave North	2	2	252	0	256	
Main Street East	11	2	13	12	38		Main Street East	6	0	34	6	46	
Belmayne Ave South	252	26	2	5	285		Belmayne Ave South	261	5	6	1	273	
Main Street West	0	10	3	0	13		Main Street West	1	8	56	0	65	
TOTALS	263	43	428	17	751		TOTALS	270	15	348	7	640	

2032 AM Peak WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)							2032 PM Peak WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)						
From \ To	Belmayne Ave North	Main Street East	Belmayne Ave South	Main Street West	TOTALS		From \ To	Belmayne Ave North	Main Street East	Belmayne Ave South	Main Street West	TOTALS	
Belmayne Ave North	0	6	449	0	455		Belmayne Ave North	2	2	276	0	280	
Main Street East	12	2	14	13	41		Main Street East	7	0	38	7	52	
Belmayne Ave South	276	28	2	6	312		Belmayne Ave South	287	6	7	1	301	
Main Street West	0	11	4	0	15		Main Street West	1	8	61	0	70	
TOTALS	288	47	469	19	823		TOTALS	297	16	382	8	703	

2032 AM Peak WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)							2032 PM Peak WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)						
From \ To	Belmayne Ave North	Main Street East	Belmayne Ave South	Main Street West	TOTALS		From \ To	Belmayne Ave North	Main Street East	Belmayne Ave South	Main Street West	TOTALS	
Belmayne Ave North	0	6	449	0	455		Belmayne Ave North	2	2	276	0	280	
Main Street East	12	2	14	13	41		Main Street East	7	0	38	7	52	
Belmayne Ave South	276	28	2	6	312		Belmayne Ave South	287	6	7	1	301	
Main Street West	0	11	4	0	15		Main Street West	1	8	61	0	70	
TOTALS	288	47	469	19	823		TOTALS	297	16	382	8	703	

2042 AM Peak WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)							2042 PM Peak WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)						
From \ To	Belmayne Ave North	Main Street East	Belmayne Ave South	Main Street West	TOTALS		From \ To	Belmayne Ave North	Main Street East	Belmayne Ave South	Main Street West	TOTALS	
Belmayne Ave North	0	6	487	0	493		Belmayne Ave North	3	3	299	0	305	
Main Street East	13	3	15	14	45		Main Street East	8	0	41	8	57	
Belmayne Ave South	299	31	3	6	339		Belmayne Ave South	311	6	8	1	326	
Main Street West	0	12	4	0	16		Main Street West	1	9	66	0	76	
TOTALS	312	52	509	20	893		TOTALS	323	18	414	9	764	

2042 AM Peak WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)							2042 PM Peak WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)						
From \ To	Belmayne Ave North	Main Street East	Belmayne Ave South	Main Street West	TOTALS		From \ To	Belmayne Ave North	Main Street East	Belmayne Ave South	Main Street West	TOTALS	
Belmayne Ave North	0	6	487	0	493		Belmayne Ave North	3	3	299	0	305	
Main Street East	13	3	15	14	45		Main Street East	8	0	41	8	57	
Belmayne Ave South	299	31	3	6	339		Belmayne Ave South	311	6	8	1	326	
Main Street West	0	12	4	0	16		Main Street West	1	9	66	0	76	
TOTALS	312	52	509	20	893		TOTALS	323	18	414	9	764	

Peak Hour Traffic Flow Matrices (Passenger Car Units) - Junction 6

2024 AM Peak (08:00-09:00) SURVEYED TRAFFIC FLOWS							2024 PM Peak (17:00-18:00) SURVEYED TRAFFIC FLOWS						
From \ To	R139 West	Hole in the Wall Rd (N)	R139 East	R809 (S)	TOTALS		From \ To	R139 West	Hole in the Wall Rd (N)	R139 East	R809 (S)	TOTALS	
R139 West	0	164	514	338	1016		R139 West	0	212	350	355	917	
Hole in the Wall Rd (N)	163	20	150	377	710		Hole in the Wall Rd (N)	214	20	129	323	686	
R139 East	430	95	0	207	732		R139 East	459	135	1	226	821	
R809 (S)	337	290	211	3	841		R809 (S)	314	381	207	3	905	
TOTALS	930	569	875	925	3299		TOTALS	987	748	687	907	3329	

2024 AM Peak BASELINE TRAFFIC FLOWS (surveyed flows + TII growth factor)							2024 PM Peak BASELINE TRAFFIC FLOWS (surveyed flows + TII growth factor)						
From \ To	R139 West	Hole in the Wall Rd (N)	R139 East	R809 (S)	TOTALS		From \ To	R139 West	Hole in the Wall Rd (N)	R139 East	R809 (S)	TOTALS	
R139 West	0	164	514	338	1016		R139 West	0	212	350	355	917	
Hole in the Wall Rd (N)	163	20	150	377	710		Hole in the Wall Rd (N)	214	20	129	323	686	
R139 East	430	95	0	207	732		R139 East	459	135	1	226	821	
R809 (S)	337	290	211	3	841		R809 (S)	314	381	207	3	905	
TOTALS	930	569	875	925	3299		TOTALS	987	748	687	907	3329	

2026 AM Peak Other committed development flows							2026 PM Peak Other committed development flows						
From \ To	R139 West	Hole in the Wall Rd (N)	R139 East	R809 (S)	TOTALS		From \ To	R139 West	Hole in the Wall Rd (N)	R139 East	R809 (S)	TOTALS	
R139 West	0				0		R139 West	0				0	
Hole in the Wall Rd (N)					0		Hole in the Wall Rd (N)					0	
R139 East					0		R139 East					0	
R809 (S)					0		R809 (S)					0	
TOTALS	0	0	0	0	0		TOTALS	0	0	0	0	0	

2027 AM Peak WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)							2027 PM Peak WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)						
From \ To	R139 West	Hole in the Wall Rd (N)	R139 East	R809 (S)	TOTALS		From \ To	R139 West	Hole in the Wall Rd (N)	R139 East	R809 (S)	TOTALS	
R139 West	0	176	553	364	1093		R139 West	0	228	377	382	987	
Hole in the Wall Rd (N)	175	22	161	406	764		Hole in the Wall Rd (N)	230	22	139	348	739	
R139 East	463	102	0	223	788		R139 East	494	145	1	243	883	
R809 (S)	363	312	227	3	905		R809 (S)	338	410	223	3	974	
TOTALS	1001	612	941	996	3550		TOTALS	1062	805	740	976	3583	

2027 AM Peak SUBJECT DEVELOPMENT FLOWS - OPERATIONAL PHASE							2027 PM Peak SUBJECT DEVELOPMENT FLOWS - OPERATIONAL PHASE						
From \ To	R139 West	Hole in the Wall Rd (N)	R139 East	R809 (S)	TOTALS		From \ To	R139 West	Hole in the Wall Rd (N)	R139 East	R809 (S)	TOTALS	
R139 West	0	17	0	0	17		R139 West	0	34	0	0	34	
Hole in the Wall Rd (N)	44	0	13	14	71		Hole in the Wall Rd (N)	20	0	5	7	32	
R139 East	0	5	0	0	5		R139 East	0	10	0	0	10	
R809 (S)	0	6	0	0	6		R809 (S)	0	10	0	0	10	
TOTALS	44	28	13	14	99		TOTALS	20	54	5	7	86	

2027 AM Peak WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)							2027 PM Peak WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)						
From \ To	R139 West	Hole in the Wall Rd (N)	R139 East	R809 (S)	TOTALS		From \ To	R139 West	Hole in the Wall Rd (N)	R139 East	R809 (S)	TOTALS	
R139 West	0	193	553	364	1110		R139 West	0	262	377	382	1021	
Hole in the Wall Rd (N)	219	22	174	420	835		Hole in the Wall Rd (N)	250	22	144	355	771	
R139 East	463	107	0	223	793		R139 East	494	155	1	243	893	
R809 (S)	363	318	227	3	911		R809 (S)	338	420	223	3	984	
TOTALS	1045	640	954	1010	3649		TOTALS	1082	859	745	983	3669	

2032 AM Peak WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)							2032 PM Peak WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)						
From \ To	R139 West	Hole in the Wall Rd (N)	R139 East	R809 (S)	TOTALS		From \ To	R139 West	Hole in the Wall Rd (N)	R139 East	R809 (S)	TOTALS	
R139 West	0	193	606	399	1198		R139 West	0	250	413	419	1082	
Hole in the Wall Rd (N)	192	24	177	445	838		Hole in the Wall Rd (N)	252	24	152	381	809	
R139 East	507	112	0	244	863		R139 East	541	159	1	266	967	
R809 (S)	397	342	249	4	992		R809 (S)	370	449	244	4	1067	
TOTALS	1096	671	1032	1092	3891		TOTALS	1163	882	810	1070	3925	

2032 AM Peak WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)							2032 PM Peak WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)						
From \ To	R139 West	Hole in the Wall Rd (N)	R139 East	R809 (S)	TOTALS		From \ To	R139 West	Hole in the Wall Rd (N)	R139 East	R809 (S)	TOTALS	
R139 West	0	210	606	399	1215		R139 West	0	284	413	419	1116	
Hole in the Wall Rd (N)	236	24	190	459	909		Hole in the Wall Rd (N)	272	24	157	388	841	
R139 East	507	117	0	244	868		R139 East	541	169	1	266	977	
R809 (S)	397	348	249	4	998		R809 (S)	370	459	244	4	1077	
TOTALS	1140	699	1045	1106	3990		TOTALS	1183	936	815	1077	4011	

2042 AM Peak WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)							2042 PM Peak WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)						
From \ To	R139 West	Hole in the Wall Rd (N)	R139 East	R809 (S)	TOTALS		From \ To	R139 West	Hole in the Wall Rd (N)	R139 East	R809 (S)	TOTALS	
R139 West	0	210	657	432	1299		R139 West	0	271	447	454	1172	
Hole in the Wall Rd (N)	208	26	192	482	908		Hole in the Wall Rd (N)	274	26	165	413	878	
R139 East	550	121	0	265	936		R139 East	587	173	1	289	1050	
R809 (S)	431	371	270	4	1076		R809 (S)	401	487	265	4	1157	
TOTALS	1189	728	1119	1183	4219		TOTALS	1262	957	878	1160	4257	

2042 AM Peak WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)							2042 PM Peak WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)						
From \ To	R139 West	Hole in the Wall Rd (N)	R139 East	R809 (S)	TOTALS		From \ To	R139 West	Hole in the Wall Rd (N)	R139 East	R809 (S)	TOTALS	
R139 West	0	227	657	432	1316		R139 West	0	305	447	454	1206	
Hole in the Wall Rd (N)	252	26	205	496	979		Hole in the Wall Rd (N)	294	26	170	420	910	
R139 East	550	126	0	265	941		R139 East	587	183	1	289	1060	
R809 (S)	431	377	270	4	1082		R809 (S)	401	497	265	4	1167	
TOTALS	1233	756	1132	1197	4318		TOTALS	1282	1011	883	1167	4343	

AADT Traffic Flow Matrices (Light and Heavy Vehicles) - Junction 6

2024 Light Vehicles AADT SURVEYED TRAFFIC FLOWS							2024 Heavy Vehicles AADT SURVEYED TRAFFIC FLOWS						
From \ To	R139 West	Hole in the Wall Rd (N)	R139 East	R809 (S)	TOTALS		R139 West	Hole in the Wall Rd (N)	R139 East	R809 (S)	TOTALS		
R139 West	14	2118	5248	4322	11702		0	167	311	149	627		
Hole in the Wall Rd (N)	2346	220	1246	3958	7770		169	5	28	32	234		
R139 East	5331	1140	8	2361	8840		304	14	1	96	415		
R809 (S)	4205	3922	2297	19	10443		154	37	88	0	279		
TOTALS	11896	7400	8799	10660	38755		627	223	428	277	1555		

2024 Light Vehicles BASELINE TRAFFIC FLOWS (surveyed flows + TII growth factor)							2024 Heavy Vehicles BASELINE TRAFFIC FLOWS (surveyed flows + TII growth factor)						
From \ To	R139 West	Hole in the Wall Rd (N)	R139 East	R809 (S)	TOTALS		R139 West	Hole in the Wall Rd (N)	R139 East	R809 (S)	TOTALS		
R139 West	14	2118	5248	4322	11702		0	167	311	149	627		
Hole in the Wall Rd (N)	2346	220	1246	3958	7770		169	5	28	32	234		
R139 East	5331	1140	8	2361	8840		304	14	1	96	415		
R809 (S)	4205	3922	2297	19	10443		154	37	88	0	279		
TOTALS	11896	7400	8799	10660	38755		627	223	428	277	1555		

2026 Light Vehicles Other committed development flows							2026 Heavy Vehicles Other committed development flows						
From \ To	R139 West	Hole in the Wall Rd (N)	R139 East	R809 (S)	TOTALS		R139 West	Hole in the Wall Rd (N)	R139 East	R809 (S)	TOTALS		
R139 West					0						0		
Hole in the Wall Rd (N)					0						0		
R139 East					0						0		
R809 (S)					0						0		
TOTALS	0	0	0	0	0		0	0	0	0	0		

2027 Light Vehicles WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)							2027 Heavy Vehicles WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)						
From \ To	R139 West	Hole in the Wall Rd (N)	R139 East	R809 (S)	TOTALS		R139 West	Hole in the Wall Rd (N)	R139 East	R809 (S)	TOTALS		
R139 West	15	2279	5647	4650	12591		0	196	365	175	736		
Hole in the Wall Rd (N)	2524	237	1341	4259	8361		198	6	33	38	275		
R139 East	5736	1227	9	2540	9512		357	16	1	113	487		
R809 (S)	4524	4220	2471	20	11235		181	43	103	0	327		
TOTALS	12799	7963	9468	11469	41699		736	261	502	326	1825		

2027 Light Vehicles SUBJECT DEVELOPMENT FLOWS - OPERATIONAL PHASE							2027 Heavy Vehicles SUBJECT DEVELOPMENT FLOWS - OPERATIONAL PHASE						
From \ To	R139 West	Hole in the Wall Rd (N)	R139 East	R809 (S)	TOTALS		R139 West	Hole in the Wall Rd (N)	R139 East	R809 (S)	TOTALS		
R139 West	0	378	0	0	378		0	0	0	0	0		
Hole in the Wall Rd (N)	376	0	100	121	597		0	0	0	0	0		
R139 East	0	100	0	0	100		0	0	0	0	0		
R809 (S)	0	118	0	0	118		0	0	0	0	0		
TOTALS	376	596	100	121	1193		0	0	0	0	0		

2027 Light Vehicles WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)							2027 Heavy Vehicles WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)						
From \ To	R139 West	Hole in the Wall Rd (N)	R139 East	R809 (S)	TOTALS		R139 West	Hole in the Wall Rd (N)	R139 East	R809 (S)	TOTALS		
R139 West	15	2657	5647	4650	12969		0	196	365	175	736		
Hole in the Wall Rd (N)	2900	237	1441	4380	8958		198	6	33	38	275		
R139 East	5736	1327	9	2540	9612		357	16	1	113	487		
R809 (S)	4524	4338	2471	20	11353		181	43	103	0	327		
TOTALS	13175	8559	9568	11590	42892		736	261	502	326	1825		

2032 Light Vehicles WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)							2032 Heavy Vehicles WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)						
From \ To	R139 West	Hole in the Wall Rd (N)	R139 East	R809 (S)	TOTALS		R139 West	Hole in the Wall Rd (N)	R139 East	R809 (S)	TOTALS		
R139 West	17	2497	6188	5096	13798		0	241	449	215	905		
Hole in the Wall Rd (N)	2766	259	1469	4667	9161		244	7	40	46	337		
R139 East	6286	1344	9	2784	10423		438	20	1	138	597		
R809 (S)	4958	4624	2708	22	12312		222	53	127	0	402		
TOTALS	14027	8724	10374	12569	45694		904	321	617	399	2241		

2032 Light Vehicles WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)							2032 Heavy Vehicles WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)						
From \ To	R139 West	Hole in the Wall Rd (N)	R139 East	R809 (S)	TOTALS		R139 West	Hole in the Wall Rd (N)	R139 East	R809 (S)	TOTALS		
R139 West	17	2875	6188	5096	14176		0	241	449	215	905		
Hole in the Wall Rd (N)	3142	259	1569	4788	9758		244	7	40	46	337		
R139 East	6286	1444	9	2784	10523		438	20	1	138	597		
R809 (S)	4958	4742	2708	22	12430		222	53	127	0	402		
TOTALS	14403	9320	10474	12690	46887		904	321	617	399	2241		

2042 Light Vehicles WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)							2042 Heavy Vehicles WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)						
From \ To	R139 West	Hole in the Wall Rd (N)	R139 East	R809 (S)	TOTALS		R139 West	Hole in the Wall Rd (N)	R139 East	R809 (S)	TOTALS		
R139 West	18	2708	6709	5525	14960		0	300	559	268	1127		
Hole in the Wall Rd (N)	2999	281	1593	5060	9933		304	9	50	58	421		
R139 East	6815	1457	10	3018	11300		547	25	2	173	747		
R809 (S)	5375	5014	2936	24	13349		277	67	158	0	502		
TOTALS	15207	9460	11248	13627	49542		1128	401	769	499	2797		

2042 Light Vehicles WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)							2042 Heavy Vehicles WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)						
From \ To	R139 West	Hole in the Wall Rd (N)	R139 East	R809 (S)	TOTALS		R139 West	Hole in the Wall Rd (N)	R139 East	R809 (S)	TOTALS		
R139 West	18	3086	6709	5525	15338		0	300	559	268	1127		
Hole in the Wall Rd (N)	3375	281	1693	5181	10530		304	9	50	58	421		
R139 East	6815	1557	10	3018	11400		547	25	2	173	747		
R809 (S)	5375	5132	2936	24	13467		277	67	158	0	502		
TOTALS	15583	10056	11348	13748	50735		1128	401	769	499	2797		

Peak Hour Traffic Flow Matrices (Passenger Car Units) - Junction 7

2024 AM Peak (08:00-09:00) SURVEYED TRAFFIC FLOWS							2024 PM Peak (17:00-18:00) SURVEYED TRAFFIC FLOWS						
From	To	Main Street East	Hole in the Wall Rd S	Main Street West	Hole in the Wall Rd N	TOTALS	From	To	Main Street East	Hole in the Wall Rd S	Main Street West	Hole in the Wall Rd N	TOTALS
Main Street East		0	223	1	103	327	Main Street East		0	235	8	72	315
Hole in the Wall Rd S		140	0	9	235	384	Hole in the Wall Rd S		301	0	22	269	592
Main Street West		1	25	0	12	38	Main Street West		5	13	0	5	23
Hole in the Wall Rd N		44	224	6	0	274	Hole in the Wall Rd N		59	292	6	0	357
TOTALS		185	472	16	350	1023	TOTALS		365	540	36	346	1287
2024 AM Peak BASELINE TRAFFIC FLOWS (surveyed flows + TII growth factor)							2024 PM Peak BASELINE TRAFFIC FLOWS (surveyed flows + TII growth factor)						
Main Street East		0	223	1	103	327	Main Street East		0	235	8	72	315
Hole in the Wall Rd S		140	0	9	235	384	Hole in the Wall Rd S		301	0	22	269	592
Main Street West		1	25	0	12	38	Main Street West		5	13	0	5	23
Hole in the Wall Rd N		44	224	6	0	274	Hole in the Wall Rd N		59	292	6	0	357
TOTALS		185	472	16	350	1023	TOTALS		365	540	36	346	1287
2026 AM Peak Other committed development flows							2026 PM Peak Other committed development flows						
Main Street East						0	Main Street East						0
Hole in the Wall Rd S						0	Hole in the Wall Rd S						0
Main Street West						0	Main Street West						0
Hole in the Wall Rd N						0	Hole in the Wall Rd N						0
TOTALS		0	0	0	0	0	TOTALS		0	0	0	0	0
2027 AM Peak WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)							2027 PM Peak WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)						
Main Street East		0	240	1	111	352	Main Street East		0	253	9	77	339
Hole in the Wall Rd S		151	0	10	253	414	Hole in the Wall Rd S		324	0	24	289	637
Main Street West		1	27	0	13	41	Main Street West		5	14	0	5	24
Hole in the Wall Rd N		47	241	6	0	294	Hole in the Wall Rd N		63	314	6	0	383
TOTALS		199	508	17	377	1101	TOTALS		392	581	39	371	1383
2027 AM Peak SUBJECT DEVELOPMENT FLOWS - OPERATIONAL PHASE							2027 PM Peak SUBJECT DEVELOPMENT FLOWS - OPERATIONAL PHASE						
Main Street East			71	0	0	71	Main Street East			32	0	0	32
Hole in the Wall Rd S		28	0	0	0	28	Hole in the Wall Rd S		54	0	0	0	54
Main Street West		0	0	0	0	0	Main Street West		0	0	0	0	0
Hole in the Wall Rd N		0	0	0	0	0	Hole in the Wall Rd N		0	0	0	0	0
TOTALS		28	71	0	0	99	TOTALS		54	32	0	0	86
2027 AM Peak WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)							2027 PM Peak WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)						
Main Street East		0	311	1	111	423	Main Street East		0	285	9	77	371
Hole in the Wall Rd S		179	0	10	253	442	Hole in the Wall Rd S		378	0	24	289	691
Main Street West		1	27	0	13	41	Main Street West		5	14	0	5	24
Hole in the Wall Rd N		47	241	6	0	294	Hole in the Wall Rd N		63	314	6	0	383
TOTALS		227	579	17	377	1200	TOTALS		446	613	39	371	1469
2032 AM Peak WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)							2032 PM Peak WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)						
Main Street East		0	263	1	121	385	Main Street East		0	277	9	85	371
Hole in the Wall Rd S		165	0	11	277	453	Hole in the Wall Rd S		355	0	26	317	698
Main Street West		1	29	0	14	44	Main Street West		6	15	0	6	27
Hole in the Wall Rd N		52	264	7	0	323	Hole in the Wall Rd N		70	344	7	0	421
TOTALS		218	556	19	412	1205	TOTALS		431	636	42	408	1517
2032 AM Peak WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)							2032 PM Peak WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)						
Main Street East		0	334	1	121	456	Main Street East		0	309	9	85	403
Hole in the Wall Rd S		193	0	11	277	481	Hole in the Wall Rd S		409	0	26	317	752
Main Street West		1	29	0	14	44	Main Street West		6	15	0	6	27
Hole in the Wall Rd N		52	264	7	0	323	Hole in the Wall Rd N		70	344	7	0	421
TOTALS		246	627	19	412	1304	TOTALS		485	668	42	408	1603
2042 AM Peak WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)							2042 PM Peak WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)						
Main Street East		0	285	1	132	418	Main Street East		0	300	10	92	402
Hole in the Wall Rd S		179	0	12	300	491	Hole in the Wall Rd S		385	0	28	344	757
Main Street West		1	32	0	15	48	Main Street West		6	17	0	6	29
Hole in the Wall Rd N		56	286	8	0	350	Hole in the Wall Rd N		75	373	8	0	456
TOTALS		236	603	21	447	1307	TOTALS		466	690	46	442	1644
2042 AM Peak WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)							2042 PM Peak WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)						
Main Street East		0	356	1	132	489	Main Street East		0	332	10	92	434
Hole in the Wall Rd S		207	0	12	300	519	Hole in the Wall Rd S		439	0	28	344	811
Main Street West		1	32	0	15	48	Main Street West		6	17	0	6	29
Hole in the Wall Rd N		56	286	8	0	350	Hole in the Wall Rd N		75	373	8	0	456
TOTALS		264	674	21	447	1406	TOTALS		520	722	46	442	1730

Peak Hour Traffic Flow Matrices (Passenger Car Units) - Junction 8

2024 AM Peak (08:00-09:00) SURVEYED TRAFFIC FLOWS						2024 PM Peak (17:00-18:00) SURVEYED TRAFFIC FLOWS							
From	To	Hole in the Wall Rd N	Marrsfield Avenue (E)	Hole in the Wall Rd S	Clongriffin Avenue (W)	TOTALS	From	To	Hole in the Wall Rd N	Marrsfield Avenue (E)	Hole in the Wall Rd S	Clongriffin Avenue (W)	TOTALS
Hole in the Wall Rd N		0	47	166	141	354	Hole in the Wall Rd N		0	54	230	81	365
Marrsfield Avenue (E)		57	0	26	208	291	Marrsfield Avenue (E)		24	0	31	93	148
Hole in the Wall Rd S		167	20	0	159	346	Hole in the Wall Rd S		197	27	0	114	338
Clongriffin Avenue (W)		106	135	78	0	319	Clongriffin Avenue (W)		63	126	115	0	304
TOTALS		330	202	270	508	1310	TOTALS		284	207	376	288	1155
2024 AM Peak BASELINE TRAFFIC FLOWS (surveyed flows + TII growth factor)						2024 PM Peak BASELINE TRAFFIC FLOWS (surveyed flows + TII growth factor)							
From	To	Hole in the Wall Rd N	Marrsfield Avenue (E)	Hole in the Wall Rd S	Clongriffin Avenue (W)	TOTALS	From	To	Hole in the Wall Rd N	Marrsfield Avenue (E)	Hole in the Wall Rd S	Clongriffin Avenue (W)	TOTALS
Hole in the Wall Rd N		0	47	166	141	354	Hole in the Wall Rd N		0	54	230	81	365
Marrsfield Avenue (E)		57	0	26	208	291	Marrsfield Avenue (E)		24	0	31	93	148
Hole in the Wall Rd S		167	20	0	159	346	Hole in the Wall Rd S		197	27	0	114	338
Clongriffin Avenue (W)		106	135	78	0	319	Clongriffin Avenue (W)		63	126	115	0	304
TOTALS		330	202	270	508	1310	TOTALS		284	207	376	288	1155
2026 AM Peak Other committed development flows						2026 PM Peak Other committed development flows							
From	To	Hole in the Wall Rd N	Marrsfield Avenue (E)	Hole in the Wall Rd S	Clongriffin Avenue (W)	TOTALS	From	To	Hole in the Wall Rd N	Marrsfield Avenue (E)	Hole in the Wall Rd S	Clongriffin Avenue (W)	TOTALS
Hole in the Wall Rd N						0	Hole in the Wall Rd N						0
Marrsfield Avenue (E)						0	Marrsfield Avenue (E)						0
Hole in the Wall Rd S						0	Hole in the Wall Rd S						0
Clongriffin Avenue (W)						0	Clongriffin Avenue (W)						0
TOTALS		0	0	0	0	0	TOTALS		0	0	0	0	0
2027 AM Peak WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)						2027 PM Peak WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)							
From	To	Hole in the Wall Rd N	Marrsfield Avenue (E)	Hole in the Wall Rd S	Clongriffin Avenue (W)	TOTALS	From	To	Hole in the Wall Rd N	Marrsfield Avenue (E)	Hole in the Wall Rd S	Clongriffin Avenue (W)	TOTALS
Hole in the Wall Rd N		0	51	179	152	382	Hole in the Wall Rd N		0	58	247	87	392
Marrsfield Avenue (E)		61	0	28	224	313	Marrsfield Avenue (E)		26	0	33	100	159
Hole in the Wall Rd S		180	22	0	171	373	Hole in the Wall Rd S		212	29	0	123	364
Clongriffin Avenue (W)		114	145	84	0	343	Clongriffin Avenue (W)		68	136	124	0	328
TOTALS		355	218	291	547	1411	TOTALS		306	223	404	310	1243
2027 AM Peak SUBJECT DEVELOPMENT FLOWS - OPERATIONAL PHASE						2027 PM Peak SUBJECT DEVELOPMENT FLOWS - OPERATIONAL PHASE							
From	To	Hole in the Wall Rd N	Marrsfield Avenue (E)	Hole in the Wall Rd S	Clongriffin Avenue (W)	TOTALS	From	To	Hole in the Wall Rd N	Marrsfield Avenue (E)	Hole in the Wall Rd S	Clongriffin Avenue (W)	TOTALS
Hole in the Wall Rd N		0	3	0	0	3	Hole in the Wall Rd N		0	4	0	0	4
Marrsfield Avenue (E)		5	0	0	10	15	Marrsfield Avenue (E)		2	0	0	7	9
Hole in the Wall Rd S		0	0	0	0	0	Hole in the Wall Rd S		0	0	0	0	0
Clongriffin Avenue (W)		0	6	0	0	6	Clongriffin Avenue (W)		0	7	0	0	7
TOTALS		5	9	0	10	24	TOTALS		2	11	0	7	20
2027 AM Peak WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)						2027 PM Peak WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)							
From	To	Hole in the Wall Rd N	Marrsfield Avenue (E)	Hole in the Wall Rd S	Clongriffin Avenue (W)	TOTALS	From	To	Hole in the Wall Rd N	Marrsfield Avenue (E)	Hole in the Wall Rd S	Clongriffin Avenue (W)	TOTALS
Hole in the Wall Rd N		0	54	179	152	385	Hole in the Wall Rd N		0	62	247	87	396
Marrsfield Avenue (E)		66	0	28	234	328	Marrsfield Avenue (E)		28	0	33	107	168
Hole in the Wall Rd S		180	22	0	171	373	Hole in the Wall Rd S		212	29	0	123	364
Clongriffin Avenue (W)		114	151	84	0	349	Clongriffin Avenue (W)		68	143	124	0	335
TOTALS		360	227	291	557	1435	TOTALS		308	234	404	317	1263
2032 AM Peak WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)						2032 PM Peak WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)							
From	To	Hole in the Wall Rd N	Marrsfield Avenue (E)	Hole in the Wall Rd S	Clongriffin Avenue (W)	TOTALS	From	To	Hole in the Wall Rd N	Marrsfield Avenue (E)	Hole in the Wall Rd S	Clongriffin Avenue (W)	TOTALS
Hole in the Wall Rd N		0	55	196	166	417	Hole in the Wall Rd N		0	64	271	96	431
Marrsfield Avenue (E)		67	0	31	245	343	Marrsfield Avenue (E)		28	0	37	110	175
Hole in the Wall Rd S		197	24	0	187	408	Hole in the Wall Rd S		232	32	0	134	398
Clongriffin Avenue (W)		125	159	92	0	376	Clongriffin Avenue (W)		74	149	136	0	359
TOTALS		389	238	319	598	1544	TOTALS		334	245	444	340	1363
2032 AM Peak WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)						2032 PM Peak WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)							
From	To	Hole in the Wall Rd N	Marrsfield Avenue (E)	Hole in the Wall Rd S	Clongriffin Avenue (W)	TOTALS	From	To	Hole in the Wall Rd N	Marrsfield Avenue (E)	Hole in the Wall Rd S	Clongriffin Avenue (W)	TOTALS
Hole in the Wall Rd N		0	58	196	166	420	Hole in the Wall Rd N		0	68	271	96	435
Marrsfield Avenue (E)		72	0	31	255	358	Marrsfield Avenue (E)		30	0	37	117	184
Hole in the Wall Rd S		197	24	0	187	408	Hole in the Wall Rd S		232	32	0	134	398
Clongriffin Avenue (W)		125	165	92	0	382	Clongriffin Avenue (W)		74	156	136	0	366
TOTALS		394	247	319	608	1568	TOTALS		336	256	444	347	1383
2042 AM Peak WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)						2042 PM Peak WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)							
From	To	Hole in the Wall Rd N	Marrsfield Avenue (E)	Hole in the Wall Rd S	Clongriffin Avenue (W)	TOTALS	From	To	Hole in the Wall Rd N	Marrsfield Avenue (E)	Hole in the Wall Rd S	Clongriffin Avenue (W)	TOTALS
Hole in the Wall Rd N		0	60	212	180	452	Hole in the Wall Rd N		0	69	294	104	467
Marrsfield Avenue (E)		73	0	33	266	372	Marrsfield Avenue (E)		31	0	40	119	190
Hole in the Wall Rd S		213	26	0	203	442	Hole in the Wall Rd S		252	35	0	146	433
Clongriffin Avenue (W)		136	173	100	0	409	Clongriffin Avenue (W)		81	161	147	0	389
TOTALS		422	259	345	649	1675	TOTALS		364	265	481	369	1479
2042 AM Peak WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)						2042 PM Peak WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)							
From	To	Hole in the Wall Rd N	Marrsfield Avenue (E)	Hole in the Wall Rd S	Clongriffin Avenue (W)	TOTALS	From	To	Hole in the Wall Rd N	Marrsfield Avenue (E)	Hole in the Wall Rd S	Clongriffin Avenue (W)	TOTALS
Hole in the Wall Rd N		0	63	212	180	455	Hole in the Wall Rd N		0	73	294	104	471
Marrsfield Avenue (E)		78	0	33	276	387	Marrsfield Avenue (E)		33	0	40	126	199
Hole in the Wall Rd S		213	26	0	203	442	Hole in the Wall Rd S		252	35	0	146	433
Clongriffin Avenue (W)		136	179	100	0	415	Clongriffin Avenue (W)		81	168	147	0	396
TOTALS		427	268	345	659	1699	TOTALS		366	276	481	376	1499

AADT Traffic Flow Matrices (Light and Heavy Vehicles) - Junction 8

2024 Light Vehicles AADT SURVEYED TRAFFIC FLOWS						2024 Heavy Vehicles AADT SURVEYED TRAFFIC FLOWS					
From \ To	Hole in the Wall Rd N	Marrsfield Avenue (E)	Hole in the Wall Rd S	Clongriffin Avenue (W)	TOTALS	From \ To	Hole in the Wall Rd N	Marrsfield Avenue (E)	Hole in the Wall Rd S	Clongriffin Avenue (W)	TOTALS
Hole in the Wall Rd N	0	430	2335	984	3749	Hole in the Wall Rd N	0	5	54	9	68
Marrsfield Avenue (E)	317	0	326	1163	1806	Marrsfield Avenue (E)	2	0	2	12	16
Hole in the Wall Rd S	2098	284	0	1296	3678	Hole in the Wall Rd S	48	2	0	18	68
Clongriffin Avenue (W)	637	1166	972	1	2776	Clongriffin Avenue (W)	7	19	15	0	41
TOTALS	3052	1880	3633	3444	12009	TOTALS	57	26	71	39	193
2024 Light Vehicles BASELINE TRAFFIC FLOWS (surveyed flows + TII growth factor)						2024 Heavy Vehicles BASELINE TRAFFIC FLOWS (surveyed flows + TII growth factor)					
From \ To	Hole in the Wall Rd N	Marrsfield Avenue (E)	Hole in the Wall Rd S	Clongriffin Avenue (W)	TOTALS	From \ To	Hole in the Wall Rd N	Marrsfield Avenue (E)	Hole in the Wall Rd S	Clongriffin Avenue (W)	TOTALS
Hole in the Wall Rd N	0	430	2335	984	3749	Hole in the Wall Rd N	0	5	54	9	68
Marrsfield Avenue (E)	317	0	326	1163	1806	Marrsfield Avenue (E)	2	0	2	12	16
Hole in the Wall Rd S	2098	284	0	1296	3678	Hole in the Wall Rd S	48	2	0	18	68
Clongriffin Avenue (W)	637	1166	972	1	2776	Clongriffin Avenue (W)	7	19	15	0	41
TOTALS	3052	1880	3633	3444	12009	TOTALS	57	26	71	39	193
2026 Light Vehicles Other committed development flows						2026 Heavy Vehicles Other committed development flows					
From \ To	Hole in the Wall Rd N	Marrsfield Avenue (E)	Hole in the Wall Rd S	Clongriffin Avenue (W)	TOTALS	From \ To	Hole in the Wall Rd N	Marrsfield Avenue (E)	Hole in the Wall Rd S	Clongriffin Avenue (W)	TOTALS
Hole in the Wall Rd N	0	0	0	0	0	Hole in the Wall Rd N	0	0	0	0	0
Marrsfield Avenue (E)	0	0	0	0	0	Marrsfield Avenue (E)	0	0	0	0	0
Hole in the Wall Rd S	0	0	0	0	0	Hole in the Wall Rd S	0	0	0	0	0
Clongriffin Avenue (W)	0	0	0	0	0	Clongriffin Avenue (W)	0	0	0	0	0
TOTALS	0	0	0	0	0	TOTALS	0	0	0	0	0
2027 Light Vehicles WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)						2027 Heavy Vehicles WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)					
From \ To	Hole in the Wall Rd N	Marrsfield Avenue (E)	Hole in the Wall Rd S	Clongriffin Avenue (W)	TOTALS	From \ To	Hole in the Wall Rd N	Marrsfield Avenue (E)	Hole in the Wall Rd S	Clongriffin Avenue (W)	TOTALS
Hole in the Wall Rd N	0	463	2512	1059	4034	Hole in the Wall Rd N	0	6	63	11	80
Marrsfield Avenue (E)	341	0	351	1251	1943	Marrsfield Avenue (E)	2	0	2	14	18
Hole in the Wall Rd S	2257	306	0	1394	3957	Hole in the Wall Rd S	56	2	0	21	79
Clongriffin Avenue (W)	685	1255	1046	1	2987	Clongriffin Avenue (W)	8	22	18	0	48
TOTALS	3283	2024	3909	3705	12921	TOTALS	66	30	83	46	225
2027 Light Vehicles SUBJECT DEVELOPMENT FLOWS - OPERATIONAL PHASE						2027 Heavy Vehicles SUBJECT DEVELOPMENT FLOWS - OPERATIONAL PHASE					
From \ To	Hole in the Wall Rd N	Marrsfield Avenue (E)	Hole in the Wall Rd S	Clongriffin Avenue (W)	TOTALS	From \ To	Hole in the Wall Rd N	Marrsfield Avenue (E)	Hole in the Wall Rd S	Clongriffin Avenue (W)	TOTALS
Hole in the Wall Rd N	0	43	0	0	43	Hole in the Wall Rd N	0	0	0	0	0
Marrsfield Avenue (E)	35	0	0	104	139	Marrsfield Avenue (E)	0	0	0	0	0
Hole in the Wall Rd S	0	0	0	0	0	Hole in the Wall Rd S	0	0	0	0	0
Clongriffin Avenue (W)	0	95	0	0	95	Clongriffin Avenue (W)	0	0	0	0	0
TOTALS	35	138	0	104	277	TOTALS	0	0	0	0	0
2027 Light Vehicles WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)						2027 Heavy Vehicles WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)					
From \ To	Hole in the Wall Rd N	Marrsfield Avenue (E)	Hole in the Wall Rd S	Clongriffin Avenue (W)	TOTALS	From \ To	Hole in the Wall Rd N	Marrsfield Avenue (E)	Hole in the Wall Rd S	Clongriffin Avenue (W)	TOTALS
Hole in the Wall Rd N	0	506	2512	1059	4077	Hole in the Wall Rd N	0	6	63	11	80
Marrsfield Avenue (E)	376	0	351	1355	2082	Marrsfield Avenue (E)	2	0	2	14	18
Hole in the Wall Rd S	2257	306	0	1394	3957	Hole in the Wall Rd S	56	2	0	21	79
Clongriffin Avenue (W)	685	1350	1046	1	3082	Clongriffin Avenue (W)	8	22	18	0	48
TOTALS	3318	2162	3909	3809	13198	TOTALS	66	30	83	46	225
2032 Light Vehicles WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)						2032 Heavy Vehicles WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)					
From \ To	Hole in the Wall Rd N	Marrsfield Avenue (E)	Hole in the Wall Rd S	Clongriffin Avenue (W)	TOTALS	From \ To	Hole in the Wall Rd N	Marrsfield Avenue (E)	Hole in the Wall Rd S	Clongriffin Avenue (W)	TOTALS
Hole in the Wall Rd N	0	507	2753	1160	4420	Hole in the Wall Rd N	0	7	78	13	98
Marrsfield Avenue (E)	374	0	384	1371	2129	Marrsfield Avenue (E)	3	0	3	17	23
Hole in the Wall Rd S	2474	335	0	1528	4337	Hole in the Wall Rd S	69	3	0	26	98
Clongriffin Avenue (W)	751	1375	1146	1	3273	Clongriffin Avenue (W)	10	27	22	0	59
TOTALS	3599	2217	4283	4060	14159	TOTALS	82	37	103	56	278
2032 Light Vehicles WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)						2032 Heavy Vehicles WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)					
From \ To	Hole in the Wall Rd N	Marrsfield Avenue (E)	Hole in the Wall Rd S	Clongriffin Avenue (W)	TOTALS	From \ To	Hole in the Wall Rd N	Marrsfield Avenue (E)	Hole in the Wall Rd S	Clongriffin Avenue (W)	TOTALS
Hole in the Wall Rd N	0	550	2753	1160	4463	Hole in the Wall Rd N	0	7	78	13	98
Marrsfield Avenue (E)	409	0	384	1475	2268	Marrsfield Avenue (E)	3	0	3	17	23
Hole in the Wall Rd S	2474	335	0	1528	4337	Hole in the Wall Rd S	69	3	0	26	98
Clongriffin Avenue (W)	751	1470	1146	1	3368	Clongriffin Avenue (W)	10	27	22	0	59
TOTALS	3634	2355	4283	4164	14436	TOTALS	82	37	103	56	278
2042 Light Vehicles WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)						2042 Heavy Vehicles WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)					
From \ To	Hole in the Wall Rd N	Marrsfield Avenue (E)	Hole in the Wall Rd S	Clongriffin Avenue (W)	TOTALS	From \ To	Hole in the Wall Rd N	Marrsfield Avenue (E)	Hole in the Wall Rd S	Clongriffin Avenue (W)	TOTALS
Hole in the Wall Rd N	0	550	2985	1258	4793	Hole in the Wall Rd N	0	9	97	16	122
Marrsfield Avenue (E)	405	0	417	1487	2309	Marrsfield Avenue (E)	4	0	4	22	30
Hole in the Wall Rd S	2682	363	0	1657	4702	Hole in the Wall Rd S	86	4	0	32	122
Clongriffin Avenue (W)	814	1491	1243	1	3549	Clongriffin Avenue (W)	13	34	27	0	74
TOTALS	3901	2404	4645	4403	15353	TOTALS	103	47	128	70	348
2042 Light Vehicles WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)						2042 Heavy Vehicles WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)					
From \ To	Hole in the Wall Rd N	Marrsfield Avenue (E)	Hole in the Wall Rd S	Clongriffin Avenue (W)	TOTALS	From \ To	Hole in the Wall Rd N	Marrsfield Avenue (E)	Hole in the Wall Rd S	Clongriffin Avenue (W)	TOTALS
Hole in the Wall Rd N	0	593	2985	1258	4836	Hole in the Wall Rd N	0	9	97	16	122
Marrsfield Avenue (E)	440	0	417	1591	2448	Marrsfield Avenue (E)	4	0	4	22	30
Hole in the Wall Rd S	2682	363	0	1657	4702	Hole in the Wall Rd S	86	4	0	32	122
Clongriffin Avenue (W)	814	1586	1243	1	3644	Clongriffin Avenue (W)	13	34	27	0	74
TOTALS	3936	2542	4645	4507	15630	TOTALS	103	47	128	70	348

Peak Hour Traffic Flow Matrices (Passenger Car Units) - Junction 9

2024 AM Peak (08:00-09:00) SURVEYED TRAFFIC FLOWS

To		Main Street West	Park Avenue (N)	Main Street East	TOTALS
From					
Main Street West		0	29	119	148
Park Avenue (N)		55	0	38	93
Main Street East		239	27	9	275
TOTALS		294	56	166	516

2024 PM Peak (17:00-18:00) SURVEYED TRAFFIC FLOWS

To		Main Street West	Park Avenue (N)	Main Street East	TOTALS
From					
Main Street West		1	45	258	304
Park Avenue (N)		54	0	22	76
Main Street East		210	29	9	248
TOTALS		265	74	289	628

2024 AM Peak BASELINE TRAFFIC FLOWS (surveyed flows + TII growth factor)

To		Main Street West	Park Avenue (N)	Main Street East	TOTALS
From					
Main Street West		0	29	119	148
Park Avenue (N)		55	0	38	93
Main Street East		239	27	9	275
TOTALS		294	56	166	516

2024 PM Peak BASELINE TRAFFIC FLOWS (surveyed flows + TII growth factor)

To		Main Street West	Park Avenue (N)	Main Street East	TOTALS
From					
Main Street West		1	45	258	304
Park Avenue (N)		54	0	22	76
Main Street East		210	29	9	248
TOTALS		265	74	289	628

2026 AM Peak Other committed development flows

To		Main Street West	Park Avenue (N)	Main Street East	TOTALS
From					
Main Street West					0
Park Avenue (N)					0
Main Street East					0
TOTALS		0	0	0	0

2026 PM Peak Other committed development flows

To		Main Street West	Park Avenue (N)	Main Street East	TOTALS
From					
Main Street West					0
Park Avenue (N)					0
Main Street East					0
TOTALS		0	0	0	0

2027 AM Peak WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)

To		Main Street West	Park Avenue (N)	Main Street East	TOTALS
From					
Main Street West		0	31	128	159
Park Avenue (N)		59	0	41	100
Main Street East		257	29	10	296
TOTALS		316	60	179	555

2027 PM Peak WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)

To		Main Street West	Park Avenue (N)	Main Street East	TOTALS
From					
Main Street West		1	48	278	327
Park Avenue (N)		58	0	24	82
Main Street East		226	31	10	267
TOTALS		285	79	312	676

2027 AM Peak SUBJECT DEVELOPMENT FLOWS - OPERATIONAL PHASE

To		Main Street West	Park Avenue (N)	Main Street East	TOTALS
From					
Main Street West		0	28	0	28
Park Avenue (N)		71	0	0	71
Main Street East		0	0	0	0
TOTALS		71	28	0	99

2027 PM Peak SUBJECT DEVELOPMENT FLOWS - OPERATIONAL PHASE

To		Main Street West	Park Avenue (N)	Main Street East	TOTALS
From					
Main Street West		0	54	0	54
Park Avenue (N)		32	0	0	32
Main Street East		0	0	0	0
TOTALS		32	54	0	86

2027 AM Peak WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)

To		Main Street West	Park Avenue (N)	Main Street East	TOTALS
From					
Main Street West		0	59	128	187
Park Avenue (N)		130	0	41	171
Main Street East		257	29	10	296
TOTALS		387	88	179	654

2027 PM Peak WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)

To		Main Street West	Park Avenue (N)	Main Street East	TOTALS
From					
Main Street West		1	102	278	381
Park Avenue (N)		90	0	24	114
Main Street East		226	31	10	267
TOTALS		317	133	312	762

2032 AM Peak WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)

To		Main Street West	Park Avenue (N)	Main Street East	TOTALS
From					
Main Street West		0	34	140	174
Park Avenue (N)		65	0	45	110
Main Street East		282	32	11	325
TOTALS		347	66	196	609

2032 PM Peak WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)

To		Main Street West	Park Avenue (N)	Main Street East	TOTALS
From					
Main Street West		1	53	304	358
Park Avenue (N)		64	0	26	90
Main Street East		248	34	11	293
TOTALS		313	87	341	741

2032 AM Peak WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)

To		Main Street West	Park Avenue (N)	Main Street East	TOTALS
From					
Main Street West		0	62	140	202
Park Avenue (N)		136	0	45	181
Main Street East		282	32	11	325
TOTALS		418	94	196	708

2032 PM Peak WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)

To		Main Street West	Park Avenue (N)	Main Street East	TOTALS
From					
Main Street West		1	107	304	412
Park Avenue (N)		96	0	26	122
Main Street East		248	34	11	293
TOTALS		345	141	341	827

2042 AM Peak WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)

To		Main Street West	Park Avenue (N)	Main Street East	TOTALS
From					
Main Street West		0	37	152	189
Park Avenue (N)		70	0	49	119
Main Street East		306	35	12	353
TOTALS		376	72	213	661

2042 PM Peak WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)

To		Main Street West	Park Avenue (N)	Main Street East	TOTALS
From					
Main Street West		1	58	330	389
Park Avenue (N)		69	0	28	97
Main Street East		268	37	12	317
TOTALS		338	95	370	803

2042 AM Peak WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)

To		Main Street West	Park Avenue (N)	Main Street East	TOTALS
From					
Main Street West		0	65	152	217
Park Avenue (N)		141	0	49	190
Main Street East		306	35	12	353
TOTALS		447	100	213	760

2042 PM Peak WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)

To		Main Street West	Park Avenue (N)	Main Street East	TOTALS
From					
Main Street West		1	112	330	443
Park Avenue (N)		101	0	28	129
Main Street East		268	37	12	317
TOTALS		370	149	370	889

AADT Traffic Flow Matrices (Light and Heavy Vehicles) - Junction 9

2024 Light Vehicles AADT SURVEYED TRAFFIC FLOWS

To		Main Street West	Park Avenue (N)	Main Street East	TOTALS
From					
Main Street West		12	380	2127	2519
Park Avenue (N)		633	2	234	869
Main Street East		2182	156	71	2409
TOTALS		2827	538	2432	5797

2024 Heavy Vehicles AADT SURVEYED TRAFFIC FLOWS

To		Main Street West	Park Avenue (N)	Main Street East	TOTALS
From					
Main Street West		1	2	127	130
Park Avenue (N)		13	0	2	15
Main Street East		127	2	2	131
TOTALS		141	4	131	276

2024 Light Vehicles BASELINE TRAFFIC FLOWS (surveyed flows + TII growth factor)

To		Main Street West	Park Avenue (N)	Main Street East	TOTALS
From					
Main Street West		12	380	2127	2519
Park Avenue (N)		633	2	234	869
Main Street East		2182	156	71	2409
TOTALS		2827	538	2432	5797

2024 Heavy Vehicles BASELINE TRAFFIC FLOWS (surveyed flows + TII growth factor)

To		Main Street West	Park Avenue (N)	Main Street East	TOTALS
From					
Main Street West		1	2	127	130
Park Avenue (N)		13	0	2	15
Main Street East		127	2	2	131
TOTALS		141	4	131	276

2026 Light Vehicles Other committed development flows

To		Main Street West	Park Avenue (N)	Main Street East	TOTALS
From					
Main Street West					0
Park Avenue (N)					0
Main Street East					0
TOTALS		0	0	0	0

2026 Heavy Vehicles Other committed development flows

To		Main Street West	Park Avenue (N)	Main Street East	TOTALS
From					
Main Street West					0
Park Avenue (N)					0
Main Street East					0
TOTALS		0	0	0	0

2027 Light Vehicles WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)

To		Main Street West	Park Avenue (N)	Main Street East	TOTALS
From					
Main Street West		13	409	2289	2711
Park Avenue (N)		681	2	252	935
Main Street East		2348	168	76	2592
TOTALS		3042	579	2617	6238

2027 Heavy Vehicles WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)

To		Main Street West	Park Avenue (N)	Main Street East	TOTALS
From					
Main Street West		1	2	149	152
Park Avenue (N)		15	0	2	17
Main Street East		149	2	2	153
TOTALS		165	4	153	322

2027 Light Vehicles SUBJECT DEVELOPMENT FLOWS - OPERATIONAL PHASE

To		Main Street West	Park Avenue (N)	Main Street East	TOTALS
From					
Main Street West		0	596	0	596
Park Avenue (N)		597	0	0	597
Main Street East		0	0	0	0
TOTALS		597	596	0	1193

2027 Heavy Vehicles SUBJECT DEVELOPMENT FLOWS - OPERATIONAL PHASE

To		Main Street West	Park Avenue (N)	Main Street East	TOTALS
From					
Main Street West		0	0	0	0
Park Avenue (N)		0	0	0	0
Main Street East		0	0	0	0
TOTALS		0	0	0	0

2027 Light Vehicles WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)

To		Main Street West	Park Avenue (N)	Main Street East	TOTALS
From					
Main Street West		13	1005	2289	3307
Park Avenue (N)		1278	2	252	1532
Main Street East		2348	168	76	2592
TOTALS		3639	1175	2617	7431

2027 Heavy Vehicles WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)

To		Main Street West	Park Avenue (N)	Main Street East	TOTALS
From					
Main Street West		1	2	149	152
Park Avenue (N)		15	0	2	17
Main Street East		149	2	2	153
TOTALS		165	4	153	322

2032 Light Vehicles WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)

To		Main Street West	Park Avenue (N)	Main Street East	TOTALS
From					
Main Street West		14	448	2508	2970
Park Avenue (N)		746	2	276	1024
Main Street East		2573	184	84	2841
TOTALS		3333	634	2868	6835

2032 Heavy Vehicles WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)

To		Main Street West	Park Avenue (N)	Main Street East	TOTALS
From					
Main Street West		1	3	183	187
Park Avenue (N)		19	0	3	22
Main Street East		183	3	3	189
TOTALS		203	6	189	398

2032 Light Vehicles WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)

To		Main Street West	Park Avenue (N)	Main Street East	TOTALS
From					
Main Street West		14	1044	2508	3566
Park Avenue (N)		1343	2	276	1621
Main Street East		2573	184	84	2841
TOTALS		3930	1230	2868	8028

2032 Heavy Vehicles WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)

To		Main Street West	Park Avenue (N)	Main Street East	TOTALS
From					
Main Street West		1	3	183	187
Park Avenue (N)		19	0	3	22
Main Street East		183	3	3	189
TOTALS		203	6	189	398

2042 Light Vehicles WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)

To		Main Street West	Park Avenue (N)	Main Street East	TOTALS
From					
Main Street West		15	486	2719	3220
Park Avenue (N)		809	3	299	1111
Main Street East		2789	199	91	3079
TOTALS		3613	688	3109	7410

2042 Heavy Vehicles WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)

To		Main Street West	Park Avenue (N)	Main Street East	TOTALS
From					
Main Street West		2	4	228	234
Park Avenue (N)		23	0	4	27
Main Street East		228	4	4	236
TOTALS		253	8	236	497

2042 Light Vehicles WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)

To		Main Street West	Park Avenue (N)	Main Street East	TOTALS
From					
Main Street West		15	1082	2719	3816
Park Avenue (N)		1406	3	299	1708
Main Street East		2789	199	91	3079
TOTALS		4210	1284	3109	8603

2042 Heavy Vehicles WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)

To		Main Street West	Park Avenue (N)	Main Street East	TOTALS
From					
Main Street West		2	4	228	234
Park Avenue (N)		23	0	4	27
Main Street East		228	4	4	236
TOTALS		253	8	236	497

Peak Hour Traffic Flow Matrices (Passenger Car Units) - Junction 10

2024 AM Peak (08:00-09:00) SURVEYED TRAFFIC FLOWS

To		Marrsfield Ave East	Park Avenue (S)	Marrsfield Ave West	TOTALS
From					
Marrsfield Ave East		0	6	140	146
Park Avenue (S)		2	0	92	94
Marrsfield Ave West		101	77	2	180
TOTALS		103	83	234	420

2024 PM Peak (17:00-18:00) SURVEYED TRAFFIC FLOWS

To		Marrsfield Ave East	Park Avenue (S)	Marrsfield Ave West	TOTALS
From					
Marrsfield Ave East		0	4	79	83
Park Avenue (S)		6	0	44	50
Marrsfield Ave West		112	62	1	175
TOTALS		118	66	124	308

2024 AM Peak BASELINE TRAFFIC FLOWS (surveyed flows + TII growth factor)

To		Marrsfield Ave East	Park Avenue (S)	Marrsfield Ave West	TOTALS
From					
Marrsfield Ave East		0	6	140	146
Park Avenue (S)		2	0	92	94
Marrsfield Ave West		101	77	2	180
TOTALS		103	83	234	420

2024 PM Peak BASELINE TRAFFIC FLOWS (surveyed flows + TII growth factor)

To		Marrsfield Ave East	Park Avenue (S)	Marrsfield Ave West	TOTALS
From					
Marrsfield Ave East		0	4	79	83
Park Avenue (S)		6	0	44	50
Marrsfield Ave West		112	62	1	175
TOTALS		118	66	124	308

2026 AM Peak Other committed development flows

To		Marrsfield Ave East	Park Avenue (S)	Marrsfield Ave West	TOTALS
From					
Marrsfield Ave East					0
Park Avenue (S)					0
Marrsfield Ave West					0
TOTALS		0	0	0	0

2026 PM Peak Other committed development flows

To		Marrsfield Ave East	Park Avenue (S)	Marrsfield Ave West	TOTALS
From					
Marrsfield Ave East					0
Park Avenue (S)					0
Marrsfield Ave West					0
TOTALS		0	0	0	0

2027 AM Peak WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)

To		Marrsfield Ave East	Park Avenue (S)	Marrsfield Ave West	TOTALS
From					
Marrsfield Ave East		0	6	151	157
Park Avenue (S)		2	0	99	101
Marrsfield Ave West		109	83	2	194
TOTALS		111	89	252	452

2027 PM Peak WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)

To		Marrsfield Ave East	Park Avenue (S)	Marrsfield Ave West	TOTALS
From					
Marrsfield Ave East		0	4	85	89
Park Avenue (S)		6	0	47	53
Marrsfield Ave West		121	67	1	189
TOTALS		127	71	133	331

2027 AM Peak SUBJECT DEVELOPMENT FLOWS - OPERATIONAL PHASE

To		Marrsfield Ave East	Park Avenue (S)	Marrsfield Ave West	TOTALS
From					
Marrsfield Ave East		0	0	0	0
Park Avenue (S)		0	0	15	15
Marrsfield Ave West		0	9	0	9
TOTALS		0	9	15	24

2027 PM Peak SUBJECT DEVELOPMENT FLOWS - OPERATIONAL PHASE

To		Marrsfield Ave East	Park Avenue (S)	Marrsfield Ave West	TOTALS
From					
Marrsfield Ave East		0	0	0	0
Park Avenue (S)		0	0	9	9
Marrsfield Ave West		0	11	0	11
TOTALS		0	11	9	20

2027 AM Peak WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)

To		Marrsfield Ave East	Park Avenue (S)	Marrsfield Ave West	TOTALS
From					
Marrsfield Ave East		0	6	151	157
Park Avenue (S)		2	0	114	116
Marrsfield Ave West		109	92	2	203
TOTALS		111	98	267	476

2027 PM Peak WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)

To		Marrsfield Ave East	Park Avenue (S)	Marrsfield Ave West	TOTALS
From					
Marrsfield Ave East		0	4	85	89
Park Avenue (S)		6	0	56	62
Marrsfield Ave West		121	78	1	200
TOTALS		127	82	142	351

2032 AM Peak WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)

To		Marrsfield Ave East	Park Avenue (S)	Marrsfield Ave West	TOTALS
From					
Marrsfield Ave East		0	7	165	172
Park Avenue (S)		2	0	108	110
Marrsfield Ave West		119	91	2	212
TOTALS		121	98	275	494

2032 PM Peak WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)

To		Marrsfield Ave East	Park Avenue (S)	Marrsfield Ave West	TOTALS
From					
Marrsfield Ave East		0	5	93	98
Park Avenue (S)		7	0	52	59
Marrsfield Ave West		132	73	1	206
TOTALS		139	78	146	363

2032 AM Peak WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)

To		Marrsfield Ave East	Park Avenue (S)	Marrsfield Ave West	TOTALS
From					
Marrsfield Ave East		0	7	165	172
Park Avenue (S)		2	0	123	125
Marrsfield Ave West		119	100	2	221
TOTALS		121	107	290	518

2032 PM Peak WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)

To		Marrsfield Ave East	Park Avenue (S)	Marrsfield Ave West	TOTALS
From					
Marrsfield Ave East		0	5	93	98
Park Avenue (S)		7	0	61	68
Marrsfield Ave West		132	84	1	217
TOTALS		139	89	155	383

2042 AM Peak WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)

To		Marrsfield Ave East	Park Avenue (S)	Marrsfield Ave West	TOTALS
From					
Marrsfield Ave East		0	8	179	187
Park Avenue (S)		3	0	118	121
Marrsfield Ave West		129	98	3	230
TOTALS		132	106	300	538

2042 PM Peak WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)

To		Marrsfield Ave East	Park Avenue (S)	Marrsfield Ave West	TOTALS
From					
Marrsfield Ave East		0	5	101	106
Park Avenue (S)		8	0	56	64
Marrsfield Ave West		143	79	1	223
TOTALS		151	84	158	393

2042 AM Peak WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)

To		Marrsfield Ave East	Park Avenue (S)	Marrsfield Ave West	TOTALS
From					
Marrsfield Ave East		0	8	179	187
Park Avenue (S)		3	0	133	136
Marrsfield Ave West		129	107	3	239
TOTALS		132	115	315	562

2042 PM Peak WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)

To		Marrsfield Ave East	Park Avenue (S)	Marrsfield Ave West	TOTALS
From					
Marrsfield Ave East		0	5	101	106
Park Avenue (S)		8	0	65	73
Marrsfield Ave West		143	90	1	234
TOTALS		151	95	167	413

AADT Traffic Flow Matrices (Light and Heavy Vehicles) - Junction 10

2024 Light Vehicles AADT SURVEYED TRAFFIC FLOWS

To		Marrsfield Ave East	Park Avenue (S)	Marrsfield Ave West	TOTALS
From					
Marrsfield Ave East		0	54	934	988
Park Avenue (S)		49	0	449	498
Marrsfield Ave West		949	558	17	1524
TOTALS		998	612	1400	3010

2024 Heavy Vehicles AADT SURVEYED TRAFFIC FLOWS

To		Marrsfield Ave East	Park Avenue (S)	Marrsfield Ave West	TOTALS
From					
Marrsfield Ave East		0	2	11	13
Park Avenue (S)		0	0	2	2
Marrsfield Ave West		12	12	0	24
TOTALS		12	14	13	39

2024 Light Vehicles BASELINE TRAFFIC FLOWS (surveyed flows + TII growth factor)

To		Marrsfield Ave East	Park Avenue (S)	Marrsfield Ave West	TOTALS
From					
Marrsfield Ave East		0	54	934	988
Park Avenue (S)		49	0	449	498
Marrsfield Ave West		949	558	17	1524
TOTALS		998	612	1400	3010

2024 Heavy Vehicles BASELINE TRAFFIC FLOWS (surveyed flows + TII growth factor)

To		Marrsfield Ave East	Park Avenue (S)	Marrsfield Ave West	TOTALS
From					
Marrsfield Ave East		0	2	11	13
Park Avenue (S)		0	0	2	2
Marrsfield Ave West		12	12	0	24
TOTALS		12	14	13	39

2026 Light Vehicles Other committed development flows

To		Marrsfield Ave East	Park Avenue (S)	Marrsfield Ave West	TOTALS
From					
Marrsfield Ave East					0
Park Avenue (S)					0
Marrsfield Ave West					0
TOTALS		0	0	0	0

2026 Heavy Vehicles Other committed development flows

To		Marrsfield Ave East	Park Avenue (S)	Marrsfield Ave West	TOTALS
From					
Marrsfield Ave East					0
Park Avenue (S)					0
Marrsfield Ave West					0
TOTALS		0	0	0	0

2027 Light Vehicles WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)

To		Marrsfield Ave East	Park Avenue (S)	Marrsfield Ave West	TOTALS
From					
Marrsfield Ave East		0	58	1005	1063
Park Avenue (S)		53	0	483	536
Marrsfield Ave West		1021	600	18	1639
TOTALS		1074	658	1506	3238

2027 Heavy Vehicles WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)

To		Marrsfield Ave East	Park Avenue (S)	Marrsfield Ave West	TOTALS
From					
Marrsfield Ave East		0	2	13	15
Park Avenue (S)		0	0	2	2
Marrsfield Ave West		14	14	0	28
TOTALS		14	16	15	45

2027 Light Vehicles SUBJECT DEVELOPMENT FLOWS - OPERATIONAL PHASE

To		Marrsfield Ave East	Park Avenue (S)	Marrsfield Ave West	TOTALS
From					
Marrsfield Ave East		0	0	0	0
Park Avenue (S)		0	0	139	139
Marrsfield Ave West		0	138	0	138
TOTALS		0	138	139	277

2027 Heavy Vehicles SUBJECT DEVELOPMENT FLOWS - OPERATIONAL PHASE

To		Marrsfield Ave East	Park Avenue (S)	Marrsfield Ave West	TOTALS
From					
Marrsfield Ave East		0	0	0	0
Park Avenue (S)		0	0	0	0
Marrsfield Ave West		0	0	0	0
TOTALS		0	0	0	0

2027 Light Vehicles WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)

To		Marrsfield Ave East	Park Avenue (S)	Marrsfield Ave West	TOTALS
From					
Marrsfield Ave East		0	58	1005	1063
Park Avenue (S)		53	0	622	675
Marrsfield Ave West		1021	738	18	1777
TOTALS		1074	796	1645	3515

2027 Heavy Vehicles WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)

To		Marrsfield Ave East	Park Avenue (S)	Marrsfield Ave West	TOTALS
From					
Marrsfield Ave East		0	2	13	15
Park Avenue (S)		0	0	2	2
Marrsfield Ave West		14	14	0	28
TOTALS		14	16	15	45

2032 Light Vehicles WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)

To		Marrsfield Ave East	Park Avenue (S)	Marrsfield Ave West	TOTALS
From					
Marrsfield Ave East		0	64	1101	1165
Park Avenue (S)		58	0	529	587
Marrsfield Ave West		1119	658	20	1797
TOTALS		1177	722	1650	3549

2032 Heavy Vehicles WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)

To		Marrsfield Ave East	Park Avenue (S)	Marrsfield Ave West	TOTALS
From					
Marrsfield Ave East		0	3	16	19
Park Avenue (S)		0	0	3	3
Marrsfield Ave West		17	17	0	34
TOTALS		17	20	19	56

2032 Light Vehicles WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)

To		Marrsfield Ave East	Park Avenue (S)	Marrsfield Ave West	TOTALS
From					
Marrsfield Ave East		0	64	1101	1165
Park Avenue (S)		58	0	668	726
Marrsfield Ave West		1119	796	20	1935
TOTALS		1177	860	1789	3826

2032 Heavy Vehicles WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)

To		Marrsfield Ave East	Park Avenue (S)	Marrsfield Ave West	TOTALS
From					
Marrsfield Ave East		0	3	16	19
Park Avenue (S)		0	0	3	3
Marrsfield Ave West		17	17	0	34
TOTALS		17	20	19	56

2042 Light Vehicles WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)

To		Marrsfield Ave East	Park Avenue (S)	Marrsfield Ave West	TOTALS
From					
Marrsfield Ave East		0	69	1194	1263
Park Avenue (S)		63	0	574	637
Marrsfield Ave West		1213	713	22	1948
TOTALS		1276	782	1790	3848

2042 Heavy Vehicles WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)

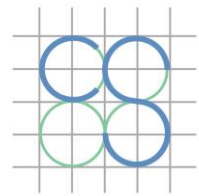
To		Marrsfield Ave East	Park Avenue (S)	Marrsfield Ave West	TOTALS
From					
Marrsfield Ave East		0	4	20	24
Park Avenue (S)		0	0	4	4
Marrsfield Ave West		22	22	0	44
TOTALS		22	26	24	72

2042 Light Vehicles WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)

To		Marrsfield Ave East	Park Avenue (S)	Marrsfield Ave West	TOTALS
From					
Marrsfield Ave East		0	69	1194	1263
Park Avenue (S)		63	0	713	776
Marrsfield Ave West		1213	851	22	2086
TOTALS		1276	920	1929	4125

2042 Heavy Vehicles WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.)

To		Marrsfield Ave East	Park Avenue (S)	Marrsfield Ave West	TOTALS
From					
Marrsfield Ave East		0	4	20	24
Park Avenue (S)		0	0	4	4
Marrsfield Ave West		22	22	0	44
TOTALS		22	26	24	72



CS CONSULTING
GROUP

Appendix D

Junction Modelling Results

Junctions 8

PICADY 8 - Priority Intersection Module

Version: 8.0.3.332 [14595,13/11/2013]
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Filename: C216 J9 PICADY Model 20240708.arc8
Path: J:\C_JOBS\Job-C216\C_CALCULATIONS\B_TRAFFIC\Modelling
Report generation date: 08/07/2024 16:25:01

Summary of junction performance

	AM					PM					
	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity	
Standard - 2024 Baseline											
Stream B-AC	0.24	8.66	0.20	A	253 % [Stream B-AC]	0.21	9.06	0.17	A	237 % [Stream B-AC]	
Stream C-AB	0.04	4.90	0.04	A		0.05	5.16	0.04	A		
Stream C-A	-	-	-	-		-	-	-	-		-
Stream A-B	-	-	-	-		-	-	-	-		-
Stream A-C	-	-	-	-		-	-	-	-		-
Standard - 2027 Do-Nothing											
Stream B-AC	0.27	8.90	0.21	A	228 % [Stream B-AC]	0.23	9.33	0.19	A	213 % [Stream B-AC]	
Stream C-AB	0.04	4.93	0.04	A		0.05	5.21	0.05	A		
Stream C-A	-	-	-	-		-	-	-	-		-
Stream A-B	-	-	-	-		-	-	-	-		-
Stream A-C	-	-	-	-		-	-	-	-		-
Standard - 2027 With Development											
Stream B-AC	0.61	11.85	0.38	B	107 % [Stream B-AC]	0.37	10.66	0.27	B	147 % [Stream B-AC]	
Stream C-AB	0.04	4.97	0.04	A		0.05	5.30	0.05	A		
Stream C-A	-	-	-	-		-	-	-	-		-
Stream A-B	-	-	-	-		-	-	-	-		-
Stream A-C	-	-	-	-		-	-	-	-		-
Standard - 2032 Do-Nothing											

Stream B-AC	0.31	9.25	0.24	A	199 % [Stream B-AC]	0.27	9.74	0.21	A	185 % [Stream B-AC]
Stream C-AB	0.05	4.98	0.05	A						
Stream C-A	-	-	-	-						
Stream A-B	-	-	-	-						
Stream A-C	-	-	-	-						
Standard - 2032 With Development										
Stream B-AC	0.68	12.46	0.41	B	95 % [Stream B-AC]	0.41	11.18	0.29	B	129 % [Stream B-AC]
Stream C-AB	0.05	5.02	0.05	A						
Stream C-A	-	-	-	-						
Stream A-B	-	-	-	-						
Stream A-C	-	-	-	-						
Standard - 2042 Do-Nothing										
Stream B-AC	0.35	9.60	0.26	A	176 % [Stream B-AC]	0.30	10.14	0.23	B	163 % [Stream B-AC]
Stream C-AB	0.05	5.02	0.05	A						
Stream C-A	-	-	-	-						
Stream A-B	-	-	-	-						
Stream A-C	-	-	-	-						
Standard - 2042 With Development										
Stream B-AC	0.75	13.08	0.43	B	85 % [Stream B-AC]	0.46	11.70	0.32	B	115 % [Stream B-AC]
Stream C-AB	0.05	5.07	0.05	A						
Stream C-A	-	-	-	-						
Stream A-B	-	-	-	-						
Stream A-C	-	-	-	-						

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

- "D1 - 2024 Baseline, AM" model duration: 07:45 - 09:15
- "D2 - 2024 Baseline, PM" model duration: 16:45 - 18:15
- "D3 - 2027 Do-Nothing, AM" model duration: 07:45 - 09:15
- "D4 - 2027 Do-Nothing, PM" model duration: 16:45 - 18:15
- "D5 - 2027 With Development, AM" model duration: 07:45 - 09:15
- "D6 - 2027 With Development, PM" model duration: 16:45 - 18:15
- "D7 - 2032 Do-Nothing, AM" model duration: 07:45 - 09:15
- "D8 - 2032 Do-Nothing, PM" model duration: 16:45 - 18:15
- "D9 - 2032 With Development, AM" model duration: 07:45 - 09:15
- "D10 - 2032 With Development, PM" model duration: 16:45 - 18:15
- "D11 - 2042 Do-Nothing, AM" model duration: 07:45 - 09:15
- "D12 - 2042 Do-Nothing, PM" model duration: 16:45 - 18:15
- "D13 - 2042 With Development, AM" model duration: 07:45 - 09:15
- "D14 - 2042 With Development, PM" model duration: 16:45 - 18:15

Run using Junctions 8.0.3.332 at 08/07/2024 16:24:51

File summary

File Description

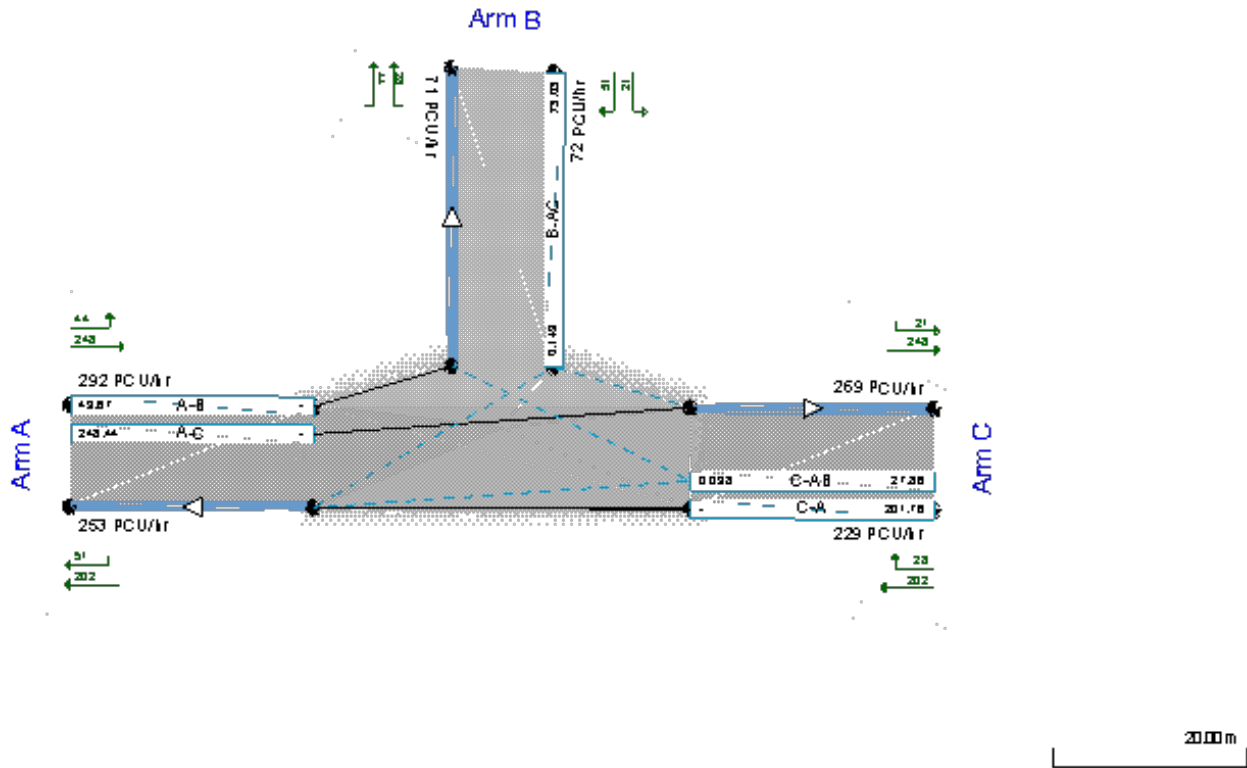
Title	Clongriffin 5 & 6
Location	Dublin 13
Site Number	9
Date	08/07/2024
Version	
Status	
Identifier	
Client	
Jobnumber	C216
Enumerator	GF
Description	

Analysis Options

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

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin



Text overlays show modeled flow through the junction (entry and exit flows, PCU/hr).
Streams (upstreams) show Total Demand (PCU/hr); Streams (downstreams) show RFC ()
Time Segment: (07:45-08:00)
Showing Analysis Set "A1 - Standard"; Demand Set "D1 - 2024 Baseline, AM"

The junction diagram reflects the last run of ARCADY.

Standard - 2024 Baseline, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Standard			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length	Time Segment Length (min)	Single Time Segment Only	Locked
------	---------------	------------------	-------------	----------------------	--------------------------	---------------------------	--------------------------	---------------------------	--------------------------	--------

							(min)			
2024 Baseline, AM	2024 Baseline	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
Main Street / Park Avenue	T-Junction	Two-way	A,B,C	7.82	A

Junction Network Options

Driving Side	Lighting	Network Residual Capacity (%)	First Arm Reaching Threshold
Left	Normal/unknown	253	Stream B-AC

Arms

Arms

Arm	Name	Description	Arm Type
A	Main Street (West)		Major
B	Park Avenue (North)		Minor
C	Main Street (East)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	14.00	✓	2.90	✓	3.20	250.00	✓	6.00

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)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane	2.80										29	28

Pedestrian Crossings

Arm	Crossing Type
A	None
B	None
C	None

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept	Slope for	Slope for	Slope for	Slope for
----------	--------	-----------	-----------	-----------	-----------	-----------

		(PCU/hr)	A-B	A-C	C-A	C-B
9	B-A	522.495	0.058	0.147	0.093	0.210
9	B-C	628.717	0.063	0.159	-	-
9	C-B	796.964	0.201	0.201	-	-

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

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

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

Traffic Flows

Demand Set Data Options

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

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	148.00	100.000
B	ONE HOUR	✓	93.00	100.000
C	ONE HOUR	✓	266.00	100.000

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Junction 9 (for whole period)

		To		
		A	B	C
From	A	0.000	29.000	119.000
	B	55.000	0.000	38.000
	C	239.000	27.000	0.000

Turning Proportions (PCU) - Junction 9 (for whole period)

		To		
		A	B	C
From	A	0.00	0.20	0.80
	B	0.59	0.00	0.41
	C	0.90	0.10	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 9 (for whole period)

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

Heavy Vehicle Percentages - Junction 9 (for whole period)

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

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.20	8.66	0.24	A
C-AB	0.04	4.90	0.04	A
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	70.02	69.41	0.00	531.74	0.132	0.15	7.776	A
C-AB	20.33	20.22	0.00	774.53	0.026	0.03	4.772	A
C-A	179.93	179.93	0.00	-	-	-	-	-
A-B	21.83	21.83	0.00	-	-	-	-	-
A-C	89.59	89.59	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	83.61	83.46	0.00	525.94	0.159	0.19	8.133	A
C-AB	24.27	24.25	0.00	770.18	0.032	0.03	4.825	A
C-A	214.86	214.86	0.00	-	-	-	-	-
A-B	26.07	26.07	0.00	-	-	-	-	-
A-C	106.98	106.98	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	102.39	102.17	0.00	517.90	0.198	0.24	8.655	A

C-AB	29.73	29.70	0.00	764.16	0.039	0.04	4.901	A
C-A	263.14	263.14	0.00	-	-	-	-	-
A-B	31.93	31.93	0.00	-	-	-	-	-
A-C	131.02	131.02	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	102.39	102.39	0.00	517.90	0.198	0.24	8.663	A
C-AB	29.73	29.73	0.00	764.16	0.039	0.04	4.901	A
C-A	263.14	263.14	0.00	-	-	-	-	-
A-B	31.93	31.93	0.00	-	-	-	-	-
A-C	131.02	131.02	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	83.61	83.82	0.00	525.93	0.159	0.19	8.148	A
C-AB	24.27	24.30	0.00	770.18	0.032	0.03	4.828	A
C-A	214.86	214.86	0.00	-	-	-	-	-
A-B	26.07	26.07	0.00	-	-	-	-	-
A-C	106.98	106.98	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	70.02	70.17	0.00	531.72	0.132	0.15	7.803	A
C-AB	20.33	20.35	0.00	774.53	0.026	0.03	4.773	A
C-A	179.93	179.93	0.00	-	-	-	-	-
A-B	21.83	21.83	0.00	-	-	-	-	-
A-C	89.59	89.59	0.00	-	-	-	-	-

Standard - 2024 Baseline, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Standard			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2024 Baseline, PM	2024 Baseline	PM		ONE HOUR	16:45	18:15	90	15		

Junction Network

Junctions

Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
Main Street / Park Avenue	T-Junction	Two-way	A,B,C	7.98	A

Junction Network Options

Driving Side	Lighting	Network Residual Capacity (%)	First Arm Reaching Threshold
Left	Normal/unknown	237	Stream B-AC

Arms

Arms

Arm	Name	Description	Arm Type
A	Main Street (West)		Major
B	Park Avenue (North)		Minor
C	Main Street (East)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	14.00	✓	2.90	✓	3.20	250.00	✓	6.00

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)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane	2.80										29	28

Pedestrian Crossings

Arm	Crossing Type
A	None
B	None
C	None

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
9	B-A	522.495	0.058	0.147	0.093	0.210
9	B-C	628.717	0.063	0.159	-	-
9	C-B	796.964	0.201	0.201	-	-

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

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

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

Traffic Flows

Demand Set Data Options

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

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	303.00	100.000
B	ONE HOUR	✓	76.00	100.000
C	ONE HOUR	✓	239.00	100.000

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Junction 9 (for whole period)

		To		
		A	B	C
From	A	0.000	45.000	258.000
	B	54.000	0.000	22.000
	C	210.000	29.000	0.000

Turning Proportions (PCU) - Junction 9 (for whole period)

		To		
		A	B	C
From	A	0.00	0.15	0.85
	B	0.71	0.00	0.29
	C	0.88	0.12	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 9 (for whole period)

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

	C	1.000	1.000	1.000
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Heavy Vehicle Percentages - Junction 9 (for whole period)

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

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.17	9.06	0.21	A
C-AB	0.04	5.16	0.05	A
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	57.22	56.71	0.00	502.73	0.114	0.13	8.062	A
C-AB	21.83	21.71	0.00	751.04	0.029	0.03	4.936	A
C-A	158.10	158.10	0.00	-	-	-	-	-
A-B	33.88	33.88	0.00	-	-	-	-	-
A-C	194.24	194.24	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	68.32	68.20	0.00	493.61	0.138	0.16	8.459	A
C-AB	26.07	26.04	0.00	742.13	0.035	0.04	5.027	A
C-A	188.79	188.79	0.00	-	-	-	-	-
A-B	40.45	40.45	0.00	-	-	-	-	-
A-C	231.94	231.94	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	83.68	83.48	0.00	480.99	0.174	0.21	9.051	A
C-AB	31.93	31.89	0.00	729.80	0.044	0.05	5.158	A
C-A	231.21	231.21	0.00	-	-	-	-	-
A-B	49.55	49.55	0.00	-	-	-	-	-
A-C	284.06	284.06	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	83.68	83.67	0.00	480.99	0.174	0.21	9.060	A
C-AB	31.93	31.93	0.00	729.80	0.044	0.05	5.158	A
C-A	231.21	231.21	0.00	-	-	-	-	-
A-B	49.55	49.55	0.00	-	-	-	-	-
A-C	284.06	284.06	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	68.32	68.51	0.00	493.60	0.138	0.16	8.472	A
C-AB	26.07	26.11	0.00	742.13	0.035	0.04	5.029	A
C-A	188.79	188.79	0.00	-	-	-	-	-
A-B	40.45	40.45	0.00	-	-	-	-	-
A-C	231.94	231.94	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	57.22	57.35	0.00	502.71	0.114	0.13	8.085	A
C-AB	21.83	21.86	0.00	751.04	0.029	0.03	4.936	A
C-A	158.10	158.10	0.00	-	-	-	-	-
A-B	33.88	33.88	0.00	-	-	-	-	-
A-C	194.24	194.24	0.00	-	-	-	-	-

Standard - 2027 Do-Nothing, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Standard			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2027 Do-Nothing, AM	2027 Do-Nothing	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS

Main Street / Park Avenue	T-Junction	Two-way	A,B,C	8.00	A
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Junction Network Options

Driving Side	Lighting	Network Residual Capacity (%)	First Arm Reaching Threshold
Left	Normal/unknown	228	Stream B-AC

Arms

Arms

Arm	Name	Description	Arm Type
A	Main Street (West)		Major
B	Park Avenue (North)		Minor
C	Main Street (East)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	14.00	✓	2.90	✓	3.20	250.00	✓	6.00

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)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane	2.80										29	28

Pedestrian Crossings

Arm	Crossing Type
A	None
B	None
C	None

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
9	B-A	522.495	0.058	0.147	0.093	0.210
9	B-C	628.717	0.063	0.159	-	-
9	C-B	796.964	0.201	0.201	-	-

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

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

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

Traffic Flows

Demand Set Data Options

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

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	159.00	100.000
B	ONE HOUR	✓	100.00	100.000
C	ONE HOUR	✓	286.00	100.000

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Junction 9 (for whole period)

		To		
		A	B	C
From	A	0.000	31.000	128.000
	B	59.000	0.000	41.000
	C	257.000	29.000	0.000

Turning Proportions (PCU) - Junction 9 (for whole period)

		To		
		A	B	C
From	A	0.00	0.19	0.81
	B	0.59	0.00	0.41
	C	0.90	0.10	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 9 (for whole period)

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

Heavy Vehicle Percentages - Junction 9 (for whole period)

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

	C	0.000	0.000	0.000
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Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.21	8.90	0.27	A
C-AB	0.04	4.93	0.04	A
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	75.29	74.63	0.00	529.68	0.142	0.16	7.900	A
C-AB	21.83	21.72	0.00	772.87	0.028	0.03	4.792	A
C-A	193.48	193.48	0.00	-	-	-	-	-
A-B	23.34	23.34	0.00	-	-	-	-	-
A-C	96.37	96.37	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	89.90	89.73	0.00	523.43	0.172	0.21	8.294	A
C-AB	26.07	26.05	0.00	768.19	0.034	0.03	4.850	A
C-A	231.04	231.04	0.00	-	-	-	-	-
A-B	27.87	27.87	0.00	-	-	-	-	-
A-C	115.07	115.07	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	110.10	109.85	0.00	514.78	0.214	0.27	8.885	A
C-AB	31.93	31.90	0.00	761.72	0.042	0.04	4.932	A
C-A	282.96	282.96	0.00	-	-	-	-	-
A-B	34.13	34.13	0.00	-	-	-	-	-
A-C	140.93	140.93	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	110.10	110.10	0.00	514.78	0.214	0.27	8.895	A
C-AB	31.93	31.93	0.00	761.72	0.042	0.04	4.932	A
C-A	282.96	282.96	0.00	-	-	-	-	-

A-B	34.13	34.13	0.00	-	-	-	-	-
A-C	140.93	140.93	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	89.90	90.14	0.00	523.43	0.172	0.21	8.313	A
C-AB	26.07	26.10	0.00	768.19	0.034	0.04	4.850	A
C-A	231.04	231.04	0.00	-	-	-	-	-
A-B	27.87	27.87	0.00	-	-	-	-	-
A-C	115.07	115.07	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	75.29	75.45	0.00	529.66	0.142	0.17	7.928	A
C-AB	21.83	21.86	0.00	772.87	0.028	0.03	4.795	A
C-A	193.48	193.48	0.00	-	-	-	-	-
A-B	23.34	23.34	0.00	-	-	-	-	-
A-C	96.37	96.37	0.00	-	-	-	-	-

Standard - 2027 Do-Nothing, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Standard			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2027 Do-Nothing, PM	2027 Do-Nothing	PM		ONE HOUR	16:45	18:15	90	15		

Junction Network

Junctions

Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
Main Street / Park Avenue	T-Junction	Two-way	A,B,C	8.20	A

Junction Network Options

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

Arms

Arms

Arm	Name	Description	Arm Type
A	Main Street (West)		Major
B	Park Avenue (North)		Minor
C	Main Street (East)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	14.00	✓	2.90	✓	3.20	250.00	✓	6.00

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)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane	2.80										29	28

Pedestrian Crossings

Arm	Crossing Type
A	None
B	None
C	None

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
9	B-A	522.495	0.058	0.147	0.093	0.210
9	B-C	628.717	0.063	0.159	-	-
9	C-B	796.964	0.201	0.201	-	-

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

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

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

Traffic Flows

Demand Set Data Options

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

		✓	✓	HV Percentages	2.00			✓	✓
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Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	326.00	100.000
B	ONE HOUR	✓	82.00	100.000
C	ONE HOUR	✓	257.00	100.000

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Junction 9 (for whole period)

		To		
		A	B	C
From	A	0.000	48.000	278.000
	B	58.000	0.000	24.000
	C	226.000	31.000	0.000

Turning Proportions (PCU) - Junction 9 (for whole period)

		To		
		A	B	C
From	A	0.00	0.15	0.85
	B	0.71	0.00	0.29
	C	0.88	0.12	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 9 (for whole period)

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

Heavy Vehicle Percentages - Junction 9 (for whole period)

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

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.19	9.33	0.23	A
C-AB	0.05	5.21	0.05	A
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	61.73	61.18	0.00	499.53	0.124	0.14	8.203	A
C-AB	23.34	23.21	0.00	747.56	0.031	0.03	4.970	A
C-A	170.14	170.14	0.00	-	-	-	-	-
A-B	36.14	36.14	0.00	-	-	-	-	-
A-C	209.29	209.29	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	73.72	73.57	0.00	489.71	0.151	0.18	8.648	A
C-AB	27.87	27.84	0.00	737.97	0.038	0.04	5.069	A
C-A	203.17	203.17	0.00	-	-	-	-	-
A-B	43.15	43.15	0.00	-	-	-	-	-
A-C	249.92	249.92	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	90.28	90.06	0.00	476.13	0.190	0.23	9.317	A
C-AB	34.13	34.09	0.00	724.71	0.047	0.05	5.212	A
C-A	248.83	248.83	0.00	-	-	-	-	-
A-B	52.85	52.85	0.00	-	-	-	-	-
A-C	306.08	306.08	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	90.28	90.28	0.00	476.12	0.190	0.23	9.329	A
C-AB	34.13	34.13	0.00	724.71	0.047	0.05	5.212	A
C-A	248.83	248.83	0.00	-	-	-	-	-
A-B	52.85	52.85	0.00	-	-	-	-	-
A-C	306.08	306.08	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS

B-AC	73.72	73.93	0.00	489.70	0.151	0.18	8.664	A
C-AB	27.87	27.91	0.00	737.97	0.038	0.04	5.071	A
C-A	203.17	203.17	0.00	-	-	-	-	-
A-B	43.15	43.15	0.00	-	-	-	-	-
A-C	249.92	249.92	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	61.73	61.88	0.00	499.50	0.124	0.14	8.228	A
C-AB	23.34	23.37	0.00	747.56	0.031	0.03	4.970	A
C-A	170.14	170.14	0.00	-	-	-	-	-
A-B	36.14	36.14	0.00	-	-	-	-	-
A-C	209.29	209.29	0.00	-	-	-	-	-

Standard - 2027 With Development, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Standard			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2027 With Development, AM	2027 With Development	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
Main Street / Park Avenue	T-Junction	Two-way	A,B,C	10.86	B

Junction Network Options

Driving Side	Lighting	Network Residual Capacity (%)	First Arm Reaching Threshold
Left	Normal/unknown	107	Stream B-AC

Arms

Arms

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Arm	Name	Description	Arm Type
A	Main Street (West)		Major
B	Park Avenue (North)		Minor
C	Main Street (East)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	14.00	✓	2.90	✓	3.20	250.00	✓	6.00

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)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane	2.80										29	28

Pedestrian Crossings

Arm	Crossing Type
A	None
B	None
C	None

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
9	B-A	522.495	0.058	0.147	0.093	0.210
9	B-C	628.717	0.063	0.159	-	-
9	C-B	796.964	0.201	0.201	-	-

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

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

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

Traffic Flows

Demand Set Data Options

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

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	187.00	100.000
B	ONE HOUR	✓	171.00	100.000
C	ONE HOUR	✓	286.00	100.000

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Junction 9 (for whole period)

		To		
		A	B	C
From	A	0.000	59.000	128.000
	B	130.000	0.000	41.000
	C	257.000	29.000	0.000

Turning Proportions (PCU) - Junction 9 (for whole period)

		To		
		A	B	C
From	A	0.00	0.32	0.68
	B	0.76	0.00	0.24
	C	0.90	0.10	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 9 (for whole period)

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

Heavy Vehicle Percentages - Junction 9 (for whole period)

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

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.38	11.85	0.61	B
C-AB	0.04	4.97	0.04	A
C-A	-	-	-	-
A-B	-	-	-	-

A-C	-	-	-	-
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Main Results for each time segment

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	128.74	127.40	0.00	508.64	0.253	0.33	9.410	A
C-AB	21.83	21.72	0.00	768.62	0.028	0.03	4.820	A
C-A	193.48	193.48	0.00	-	-	-	-	-
A-B	44.42	44.42	0.00	-	-	-	-	-
A-C	96.37	96.37	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	153.73	153.32	0.00	501.60	0.306	0.44	10.323	B
C-AB	26.07	26.05	0.00	763.12	0.034	0.04	4.883	A
C-A	231.04	231.04	0.00	-	-	-	-	-
A-B	53.04	53.04	0.00	-	-	-	-	-
A-C	115.07	115.07	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	188.27	187.58	0.00	491.87	0.383	0.61	11.804	B
C-AB	31.93	31.89	0.00	755.52	0.042	0.04	4.974	A
C-A	282.96	282.96	0.00	-	-	-	-	-
A-B	64.96	64.96	0.00	-	-	-	-	-
A-C	140.93	140.93	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	188.27	188.25	0.00	491.86	0.383	0.61	11.855	B
C-AB	31.93	31.93	0.00	755.52	0.042	0.04	4.974	A
C-A	282.96	282.96	0.00	-	-	-	-	-
A-B	64.96	64.96	0.00	-	-	-	-	-
A-C	140.93	140.93	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	153.73	154.38	0.00	501.59	0.306	0.45	10.388	B
C-AB	26.07	26.10	0.00	763.12	0.034	0.04	4.886	A
C-A	231.04	231.04	0.00	-	-	-	-	-
A-B	53.04	53.04	0.00	-	-	-	-	-
A-C	115.07	115.07	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	128.74	129.16	0.00	508.62	0.253	0.34	9.497	A
C-AB	21.83	21.86	0.00	768.62	0.028	0.03	4.820	A
C-A	193.48	193.48	0.00	-	-	-	-	-
A-B	44.42	44.42	0.00	-	-	-	-	-
A-C	96.37	96.37	0.00	-	-	-	-	-

Standard - 2027 With Development, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Standard			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2027 With Development, PM	2027 With Development	PM		ONE HOUR	16:45	18:15	90	15		

Junction Network

Junctions

Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
Main Street / Park Avenue	T-Junction	Two-way	A,B,C	9.52	A

Junction Network Options

Driving Side	Lighting	Network Residual Capacity (%)	First Arm Reaching Threshold
Left	Normal/unknown	147	Stream B-AC

Arms

Arms

Arm	Name	Description	Arm Type
A	Main Street (West)		Major
B	Park Avenue (North)		Minor
C	Main Street (East)		Major

Major Arm Geometry

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Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	14.00	✓	2.90	✓	3.20	250.00	✓	6.00

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)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane	2.80										29	28

Pedestrian Crossings

Arm	Crossing Type
A	None
B	None
C	None

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
9	B-A	522.495	0.058	0.147	0.093	0.210
9	B-C	628.717	0.063	0.159	-	-
9	C-B	796.964	0.201	0.201	-	-

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

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

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

Traffic Flows

Demand Set Data Options

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

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	380.00	100.000
B	ONE HOUR	✓	114.00	100.000
C	ONE HOUR	✓	257.00	100.000

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Junction 9 (for whole period)

		To		
		A	B	C
From	A	0.000	102.000	278.000
	B	90.000	0.000	24.000
	C	226.000	31.000	0.000

Turning Proportions (PCU) - Junction 9 (for whole period)

		To		
		A	B	C
From	A	0.00	0.27	0.73
	B	0.79	0.00	0.21
	C	0.88	0.12	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 9 (for whole period)

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

Heavy Vehicle Percentages - Junction 9 (for whole period)

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

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.27	10.66	0.37	B
C-AB	0.05	5.30	0.05	A
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	85.83	84.98	0.00	488.12	0.176	0.21	8.911	A
C-AB	23.34	23.21	0.00	739.37	0.032	0.03	5.027	A
C-A	170.14	170.14	0.00	-	-	-	-	-
A-B	76.79	76.79	0.00	-	-	-	-	-
A-C	209.29	209.29	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	102.48	102.25	0.00	477.63	0.215	0.27	9.584	A
C-AB	27.87	27.84	0.00	728.19	0.038	0.04	5.139	A
C-A	203.17	203.17	0.00	-	-	-	-	-
A-B	91.70	91.70	0.00	-	-	-	-	-
A-C	249.92	249.92	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	125.52	125.13	0.00	463.14	0.271	0.37	10.642	B
C-AB	34.13	34.09	0.00	712.74	0.048	0.05	5.304	A
C-A	248.83	248.83	0.00	-	-	-	-	-
A-B	112.30	112.30	0.00	-	-	-	-	-
A-C	306.08	306.08	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	125.52	125.51	0.00	463.13	0.271	0.37	10.662	B
C-AB	34.13	34.13	0.00	712.74	0.048	0.05	5.304	A
C-A	248.83	248.83	0.00	-	-	-	-	-
A-B	112.30	112.30	0.00	-	-	-	-	-
A-C	306.08	306.08	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	102.48	102.85	0.00	477.62	0.215	0.28	9.615	A
C-AB	27.87	27.91	0.00	728.19	0.038	0.04	5.142	A
C-A	203.17	203.17	0.00	-	-	-	-	-
A-B	91.70	91.70	0.00	-	-	-	-	-
A-C	249.92	249.92	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	85.83	86.07	0.00	488.09	0.176	0.22	8.961	A
C-AB	23.34	23.37	0.00	739.37	0.032	0.03	5.027	A
C-A	170.14	170.14	0.00	-	-	-	-	-

A-B	76.79	76.79	0.00	-	-	-	-	-
A-C	209.29	209.29	0.00	-	-	-	-	-

Standard - 2032 Do-Nothing, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Standard			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2032 Do-Nothing, AM	2032 Do-Nothing	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
Main Street / Park Avenue	T-Junction	Two-way	A,B,C	8.29	A

Junction Network Options

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

Arms

Arms

Arm	Name	Description	Arm Type
A	Main Street (West)		Major
B	Park Avenue (North)		Minor
C	Main Street (East)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	14.00	✓	2.90	✓	3.20	250.00	✓	6.00

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)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane	2.80										29	28

Pedestrian Crossings

Arm	Crossing Type
A	None
B	None
C	None

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
9	B-A	522.495	0.058	0.147	0.093	0.210
9	B-C	628.717	0.063	0.159	-	-
9	C-B	796.964	0.201	0.201	-	-

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

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

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

Traffic Flows

Demand Set Data Options

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

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	174.00	100.000
B	ONE HOUR	✓	110.00	100.000
C	ONE HOUR	✓	314.00	100.000

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Junction 9 (for whole period)

		To		
		A	B	C
From	A	0.000	34.000	140.000
	B	65.000	0.000	45.000
	C	282.000	32.000	0.000

Turning Proportions (PCU) - Junction 9 (for whole period)

		To		
		A	B	C
From	A	0.00	0.20	0.80
	B	0.59	0.00	0.41
	C	0.90	0.10	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 9 (for whole period)

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

Heavy Vehicle Percentages - Junction 9 (for whole period)

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

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.24	9.25	0.31	A
C-AB	0.05	4.98	0.05	A
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	82.81	82.08	0.00	526.48	0.157	0.18	8.088	A

C-AB	24.09	23.96	0.00	770.59	0.031	0.03	4.822	A
C-A	212.30	212.30	0.00	-	-	-	-	-
A-B	25.60	25.60	0.00	-	-	-	-	-
A-C	105.40	105.40	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	98.89	98.70	0.00	519.62	0.190	0.23	8.549	A
C-AB	28.77	28.74	0.00	765.47	0.038	0.04	4.886	A
C-A	253.51	253.51	0.00	-	-	-	-	-
A-B	30.57	30.57	0.00	-	-	-	-	-
A-C	125.86	125.86	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	121.11	120.81	0.00	510.10	0.237	0.31	9.233	A
C-AB	35.23	35.19	0.00	758.40	0.046	0.05	4.977	A
C-A	310.49	310.49	0.00	-	-	-	-	-
A-B	37.43	37.43	0.00	-	-	-	-	-
A-C	154.14	154.14	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	121.11	121.10	0.00	510.10	0.237	0.31	9.254	A
C-AB	35.23	35.23	0.00	758.40	0.046	0.05	4.977	A
C-A	310.49	310.49	0.00	-	-	-	-	-
A-B	37.43	37.43	0.00	-	-	-	-	-
A-C	154.14	154.14	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	98.89	99.17	0.00	519.61	0.190	0.24	8.569	A
C-AB	28.77	28.80	0.00	765.47	0.038	0.04	4.888	A
C-A	253.51	253.51	0.00	-	-	-	-	-
A-B	30.57	30.57	0.00	-	-	-	-	-
A-C	125.86	125.86	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	82.81	83.01	0.00	526.46	0.157	0.19	8.123	A
C-AB	24.09	24.12	0.00	770.59	0.031	0.03	4.824	A
C-A	212.30	212.30	0.00	-	-	-	-	-
A-B	25.60	25.60	0.00	-	-	-	-	-
A-C	105.40	105.40	0.00	-	-	-	-	-

Standard - 2032 Do-Nothing, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Standard			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2032 Do-Nothing, PM	2032 Do-Nothing	PM		ONE HOUR	16:45	18:15	90	15		

Junction Network

Junctions

Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
Main Street / Park Avenue	T-Junction	Two-way	A,B,C	8.52	A

Junction Network Options

Driving Side	Lighting	Network Residual Capacity (%)	First Arm Reaching Threshold
Left	Normal/unknown	185	Stream B-AC

Arms

Arms

Arm	Name	Description	Arm Type
A	Main Street (West)		Major
B	Park Avenue (North)		Minor
C	Main Street (East)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	14.00	✓	2.90	✓	3.20	250.00	✓	6.00

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)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane	2.80										29	28

Pedestrian Crossings

Arm	Crossing Type
A	None
B	None
C	None

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
9	B-A	522.495	0.058	0.147	0.093	0.210
9	B-C	628.717	0.063	0.159	-	-
9	C-B	796.964	0.201	0.201	-	-

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

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

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

Traffic Flows

Demand Set Data Options

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

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	357.00	100.000
B	ONE HOUR	✓	90.00	100.000
C	ONE HOUR	✓	282.00	100.000

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Junction 9 (for whole period)

		To		
		A	B	C
From	A	0.000	53.000	304.000
	B	64.000	0.000	26.000
	C	248.000	34.000	0.000

Turning Proportions (PCU) - Junction 9 (for whole period)

		To		
		A	B	C
From	A	0.00	0.15	0.85
	B	0.71	0.00	0.29
	C	0.88	0.12	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 9 (for whole period)

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

Heavy Vehicle Percentages - Junction 9 (for whole period)

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

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.21	9.74	0.27	A
C-AB	0.05	5.29	0.05	A
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	67.76	67.13	0.00	494.30	0.137	0.16	8.416	A
C-AB	25.60	25.46	0.00	742.86	0.034	0.04	5.016	A
C-A	186.71	186.71	0.00	-	-	-	-	-
A-B	39.90	39.90	0.00	-	-	-	-	-
A-C	228.87	228.87	0.00	-	-	-	-	-

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

	Total Demand	Entry Flow	Pedestrian Demand	Capacity		End Queue	Delay	

Stream	(PCU/hr)	(PCU/hr)	(Ped/hr)	(PCU/hr)	RFC	(PCU)	(s)	LOS
B-AC	80.91	80.74	0.00	483.53	0.167	0.20	8.934	A
C-AB	30.57	30.53	0.00	732.36	0.042	0.04	5.129	A
C-A	222.95	222.95	0.00	-	-	-	-	-
A-B	47.65	47.65	0.00	-	-	-	-	-
A-C	273.29	273.29	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	99.09	98.83	0.00	468.61	0.211	0.26	9.728	A
C-AB	37.43	37.39	0.00	717.83	0.052	0.05	5.290	A
C-A	273.05	273.05	0.00	-	-	-	-	-
A-B	58.35	58.35	0.00	-	-	-	-	-
A-C	334.71	334.71	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	99.09	99.09	0.00	468.61	0.211	0.27	9.742	A
C-AB	37.43	37.43	0.00	717.83	0.052	0.05	5.290	A
C-A	273.05	273.05	0.00	-	-	-	-	-
A-B	58.35	58.35	0.00	-	-	-	-	-
A-C	334.71	334.71	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	80.91	81.16	0.00	483.51	0.167	0.20	8.952	A
C-AB	30.57	30.61	0.00	732.36	0.042	0.04	5.131	A
C-A	222.95	222.95	0.00	-	-	-	-	-
A-B	47.65	47.65	0.00	-	-	-	-	-
A-C	273.29	273.29	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	67.76	67.93	0.00	494.27	0.137	0.16	8.447	A
C-AB	25.60	25.63	0.00	742.86	0.034	0.04	5.021	A
C-A	186.71	186.71	0.00	-	-	-	-	-
A-B	39.90	39.90	0.00	-	-	-	-	-
A-C	228.87	228.87	0.00	-	-	-	-	-

Standard - 2032 With Development, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Standard			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2032 With Development, AM	2032 With Development	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
Main Street / Park Avenue	T-Junction	Two-way	A,B,C	11.34	B

Junction Network Options

Driving Side	Lighting	Network Residual Capacity (%)	First Arm Reaching Threshold
Left	Normal/unknown	95	Stream B-AC

Arms

Arms

Arm	Name	Description	Arm Type
A	Main Street (West)		Major
B	Park Avenue (North)		Minor
C	Main Street (East)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	14.00	✓	2.90	✓	3.20	250.00	✓	6.00

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)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane	2.80										29	28

Pedestrian Crossings

Arm	Crossing Type
A	None
B	None
C	None

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
9	B-A	522.495	0.058	0.147	0.093	0.210
9	B-C	628.717	0.063	0.159	-	-
9	C-B	796.964	0.201	0.201	-	-

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

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

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

Traffic Flows

Demand Set Data Options

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

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	202.00	100.000
B	ONE HOUR	✓	181.00	100.000
C	ONE HOUR	✓	314.00	100.000

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Junction 9 (for whole period)

		To		
		A	B	C
From	A	0.000	62.000	140.000
	B	136.000	0.000	45.000
	C	282.000	32.000	0.000

Turning Proportions (PCU) - Junction 9 (for whole period)

		To		
		A	B	C
From	A	0.00	0.31	0.69
	B	0.75	0.00	0.25
	C	0.90	0.10	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 9 (for whole period)

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

Heavy Vehicle Percentages - Junction 9 (for whole period)

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

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.41	12.46	0.68	B
C-AB	0.05	5.02	0.05	A
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	136.27	134.81	0.00	506.28	0.269	0.36	9.654	A
C-AB	24.09	23.96	0.00	766.35	0.031	0.03	4.849	A
C-A	212.30	212.30	0.00	-	-	-	-	-
A-B	46.68	46.68	0.00	-	-	-	-	-
A-C	105.40	105.40	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	162.72	162.26	0.00	498.60	0.326	0.48	10.687	B
C-AB	28.77	28.74	0.00	760.41	0.038	0.04	4.919	A
C-A	253.51	253.51	0.00	-	-	-	-	-
A-B	55.74	55.74	0.00	-	-	-	-	-

A-C	125.86	125.86	0.00	-	-	-	-	-
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Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	199.28	198.49	0.00	487.98	0.408	0.68	12.400	B
C-AB	35.23	35.19	0.00	752.19	0.047	0.05	5.020	A
C-A	310.49	310.49	0.00	-	-	-	-	-
A-B	68.26	68.26	0.00	-	-	-	-	-
A-C	154.14	154.14	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	199.28	199.26	0.00	487.97	0.408	0.68	12.463	B
C-AB	35.23	35.23	0.00	752.19	0.047	0.05	5.020	A
C-A	310.49	310.49	0.00	-	-	-	-	-
A-B	68.26	68.26	0.00	-	-	-	-	-
A-C	154.14	154.14	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	162.72	163.47	0.00	498.59	0.326	0.49	10.768	B
C-AB	28.77	28.81	0.00	760.41	0.038	0.04	4.922	A
C-A	253.51	253.51	0.00	-	-	-	-	-
A-B	55.74	55.74	0.00	-	-	-	-	-
A-C	125.86	125.86	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	136.27	136.74	0.00	506.25	0.269	0.37	9.756	A
C-AB	24.09	24.12	0.00	766.35	0.031	0.03	4.849	A
C-A	212.30	212.30	0.00	-	-	-	-	-
A-B	46.68	46.68	0.00	-	-	-	-	-
A-C	105.40	105.40	0.00	-	-	-	-	-

Standard - 2032 With Development, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Standard			100.000	

Demand Set Details

Name	Scenario	Time Period	Description	Traffic Profile	Model Start Time	Model Finish	Model Time Period	Time Segment	Single Time	Locked
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	Name	Name		Type	(HH:mm)	Time (HH:mm)	Length (min)	Length (min)	Segment Only	
2032 With Development, PM	2032 With Development	PM		ONE HOUR	16:45	18:15	90	15		

Junction Network

Junctions

Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
Main Street / Park Avenue	T-Junction	Two-way	A,B,C	9.92	A

Junction Network Options

Driving Side	Lighting	Network Residual Capacity (%)	First Arm Reaching Threshold
Left	Normal/unknown	129	Stream B-AC

Arms

Arms

Arm	Name	Description	Arm Type
A	Main Street (West)		Major
B	Park Avenue (North)		Minor
C	Main Street (East)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	14.00	✓	2.90	✓	3.20	250.00	✓	6.00

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)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane	2.80										29	28

Pedestrian Crossings

Arm	Crossing Type
A	None
B	None
C	None

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

			Slope	Slope	Slope	Slope

Junction	Stream	Intercept (PCU/hr)	for A-B	for A-C	for C-A	for C-B
9	B-A	522.495	0.058	0.147	0.093	0.210
9	B-C	628.717	0.063	0.159	-	-
9	C-B	796.964	0.201	0.201	-	-

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

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

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

Traffic Flows

Demand Set Data Options

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

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	411.00	100.000
B	ONE HOUR	✓	122.00	100.000
C	ONE HOUR	✓	282.00	100.000

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Junction 9 (for whole period)

		To		
		A	B	C
From	A	0.000	107.000	304.000
	B	96.000	0.000	26.000
	C	248.000	34.000	0.000

Turning Proportions (PCU) - Junction 9 (for whole period)

		To		
		A	B	C
From	A	0.00	0.26	0.74
	B	0.79	0.00	0.21
	C	0.88	0.12	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 9 (for whole period)

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

Heavy Vehicle Percentages - Junction 9 (for whole period)

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

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.29	11.18	0.41	B
C-AB	0.05	5.38	0.06	A
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	91.85	90.92	0.00	483.50	0.190	0.23	9.150	A
C-AB	25.60	25.45	0.00	734.67	0.035	0.04	5.074	A
C-A	186.71	186.71	0.00	-	-	-	-	-
A-B	80.56	80.56	0.00	-	-	-	-	-
A-C	228.87	228.87	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	109.68	109.41	0.00	472.05	0.232	0.30	9.920	A
C-AB	30.57	30.53	0.00	722.58	0.042	0.04	5.201	A
C-A	222.95	222.95	0.00	-	-	-	-	-
A-B	96.19	96.19	0.00	-	-	-	-	-
A-C	273.29	273.29	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS

B-AC	134.32	133.88	0.00	456.23	0.294	0.41	11.152	B
C-AB	37.43	37.39	0.00	705.87	0.053	0.06	5.385	A
C-A	273.05	273.05	0.00	-	-	-	-	-
A-B	117.81	117.81	0.00	-	-	-	-	-
A-C	334.71	334.71	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	134.32	134.31	0.00	456.22	0.294	0.41	11.183	B
C-AB	37.43	37.43	0.00	705.87	0.053	0.06	5.385	A
C-A	273.05	273.05	0.00	-	-	-	-	-
A-B	117.81	117.81	0.00	-	-	-	-	-
A-C	334.71	334.71	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	109.68	110.10	0.00	472.04	0.232	0.31	9.958	A
C-AB	30.57	30.61	0.00	722.58	0.042	0.04	5.202	A
C-A	222.95	222.95	0.00	-	-	-	-	-
A-B	96.19	96.19	0.00	-	-	-	-	-
A-C	273.29	273.29	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	91.85	92.13	0.00	483.46	0.190	0.24	9.207	A
C-AB	25.60	25.63	0.00	734.67	0.035	0.04	5.077	A
C-A	186.71	186.71	0.00	-	-	-	-	-
A-B	80.56	80.56	0.00	-	-	-	-	-
A-C	228.87	228.87	0.00	-	-	-	-	-

Standard - 2042 Do-Nothing, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Standard			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2042 Do-Nothing, AM	2042 Do-Nothing	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
Main Street / Park Avenue	T-Junction	Two-way	A,B,C	8.56	A

Junction Network Options

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

Arms

Arms

Arm	Name	Description	Arm Type
A	Main Street (West)		Major
B	Park Avenue (North)		Minor
C	Main Street (East)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	14.00	✓	2.90	✓	3.20	250.00	✓	6.00

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)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane	2.80										29	28

Pedestrian Crossings

Arm	Crossing Type
A	None
B	None
C	None

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
9	B-A	522.495	0.058	0.147	0.093	0.210
9	B-C	628.717	0.063	0.159	-	-
9	C-B	796.964	0.201	0.201	-	-

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

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

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

Traffic Flows

Demand Set Data Options

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

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	189.00	100.000
B	ONE HOUR	✓	119.00	100.000
C	ONE HOUR	✓	341.00	100.000

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Junction 9 (for whole period)

		To		
		A	B	C
From	A	0.000	37.000	152.000
	B	70.000	0.000	49.000
	C	306.000	35.000	0.000

Turning Proportions (PCU) - Junction 9 (for whole period)

		To		
		A	B	C
From	A	0.00	0.20	0.80
	B	0.59	0.00	0.41
	C	0.90	0.10	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 9 (for whole period)

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

	C	1.000	1.000	1.000
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Heavy Vehicle Percentages - Junction 9 (for whole period)

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

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.26	9.60	0.35	A
C-AB	0.05	5.02	0.05	A
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	89.59	88.77	0.00	523.77	0.171	0.20	8.262	A
C-AB	26.35	26.21	0.00	768.32	0.034	0.04	4.851	A
C-A	230.37	230.37	0.00	-	-	-	-	-
A-B	27.86	27.86	0.00	-	-	-	-	-
A-C	114.43	114.43	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	106.98	106.76	0.00	516.31	0.207	0.26	8.785	A
C-AB	31.46	31.43	0.00	762.76	0.041	0.04	4.922	A
C-A	275.09	275.09	0.00	-	-	-	-	-
A-B	33.26	33.26	0.00	-	-	-	-	-
A-C	136.64	136.64	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	131.02	130.68	0.00	505.96	0.259	0.34	9.584	A
C-AB	38.54	38.49	0.00	755.07	0.051	0.05	5.023	A
C-A	336.91	336.91	0.00	-	-	-	-	-
A-B	40.74	40.74	0.00	-	-	-	-	-
A-C	167.36	167.36	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	131.02	131.01	0.00	505.96	0.259	0.35	9.601	A
C-AB	38.54	38.54	0.00	755.07	0.051	0.05	5.023	A
C-A	336.91	336.91	0.00	-	-	-	-	-
A-B	40.74	40.74	0.00	-	-	-	-	-
A-C	167.36	167.36	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	106.98	107.31	0.00	516.30	0.207	0.26	8.810	A
C-AB	31.46	31.51	0.00	762.76	0.041	0.04	4.922	A
C-A	275.09	275.09	0.00	-	-	-	-	-
A-B	33.26	33.26	0.00	-	-	-	-	-
A-C	136.64	136.64	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	89.59	89.81	0.00	523.75	0.171	0.21	8.301	A
C-AB	26.35	26.38	0.00	768.32	0.034	0.04	4.853	A
C-A	230.37	230.37	0.00	-	-	-	-	-
A-B	27.86	27.86	0.00	-	-	-	-	-
A-C	114.43	114.43	0.00	-	-	-	-	-

Standard - 2042 Do-Nothing, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Standard			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2042 Do-Nothing, PM	2042 Do-Nothing	PM		ONE HOUR	16:45	18:15	90	15		

Junction Network

Junctions

Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS

Main Street / Park Avenue	T-Junction	Two-way	A,B,C	8.83	A
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Junction Network Options

Driving Side	Lighting	Network Residual Capacity (%)	First Arm Reaching Threshold
Left	Normal/unknown	163	Stream B-AC

Arms

Arms

Arm	Name	Description	Arm Type
A	Main Street (West)		Major
B	Park Avenue (North)		Minor
C	Main Street (East)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	14.00	✓	2.90	✓	3.20	250.00	✓	6.00

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)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane	2.80										29	28

Pedestrian Crossings

Arm	Crossing Type
A	None
B	None
C	None

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
9	B-A	522.495	0.058	0.147	0.093	0.210
9	B-C	628.717	0.063	0.159	-	-
9	C-B	796.964	0.201	0.201	-	-

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

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

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

Traffic Flows

Demand Set Data Options

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

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	388.00	100.000
B	ONE HOUR	✓	97.00	100.000
C	ONE HOUR	✓	305.00	100.000

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Junction 9 (for whole period)

		To		
		A	B	C
From	A	0.000	58.000	330.000
	B	69.000	0.000	28.000
	C	268.000	37.000	0.000

Turning Proportions (PCU) - Junction 9 (for whole period)

		To		
		A	B	C
From	A	0.00	0.15	0.85
	B	0.71	0.00	0.29
	C	0.88	0.12	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 9 (for whole period)

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

Heavy Vehicle Percentages - Junction 9 (for whole period)

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

C	0.000	0.000	0.000
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Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.23	10.14	0.30	B
C-AB	0.06	5.37	0.06	A
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	73.03	72.33	0.00	489.58	0.149	0.17	8.615	A
C-AB	27.86	27.70	0.00	738.16	0.038	0.04	5.065	A
C-A	201.76	201.76	0.00	-	-	-	-	-
A-B	43.67	43.67	0.00	-	-	-	-	-
A-C	248.44	248.44	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	87.20	87.01	0.00	477.87	0.182	0.22	9.205	A
C-AB	33.26	33.23	0.00	726.75	0.046	0.05	5.190	A
C-A	240.93	240.93	0.00	-	-	-	-	-
A-B	52.14	52.14	0.00	-	-	-	-	-
A-C	296.66	296.66	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	106.80	106.49	0.00	461.67	0.231	0.30	10.128	B
C-AB	40.74	40.69	0.00	710.96	0.057	0.06	5.370	A
C-A	295.07	295.07	0.00	-	-	-	-	-
A-B	63.86	63.86	0.00	-	-	-	-	-
A-C	363.34	363.34	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	106.80	106.79	0.00	461.66	0.231	0.30	10.144	B
C-AB	40.74	40.74	0.00	710.96	0.057	0.06	5.370	A
C-A	295.07	295.07	0.00	-	-	-	-	-

A-B	63.86	63.86	0.00	-	-	-	-	-
A-C	363.34	363.34	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	87.20	87.49	0.00	477.86	0.182	0.23	9.228	A
C-AB	33.26	33.31	0.00	726.75	0.046	0.05	5.191	A
C-A	240.93	240.93	0.00	-	-	-	-	-
A-B	52.14	52.14	0.00	-	-	-	-	-
A-C	296.66	296.66	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	73.03	73.22	0.00	489.54	0.149	0.18	8.652	A
C-AB	27.86	27.89	0.00	738.16	0.038	0.04	5.070	A
C-A	201.76	201.76	0.00	-	-	-	-	-
A-B	43.67	43.67	0.00	-	-	-	-	-
A-C	248.44	248.44	0.00	-	-	-	-	-

Standard - 2042 With Development, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Standard			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2042 With Development, AM	2042 With Development	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
Main Street / Park Avenue	T-Junction	Two-way	A,B,C	11.83	B

Junction Network Options

Driving Side	Lighting	Network Residual Capacity (%)	First Arm Reaching Threshold
Left	Normal/unknown	85	Stream B-AC

Arms

Arms

Arm	Name	Description	Arm Type
A	Main Street (West)		Major
B	Park Avenue (North)		Minor
C	Main Street (East)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	14.00	✓	2.90	✓	3.20	250.00	✓	6.00

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)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane	2.80										29	28

Pedestrian Crossings

Arm	Crossing Type
A	None
B	None
C	None

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
9	B-A	522.495	0.058	0.147	0.093	0.210
9	B-C	628.717	0.063	0.159	-	-
9	C-B	796.964	0.201	0.201	-	-

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

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

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

Traffic Flows

Demand Set Data Options

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

		✓	✓	HV Percentages	2.00				✓	✓
--	--	---	---	----------------	------	--	--	--	---	---

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	217.00	100.000
B	ONE HOUR	✓	190.00	100.000
C	ONE HOUR	✓	341.00	100.000

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Junction 9 (for whole period)

		To		
		A	B	C
From	A	0.000	65.000	152.000
	B	141.000	0.000	49.000
	C	306.000	35.000	0.000

Turning Proportions (PCU) - Junction 9 (for whole period)

		To		
		A	B	C
From	A	0.00	0.30	0.70
	B	0.74	0.00	0.26
	C	0.90	0.10	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 9 (for whole period)

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

Heavy Vehicle Percentages - Junction 9 (for whole period)

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

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.43	13.08	0.75	B
C-AB	0.05	5.07	0.05	A
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	143.04	141.48	0.00	504.05	0.284	0.39	9.887	A
C-AB	26.35	26.21	0.00	764.08	0.034	0.04	4.879	A
C-A	230.37	230.37	0.00	-	-	-	-	-
A-B	48.94	48.94	0.00	-	-	-	-	-
A-C	114.43	114.43	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	170.81	170.30	0.00	495.75	0.345	0.52	11.043	B
C-AB	31.46	31.43	0.00	757.69	0.042	0.04	4.956	A
C-A	275.09	275.09	0.00	-	-	-	-	-
A-B	58.43	58.43	0.00	-	-	-	-	-
A-C	136.64	136.64	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	209.19	208.29	0.00	484.27	0.432	0.74	12.999	B
C-AB	38.54	38.49	0.00	748.87	0.051	0.05	5.067	A
C-A	336.91	336.91	0.00	-	-	-	-	-
A-B	71.57	71.57	0.00	-	-	-	-	-
A-C	167.36	167.36	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	209.19	209.16	0.00	484.26	0.432	0.75	13.081	B
C-AB	38.54	38.54	0.00	748.87	0.051	0.05	5.067	A
C-A	336.91	336.91	0.00	-	-	-	-	-
A-B	71.57	71.57	0.00	-	-	-	-	-
A-C	167.36	167.36	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS

B-AC	170.81	171.67	0.00	495.74	0.345	0.54	11.140	B
C-AB	31.46	31.51	0.00	757.69	0.042	0.04	4.959	A
C-A	275.09	275.09	0.00	-	-	-	-	-
A-B	58.43	58.43	0.00	-	-	-	-	-
A-C	136.64	136.64	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	143.04	143.57	0.00	504.02	0.284	0.40	10.004	A
C-AB	26.35	26.38	0.00	764.08	0.034	0.04	4.879	A
C-A	230.37	230.37	0.00	-	-	-	-	-
A-B	48.94	48.94	0.00	-	-	-	-	-
A-C	114.43	114.43	0.00	-	-	-	-	-

Standard - 2042 With Development, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Standard			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2042 With Development, PM	2042 With Development	PM		ONE HOUR	16:45	18:15	90	15		

Junction Network

Junctions

Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
Main Street / Park Avenue	T-Junction	Two-way	A,B,C	10.31	B

Junction Network Options

Driving Side	Lighting	Network Residual Capacity (%)	First Arm Reaching Threshold
Left	Normal/unknown	115	Stream B-AC

Arms

Arms

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Arm	Name	Description	Arm Type
A	Main Street (West)		Major
B	Park Avenue (North)		Minor
C	Main Street (East)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	14.00	✓	2.90	✓	3.20	250.00	✓	6.00

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)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane	2.80										29	28

Pedestrian Crossings

Arm	Crossing Type
A	None
B	None
C	None

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
9	B-A	522.495	0.058	0.147	0.093	0.210
9	B-C	628.717	0.063	0.159	-	-
9	C-B	796.964	0.201	0.201	-	-

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

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

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

Traffic Flows

Demand Set Data Options

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

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	442.00	100.000
B	ONE HOUR	✓	129.00	100.000
C	ONE HOUR	✓	305.00	100.000

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Junction 9 (for whole period)

		To		
		A	B	C
From	A	0.000	112.000	330.000
	B	101.000	0.000	28.000
	C	268.000	37.000	0.000

Turning Proportions (PCU) - Junction 9 (for whole period)

		To		
		A	B	C
From	A	0.00	0.25	0.75
	B	0.78	0.00	0.22
	C	0.88	0.12	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 9 (for whole period)

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

Heavy Vehicle Percentages - Junction 9 (for whole period)

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

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.32	11.70	0.46	B
C-AB	0.06	5.47	0.06	A
C-A	-	-	-	-
A-B	-	-	-	-

A-C	-	-	-	-
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Main Results for each time segment

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	97.12	96.11	0.00	479.15	0.203	0.25	9.375	A
C-AB	27.86	27.70	0.00	729.97	0.038	0.04	5.124	A
C-A	201.76	201.76	0.00	-	-	-	-	-
A-B	84.32	84.32	0.00	-	-	-	-	-
A-C	248.44	248.44	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	115.97	115.67	0.00	466.77	0.248	0.33	10.243	B
C-AB	33.26	33.23	0.00	716.97	0.046	0.05	5.264	A
C-A	240.93	240.93	0.00	-	-	-	-	-
A-B	100.69	100.69	0.00	-	-	-	-	-
A-C	296.66	296.66	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	142.03	141.52	0.00	449.65	0.316	0.45	11.663	B
C-AB	40.74	40.69	0.00	698.99	0.058	0.06	5.468	A
C-A	295.07	295.07	0.00	-	-	-	-	-
A-B	123.31	123.31	0.00	-	-	-	-	-
A-C	363.34	363.34	0.00	-	-	-	-	-

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

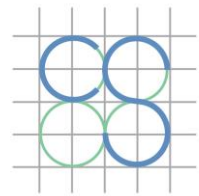
Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	142.03	142.02	0.00	449.64	0.316	0.46	11.700	B
C-AB	40.74	40.74	0.00	698.99	0.058	0.06	5.468	A
C-A	295.07	295.07	0.00	-	-	-	-	-
A-B	123.31	123.31	0.00	-	-	-	-	-
A-C	363.34	363.34	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	115.97	116.46	0.00	466.76	0.248	0.34	10.293	B
C-AB	33.26	33.31	0.00	716.97	0.046	0.05	5.267	A
C-A	240.93	240.93	0.00	-	-	-	-	-
A-B	100.69	100.69	0.00	-	-	-	-	-
A-C	296.66	296.66	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	97.12	97.43	0.00	479.11	0.203	0.26	9.441	A
C-AB	27.86	27.89	0.00	729.97	0.038	0.04	5.127	A
C-A	201.76	201.76	0.00	-	-	-	-	-
A-B	84.32	84.32	0.00	-	-	-	-	-
A-C	248.44	248.44	0.00	-	-	-	-	-



CS CONSULTING
GROUP

Appendix E

Independent Quality Audit

Cronin & Sutton Consulting (Dublin)

Proposed Residential
Development in Clongriffin, Co.
Dublin

Stage 1 & 2 Quality Audit

Cronin & Sutton Consulting (Dublin)

Proposed Residential Development in Clongriffin, Co. Dublin

Stage 1 & 2 Quality Audit

Document Ref:	P24141-PMCE-XX-XX-RP-QA-5_0001
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Rev	Prepared By	Reviewed By	Approved By	Issue Date	Reason for Revision
1.0	AMG	MAH	TAG	19 th July 2024	Draft Report

Table of Contents

1	Quality Audit Report	1
1.1	Introduction.....	1
1.2	Description of Proposed Development.....	1
1.3	Summary of Individual Audit Findings.....	5
Appendix I	Access Audit.....	I-1
I.1	Introduction.....	I-2
I.2	Access Audit Findings	I-2
Appendix II	Walking Audit	II-1
II.1	Introduction.....	II-2
II.2	Walking Audit Findings.....	II-2
Appendix III	Non-Motorised User Audit.....	III-1
III.1	Introduction.....	III-2
Appendix IV	Cycle Audit.....	IV-1
IV.1	Introduction.....	IV-2
IV.2	Existing Cycle Facilities.....	IV-2
IV.3	Proposed Cycle Facilities.....	IV-2
IV.4	Cycle Audit Findings.....	IV-2
Appendix V	Road Safety Audit	V-1

1 Quality Audit Report

1.1 Introduction

This report was prepared in response to a request from Mr Gordon Finn of Cronin & Sutton Consulting (Dublin) to provide a Stage 1 Quality Audit of the Proposed Residential Development in Clongriffin, Co. Dublin

The Stage 1 Quality Audit considers the following elements:

- Access Audit (Appendix I)
- Walking Audit (Appendix II)
- Non-Motorised User Audit (Appendix III)
- Cycle Audit (Appendix IV)
- Road Safety Audit (Appendix V)

The Quality Audit followed a site visit on the 17th July 2024. At the time of the site visit the weather was dry, the ground surface was dry and traffic volumes in the vicinity of the site were low. Pedestrian and cycle volumes were also low.

The different audits included in the appendices to this report address the implications for the different types of non-motorised road users of the proposed development.

The Access (Accessibility) & Walking Audits assess potential usability/accessibility for pedestrians and, in particular, people with sensory or intellectual disabilities. The Cycle Audit predominantly focusses on cycle use, whilst the Road Safety Audit identifies potential safety implications of the scheme.

1.2 Description of Proposed Development

It is proposed to construct a new residential development on an existing greenfield site in Clongriffin, Co. Dublin (see Figure 1.1). The site would be bound to the north by Belltree Avenue, to the west by Park Street and Belltree Park, to the east by Lake Street and to the south by an adjacent greenfield site.

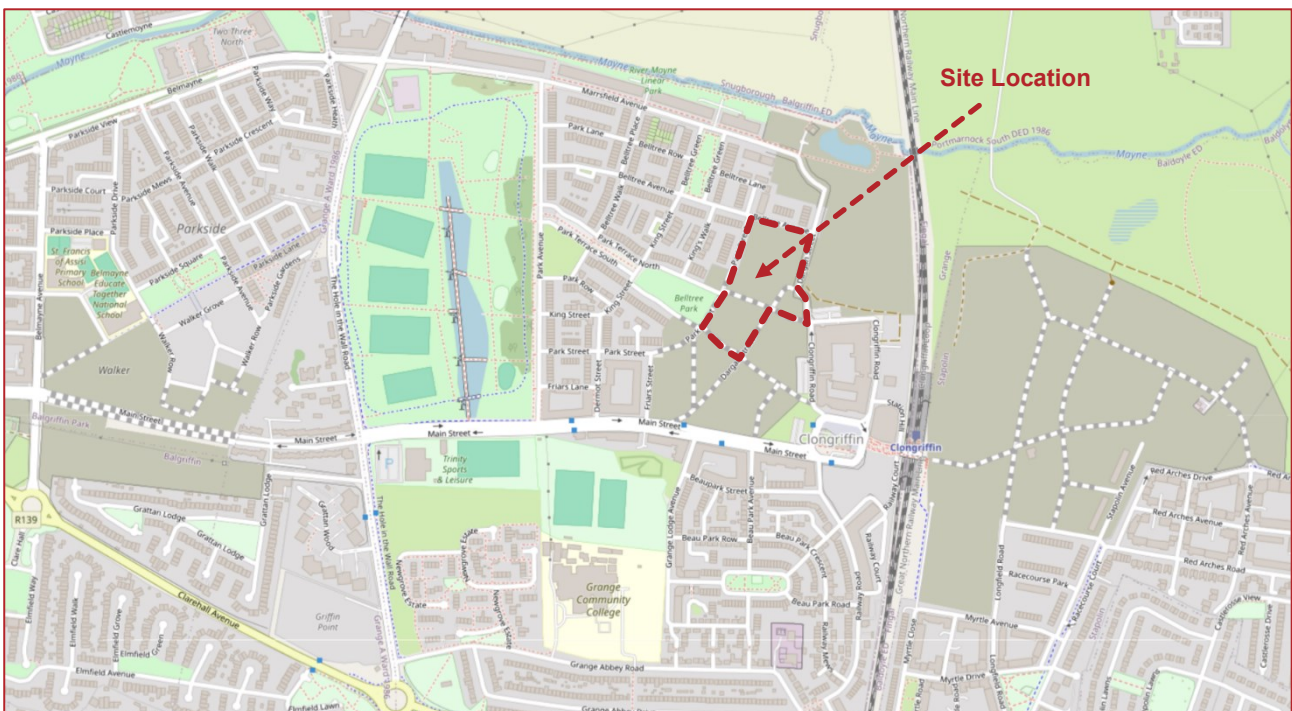


FIGURE 1.1: LOCATION PLAN (SOURCE: WWW.OPENSTREETMAP.ORG)

The land use in the vicinity of the proposed Scheme is primarily residential. Park Street and Belltree Avenue are two-way, single carriageway residential roads which provide direct access to single unit residential properties. Footpaths are currently provided on the western side of Park Street and on the northern side of Belltree Avenue. Public lighting is provided at the rear of these footpaths throughout their length. The existing junctions within the vicinity of the Scheme are priority-controlled and typically provided on raised tables. The posted speed limit on these roads is 30kph.

Lake Street, in the vicinity of the Scheme, provides access to some residential properties and links Marrsfield Avenue with Clongriffin Road and Dargan Street. It is a two-way single carriageway road with a footpath, and public lighting, provided on its eastern side throughout its length. It also has a posted speed limit of 30kph.

The proposed development would be composed of two apartment blocks, Block 5 and Block 6, and would comprise the following elements:

- 180 1-bedroom apartments (58 in Block 5 and 122 in Block 6).
- 226 2-bedroom apartments (78 in Block 5 and 148 in Block 6).
- Two 3-bedroom apartments (all in Block 5).
- A crèche facility in Block 6 to provide 99 childcare places.
- A new public area, Grant Park, to the southeast of Block 6.

With regards to parking, the development shall provide:

- 260 car parking spaces, of which:
 - 14 spaces shall be mobility impaired parking spaces.
 - 132 spaces shall be equipped with EV charging facilities.
- 13 motorcycle parking spaces.
- 642 long term bicycle parking spaces.
- 216 short stay bicycle parking spaces.

A new shared surface road, Market Street, would also be provided at the southern extents of the Scheme to the south of Block 5 which would link Park Street and Lake Street. It is proposed to extend Dargan Street to the west, between the two apartment blocks, as far as Park Street where a new priority-controlled T-Junction would be provided as well as a priority-controlled crossroads junction with Lake Street. It is also proposed to extend Lake Street to the south which would be a one-way road, travelling northbound between its junction with the existing two-way section of Lake Street at the southeastern corner of Block 6 and its junction with Dargan Street.

Although not included within the scope of this Scheme, an extension of Park Street is also proposed between its current southern extents and just south of the junction with the proposed shared surface within the Scheme, and it is also proposed to amend the traffic flow from two-way to one-way on Clongriffin Road from its junction with Lake Street to its junction with Dargan Street.

1.2.1 Existing Road Network

Lake Street

Lake Street is a two-way single carriageway road with an approximate width of 6m. It extends along the eastern side of the proposed development and runs in north to south direction. There is a footpath which is approximately 1.5m wide on the western side of the road. Apartment block 6 will be accessed via Lake Street.



Park Street

Park Street is a two-way single carriageway road with an approximate width of 6m. It extends along the eastern side of the proposed development and runs in north to south direction. There is a footpath which is approximately 1.5m wide on the eastern side of the road. Apartment block 5 will be accessed via Park Street.

1.2.2 Existing Pedestrian & Cyclist Facilities

The existing residential developments that surround the proposed development include public footways and public lighting. Footways are provided within the development, but are discontinuous in areas, and not always provided on both sides of the road. The existing developments do not include any cycle facilities, though the combination of low traffic volumes and speeds will likely provide a safer environment for cyclists.

1.2.3 Public Transport

There are existing bus stops on Main Street, which are 250m south of the proposed development, providing direct access to the local bus network. Additional bus stops are provided on The Hole in The Wall Road.

The nearest bus stops to the proposed development are listed in Table 1.1 including the bus routes which serve these bus stops, and Figure 1.2 illustrates the location of these bus stops in relation to the proposed development.

TABLE 1.1: BUS ROUTES NEAR PROPOSED DEVELOPMENT

Bus Stop (Name)	Bus Stop (number)	Route No.	Proximity to the development	Travelling between	Frequency
Grange Lodge Avenue Stop	7236	15	250m	Clongriffin Station to Ballycullen Road	One bus per 10 minutes
Park Avenue Stop	7246	15	350m	Ballycullen Road to Clongriffin Station	One bus per 10 minutes
Hole In The Wall Stop	6320	40	800m	Clongriffin Station to Ballycullen Road	One bus per 10 minutes

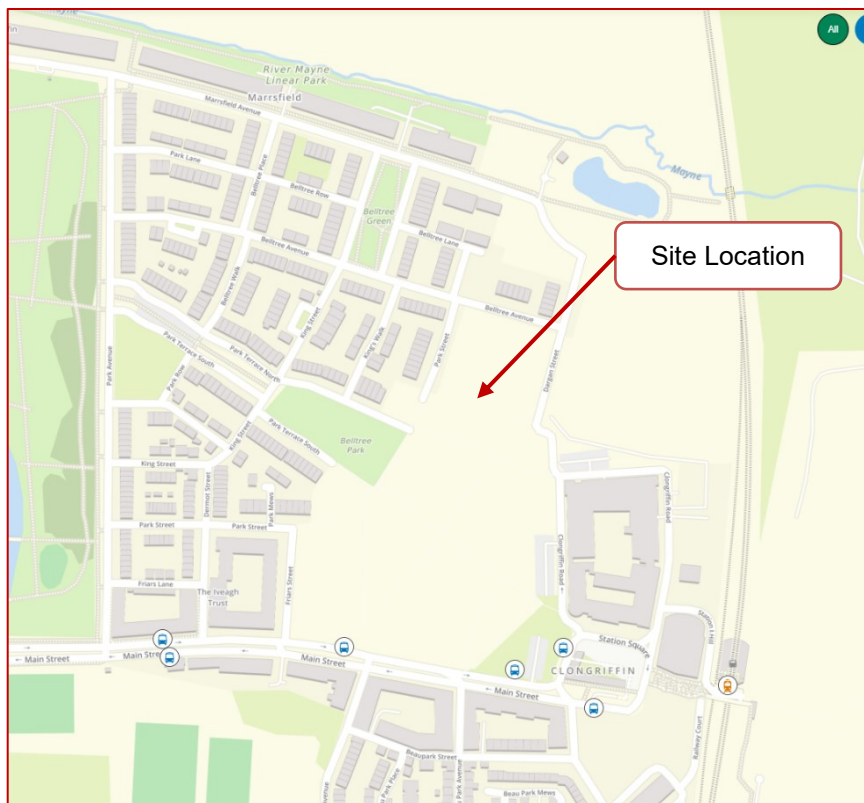


FIGURE 1.2: NEARBY BUS STOPS AND LUAS STOP (SOURCE: WWW.TRANSPORTFORIRELAND.IE)

In addition, Clongriffin Train Station is located 300m east of the proposed development. Waterford Train Station provides access to regional and national destinations, and can be reached within a 5-minute walk, and a 2 minute cycle from the proposed development.

1.3 Summary of Individual Audit Findings

The following table summarises the issues identified by the component audits of this Quality Audit, and the Design Team’s response to the issues raised.

Item No.	Summary of Issue	Individual Audit References				Design Team Response/Action
		Access Audit	Walking Audit	Cycle Audit	Road Safety Audit	
1	Trees Obstructing Access to Parking Space	1.2.1				
2	Lack of Hazard Tactile Paving	1.2.2				
3	No Dropped Kerb or Tactile Paving at Mobility Parking	1.2.3				
4	Access to Bicycle Parking	1.2.4				
5	Building Access	1.2.5				
6	Footway Provoins to the Building Access	1.2.6				
7	Absence of Dropped Kerb at Tactile Paving	1.2.7				
8	Pedestrian Route		II.2.1			
9	Lack of Delineation Between Carriageway		II.2.2			
11	Absence of Seating		II.2.3			
12	Bicycle Parking			IV.4.1		
13	Sheltered Short-Stay Bicycle Parking			IV.4.2		
14	Shower/Changing Facilities for the Crèche			IV.4.3		
16	Risk of High Speeds on One-Way Section				3.1	
17	Pedestrian Desire Line Leads to Carriageway				3.2	
18	Cyclists Travelling Within The Footpath Over Long Distances				3.3	
19	Risk of Striking Columns when Entering/Exiting Parking Spaces				3.4	
21	Risk of Collisions with Steps				3.5	

Item No.	Summary of Issue	Individual Audit References				Design Team Response/Action
		Access Audit	Walking Audit	Cycle Audit	Road Safety Audit	
22	Depth of Tactile Paving				3.6	
23	Buffer Between Parking Spaces and Carriageway may Encourage High Speeds				3.7	
24	Lack of Warning of Edge of Shared Surface Carriageway for Visually-Impaired Pedestrians				3.8	
25	No Pedestrian Crossing				3.9	
26	No Tactile Paving at Dropped Kerbs				3.10	
27	Gullies Within Pedestrian Routes may Present Trip/Slip Hazards				3.11	
28	Gullies/Concrete Channel Within the Shared Surface may Present Slip Hazards				3.12	
29	No Public lighting Indicated				3.13	

Appendix I Access Audit

I.1 Introduction

The purpose of this Access Audit is to review the proposed Scheme, and the existing surrounding environment, to assess if it can be accessed, understood, and used to the greatest extent possible by all people regardless of their age, size, or disability. The Audit considers a number of aspects of the proposed Scheme, including wayfinding, lighting, tonal contrast of proposed materials, gradients, the provision of kerbs and/or dropped kerbs as appropriate, etc.

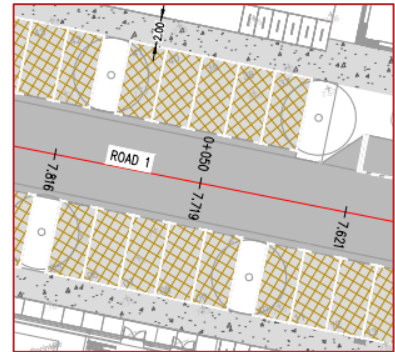
I.2 Access Audit Findings

I.2.1 Trees Obstructing Access to Parking Space

Trees indicated between the on-street perpendicular parking spaces on Belltree Avenue/Road 1 may restrict access/egress to the parking spaces, resulting in potential material damage collisions.

Recommendation

Ensure trees do not obstruct access to parking spaces.

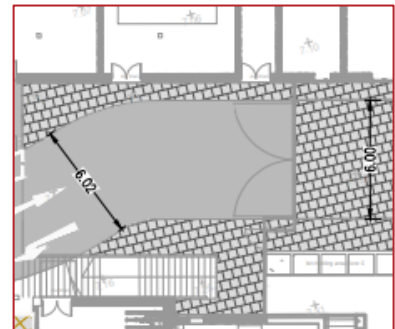


I.2.2 Lack of Hazard Tactile Paving

There are steps leading to the apartment building located adjacent the gate beside the entrance to building 5 undercroft car park, which has no hazard tactile paving at the bottom. Lack of hazard tactile paving at this location could lead to visually impaired pedestrians being insufficiently aware of the vertical hazard ahead resulting in them inadvertently entering the steps resulting in trips, falls and serious injuries.

Recommendation

Warning tactile paving should be provided at the top and bottom of steps.



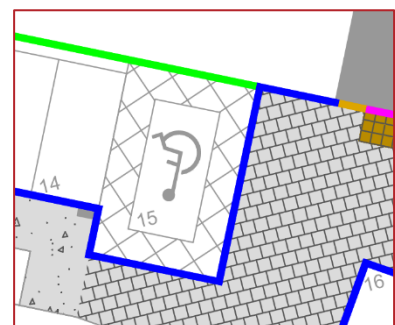
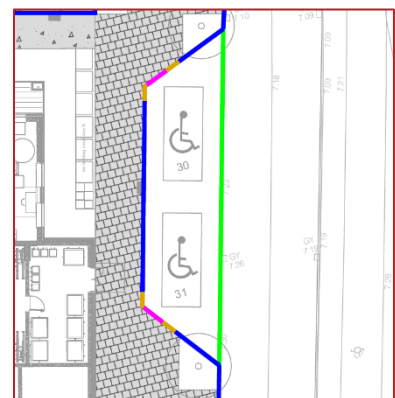
I.2.3 No Dropped Kerb or Tactile Paving at Mobility Parking

Mobility parking spaces have been indicated on the western side of Lake Street adjacent to Block 6. A dropped kerb has been indicated adjacent to each parking space however no tactile paving has been indicated at the dropped kerbs. This may lead to visually impaired pedestrians inadvertently descending the dropped kerbs and entering the parking spaces, when unoccupied, and subsequently the carriageway where there is an increased risk of being struck by a vehicle.

In addition, a mobility parking space has been indicated on Dargan Street (Road 1) at the northeastern corner of Block 5 however no dropped kerb or tactile paving has been indicated at this location. This may lead to mobility impaired vehicle occupants having to travel within the carriageway to the nearest access point where there is an increased risk of being struck by a vehicle.

Recommendation

Dropped kerbs and tactile paving should be provided adjacent to all mobility parking spaces within the Scheme.

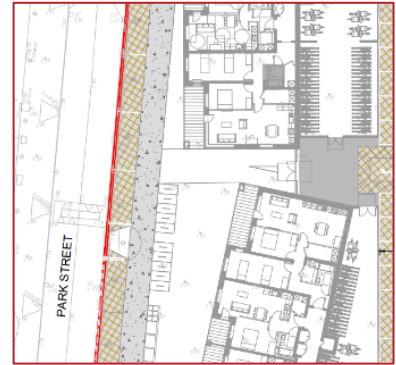


I.2.4 Access to Bicycle Parking

Both short-stay, and long-stay, bicycle parking facilities appear to be indicated in locations, adjacent to both apartment blocks, which would require cyclists to travel within the footpath, and in some instances over long distances, when travelling to/from these facilities. The footpath, which is indicated as approximately 2m wide throughout the majority of the Scheme, would not be wide enough to safely accommodate both pedestrians and cyclists.

Recommendation

Access to the footpath should be provided for cyclists close to the short-stay, and long-stay, bicycle parking facilities which would not require cyclists to share the footpath with pedestrians over long distances.

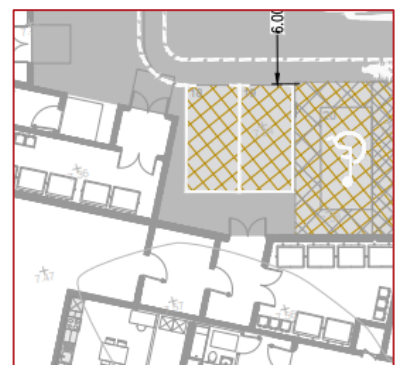


I.2.5 Building Access

The drawings provided indicate an access at the southwestern corner undercroft car park of Block 6 apartments as being blocked by the proposed parking spaces. This may result in mobility impaired pedestrians being unable to access the block.

Recommendation

Ensure sufficient access is provided to all access points to the building and are unobstructed by parked vehicles.



I.2.6 Footway Provoins to the Building Access

At a number of locations throughout the Scheme the public footpath on the roads surrounding Block 5 and Block 6 are offset from the building entrances. No pedestrian routes between the footpath and these building entrances have been indicated.

Recommendation

A paved route, with an appropriate gradient, should be provided between the footpath and all entrances to Block 5 and Block 6.

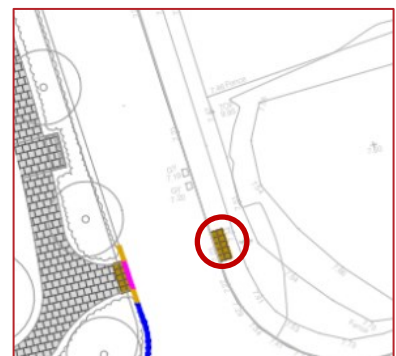


I.2.7 Absence of Dropped Kerb at Tactile Paving

A dropped kerb has not been indicated at the eastern side of the pedestrian crossing to the east of the public open space. A failure to provide dropped kerbs at crossing points could result in mobility impaired pedestrians being unable to safely and independently enter the carriageway to cross to the opposite footpath.

Recommendation

Dropped kerbs should be provided at the eastern side of the crossing.



Appendix II Walking Audit

II.1 Introduction

The purpose of this Walking Audit is to review the proposed Scheme, and the existing surrounding environment, to assess if it can be readily and comfortably traversed by pedestrians, that the needs of pedestrians have been prioritised over cyclists & vehicles, and that footpaths are continuous and wide enough to cater for the anticipated number of pedestrians.

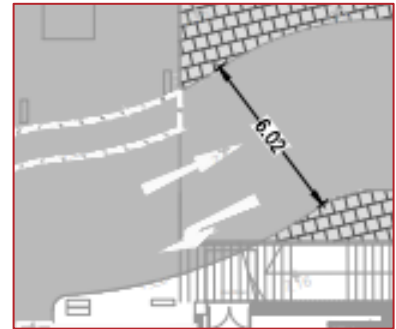
II.2 Walking Audit Findings

II.2.1 Pedestrian Route

The pedestrian route in the undercroft carpark does not align with the footpath and dropped kerb has not been indicated between the footpath and on-carriageway pedestrian route. This may lead to difficulties for visually impaired and mobility impaired pedestrians in safely accessing the pedestrian route in the carpark.

Recommendation

Align pedestrian route with footpath and provide a dropped kerb.

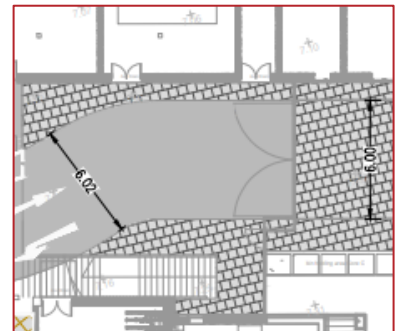


II.2.2 Lack of Delineation Between Carriageway

At the shared surface road, south of block 5 no measures have been indicated to delineate this from the adjacent footpath. The lack of delineation between the footway and the carriageway could lead to visually impaired pedestrians being insufficiently aware of the hazard resulting in them inadvertently entering the carriageway where there is an increased risk of being struck by a vehicle or cyclist.

Recommendation

Measures should be provided to delineate between the carriageway and footway.

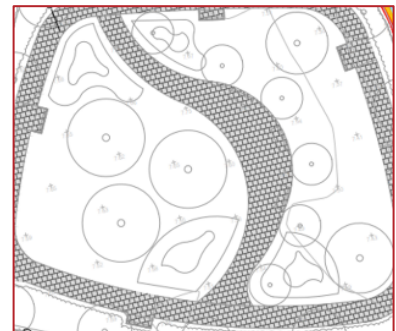


II.2.3 Absence of Seating

Seating has not been indicated near the play area within the public open space. The lack of seating may lead to discomfort for parents or elderly parents/guardians who may be supervising children at the playground.

Recommendation

Provide seating in public space.



Appendix III Non-Motorised User Audit

III.1 Introduction

The purpose of a Non-Motorised User (NMU) Audit is to review the proposed Scheme, and the existing surrounding environment, to assess if it will cater comfortably for all non-motorised road users, of all ages and abilities, and that the needs of these vulnerable road users have been prioritised over vehicular traffic.

For the proposed Scheme separate Access, Walking & Cycling Audits have been undertaken (ref Appendix I, Appendix II & Appendix IV), and these should be referred to for findings in relation to NMUs.

Appendix IV Cycle Audit

IV.1 Introduction

The purpose of this Cycle Audit is to review the proposed Scheme, and the existing surrounding environment, to assess if it will cater comfortably for cyclists, of all ages and abilities, and that the needs of cyclists have been prioritised over vehicular traffic.

IV.2 Existing Cycle Facilities

There are no existing cycle facilities.

IV.3 Proposed Cycle Facilities

There are no proposed cycle lanes or tracks indicated within the proposed development, but it is proposed to provide short stay and long-term bicycle parking proposed.

IV.4 Cycle Audit Findings

IV.4.1 Bicycle Parking

For new Apartments in the Dublin City Council (DCC) area, cycle parking for residential apartment units shall be provided at a rate of 1 secure cycle parking space per residential bedroom and 1 visitor cycle parking space for every two units, equating to a minimum requirement of 642 long-stay bicycle parking spaces and 214 short-stay bicycle parking spaces for the proposed development. (Refer to Section 15.13.1.4 of Dublin City Council Development Plan (DCCDP) 2022-2028)

The minimum bicycle parking requirements in accordance with the Dublin City Council, as well as the proposed provision, is given in Table IV.1 and Table IV.2.

TABLE IV.1: LONG-STAY BICYCLE PARKING PROVISION

Land Use	Bicycle Parking Requirements	Quantum	Required Provision	Proposed Provision
1 Bedroom Apartments	1 space per bed	180	180	638
2 Bedroom Apartments	1 space per bed	226	452	
3 Bedroom Apartments	1 space per bed	2	6	
Crèche	1 space per 5 staff	20 staff	4	4
Community/Arts/Cultural space	1 space per 5 staff	Unknown	Unknown	0
Long-Stay Bicycle Parking			644	642

TABLE IV.2: SHORT-STAY BICYCLE PARKING PROVISION

Land Use	Bicycle Parking Requirements	Quantum	Required Provision	Proposed Provision
1 Bedroom Apartments	1 space per 2 apartments	180 apartments	90	206
2 Bedroom Apartments	1 space per 2 apartments	226 apartments	113	
3 Bedroom Apartments	1 space per 2 apartments	2 apartments	1	
Crèche	1 space per 10 children	99 children	10	10
Community/Arts/Cultural space	1 per 100 sq. m. Gross Floor Area(GFA)	1,209 sq. m.	12	0
Short-Stay Bicycle Parking			226	216

Recommendation

The proposed number of Long- Stay and short-stay bicycle parking spaces for Apartments and Crèche meets the minimum requirements of the DCCDP.

However, Additional long-stay (1 secured and sheltered space per 5 staff) and 10 short-stay bicycle parking spaces should be provided for the proposed Community/Arts/Cultural space.

IV.4.2 Sheltered Short-Stay Bicycle Parking

It is unclear if any of the short-stay bicycle parking spaces within the proposed development would be covered (sheltered). Should no cover be provided at the short-stay bicycle parking spaces this would result in parked bicycles being unprotected from adverse weather conditions and may deter their use.

Recommendation

A percentage of the short-stay bicycle parking spaces within the proposed development should be covered.

IV.4.3 Shower/Changing Facilities for the Crèche

It is unclear from the drawings provided if Shower/Changing Facilities will be provided for the Crèche.

In accordance with DCCDP, Suitable shower and changing facilities shall be made available in developments incorporating staff cycle parking. The requirements for shower provision should be 1 shower for commercial development over 75m² GFA, a minimum of 2 showers for workplaces over 500m² and 1 additional shower for every 1000m² GFA thereafter. The proposed Crèche have a gross floor area of 413m² which would require 1 shower.

Recommendation

Showers, lockers and changing rooms should be provided for the Crèche employees. It is required to provide 1 shower. In addition, changing/drying areas, toilets, and lockers should be provided in association with shower facilities. The number of lockers provided shall relate to the number of cycle parking spaces. Lockers shall be well ventilated, secure, and lockable.

Appendix V Road Safety Audit

Cronin & Sutton Consulting

Proposed Residential
Development in Clongriffin, Co.
Dublin

Stage 1 & 2 Road Safety Audit

Cronin & Sutton Consulting

Proposed Residential Development in Clongriffin, Co. Dublin

Stage 1 & 2 Road Safety Audit

Document Ref:	P24141-PMCE-XX-XX-RP-SA-5_0001
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Rev	Prepared By	Reviewed By	Approved By	Issue Date	Reason for Revision
2.0	AOR	MAH	AOR	25 th July 2024	Final
1.0	AOR	MAH/TAG	AOR	19 th July 2024	Draft Report

Table of Contents

1	Introduction	1
2	Project Description	2
3	Items Arising from the Audit	4
4	Observations	10
5	Audit Team Statement	11
6	Road Safety Audit Feedback Form.....	12
	Appendix A - Documents Submitted to the Road Safety Audit Team.....	13
	Appendix B – Problem Locations	15

1 Introduction

1.1 General

This report results from a Stage 1 & 2 Road Safety Audit on the proposed Residential Development in Clongriffin, Co. Dublin carried out at the request of Mr Gordon Finn of Cronin & Sutton Consulting.

The members of the Road Safety Audit Team are independent of the design team, and include:

Mr. Alan O'Reilly

(BA, BAI, MSc, PGDip(PM), RSACert, CEng, MIEI)
Road Safety Audit Team Leader

Mr. Mazen Al Hosni

(BE(Hons), MSc, RSACert, MIEI)
Road Safety Audit Team Member

The Road Safety Audit took place during July 2024 and comprised an examination of the documents provided by the designers (see Appendix A). In addition to examining the documents supplied the Road Safety Audit Team visited the site of the proposed measures on the 17th July 2024. Weather conditions during the site visit were dry and the road surface was. Traffic volumes during the site visit were low, pedestrian and cyclist volumes were low and traffic speeds were considered to be generally within the posted speed limit.

Where problems are relevant to specific locations these are shown on drawing extracts within the main body of the report and their locations are shown in Appendix B. Where problems are general to the proposals sample drawing extracts are within the main body of the report, where considered necessary.

This Stage 1 & 2 Road Safety Audit has been carried out in accordance with the requirements of GE-STY-01024 - Road Safety Audit (December 2017), contained on the Transport Infrastructure Ireland (TII) Publications website.

The scheme has been examined and this report compiled in respect of the consideration of those matters that have an adverse effect on road safety and considers the perspective of all road users. It has not been examined or verified for compliance with any other standards or criteria. The problems identified in this report are considered to require action in order to improve the safety of the scheme and minimise collision occurrence.

If any of the recommendations within this road safety audit report are not accepted, a written response is required, stating reasons for non-acceptance. Comments made within the report under the heading of Observations are intended to be for information only. Written responses to Observations are not required.

1.2 Items Not Submitted for Auditing

Details of the following items were not submitted for audit; therefore, no specific problems have been identified at this stage relating to these design elements, however where the absence of this information has given rise to a safety concern it has been commented upon in Section 3:

- Landscaping
- Public Lighting
- Visibility splays

2 Project Description

It is proposed to construct a new residential development on an existing greenfield site in Clongriffin, Co. Dublin (see Figure 2.1). The site would be bound to the north by Belltree Avenue, to the west by Park Street and Belltree Park, to the east by Lake Street and to the south by an adjacent greenfield site.



FIGURE 2.1: LOCATION PLAN (SOURCE: WWW.OPENSTREETMAP.ORG)

Land use in the vicinity of the proposed Scheme is primarily residential. Park Street and Belltree Avenue are two-way, single carriageway residential roads which provide direct access to single unit residential properties. Footpaths are currently provided on the western side of Park Street and on the northern side of Belltree Avenue. Public lighting is provided at the rear of these footpaths throughout their length. The existing junctions within the vicinity of the Scheme are priority-controlled and typically provided on raised tables. The posted speed limit on these roads is 30kph.

Lake Street, in the vicinity of the Scheme, provides access to some residential properties and links Marrsfield Avenue with Clongriffin Road and Dargan Street. It is a two-way single carriageway road with a footpath, and public lighting, provided on its eastern side throughout its length. It also has a posted speed limit of 30kph.

The proposed development would be composed of two apartment blocks, Block 5 and Block 6, and would comprise the following elements:

- 180 1-bedroom apartments (58 in Block 5 and 122 in Block 6).
- 226 2-bedroom apartments (78 in Block 5 and 148 in Block 6).
- Two 3-bedroom apartments (all in Block 5).
- A crèche facility in Block 6 to provide 99 childcare places.
- A new public area, Grant Park, to the southeast of Block 6.

With regards to parking, the development shall provide:

- 260 car parking spaces, of which:
 - 14 spaces shall be mobility impaired parking spaces.
 - 132 spaces shall be equipped with EV charging facilities.
- 13 motorcycle parking spaces.
- 642 long term bicycle parking spaces.
- 216 short stay bicycle parking spaces.

A new shared surface road, Market Street, would also be provided at the southern extents of the Scheme to the south of Block 5 which would link Park Street and Lake Street. It is proposed to extend Dargan Street to the west, between the two apartment blocks, as far as Park Street where a new priority-controlled T-Junction would be provided as well as a priority-controlled crossroads junction with Lake Street. It is also proposed to extend Lake Street to the south which would be a one-way road, travelling northbound between its junction with the existing two-way section of Lake Street at the southeastern corner of Block 6 and its junction with Dargan Street.

Although not included within the scope of this Scheme, an extension of Park Street is also proposed between its current southern extents and just south of the junction with the proposed shared surface within the Scheme, and it is also proposed to amend the traffic flow from two-way to one-way on Clongriffin Road from its junction with Lake Street to its junction with Dargan Street.

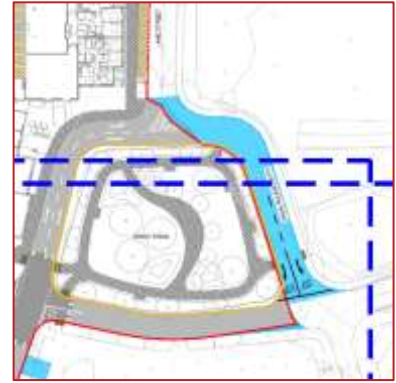
The proposed extension of Park Street and amendments to Clongriffin Road are not included within the scope of this Stage 1 & 2 Road Safety Audit.

3 Items Arising from the Audit

3.1 Risk of High Speeds on One-Way Section

Location: Drawings CLN-CSC-XX-XX-DR-C-0107/0108 (Rev. P2)

Summary: The two traffic lanes indicated within the one-way system around the boundary of Grant Park may encourage high speeds, and the use of road markings alone to advise drivers of the road layout may lead to confusion, should these fade overtime, and an increased risk of wrong-way driving.



A one-way system travelling clockwise has been indicated around the boundary of Grant Park commencing at the northern arm of the junction of Lake Street and Dargan Street (Road 1) and continue onto Clongriffin Road where it terminates at its junction with Dargan Street. Two lanes are indicated on Lake Street and Clongriffin Road within this one-way section. The provision of two lanes within this section may encourage high speeds which may lead to collisions with other vehicles and non-motorised road users.

In addition, drivers are advised of this one-way section by road markings only, with the exception of the splitter island at the proposed left-in left-out junction between Lake Street and Clongriffin Road. Overtime, road markings are likely to fade which may lead to drivers being insufficiently aware that the two lanes on Lake Street and Clongriffin Road travel in the same direction leading to a risk of wrong-way driving and head-on collisions.

Recommendation

The number of traffic lanes on Lake Street and Clongriffin Road should be reduced to one lane. An additional lane, however, may be required on the entry to, and exit from, the two-way section of Lake Street, as indicated, to support safe lane discipline at this location.

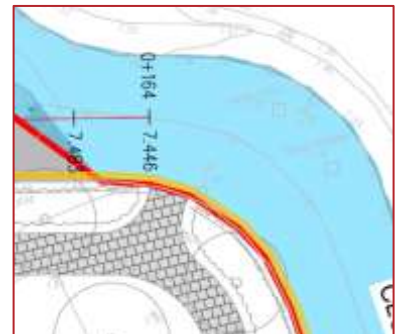
Physical measures (e.g. signs, build-outs etc.) should also be utilised within the one-way section, particularly at the start and end, to advise drivers of the restrictions on traffic flow at this location in support of the road markings indicated.

3.2 Pedestrian Desire Line Leads to Carriageway

Location: Drawing CLN-CSC-XX-XX-DR-C-0107 (Rev. P2)

Summary: The footpath in Grant Park exits onto the Clongriffin Road carriageway where no tactile paving, nor opposing crossing point, has been indicated.

It is proposed to construct an area of open space, called Grant Park, to the southeast corner of Block 6 which would be bounded by Dargan Street (Road 1), to the south, Clongriffin Road to the east and Lake Street to the west and north. A footpath network has been indicated within the park which is indicated as terminating at the carriageway on Clongriffin Road at the park's northeast corner. Tactile paving has not been indicated at this location, nor has a pedestrian crossing and opposing crossing point on the other side of the road. The termination of the footpath at this location may create a pedestrian desire line to/from the park, particularly if the lands on the other side of Clongriffin Road are developed in the future.



This may lead to an increased risk of pedestrians crossing the carriageway at this location where drivers may not anticipate them to do so resulting in drivers having insufficient time to react to a pedestrian in the carriageway and an increased risk of vehicle-pedestrian collisions.

Recommendation

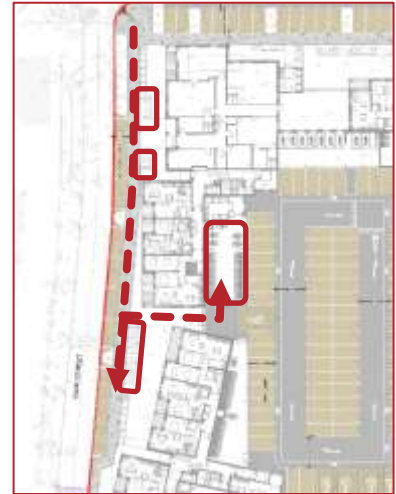
The footpath link to the edge of the Clongriffin Road carriageway should be removed and this area landscaped to prevent pedestrians crossing the road at this location.

3.3 Cyclists Travelling Within The Footpath Over Long Distances

Location: Drawings CLN-CSC-XX-XX-DR-C-0107/0108 (Rev. P2)

Summary: Access to bicycle parking facilities, both long and short-stay, would require cyclists to travel within the footpath for long distances which may lead to an increased risk of pedestrian-cyclist collisions.

Both short-stay, and long-stay, bicycle parking facilities appear to be indicated in locations, adjacent to both apartment blocks, which would require cyclists to travel within the footpath, and in some instances over long distances, when travelling to/from these facilities. The footpath, which is indicated as approximately 2m wide throughout the majority of the Scheme, would not be wide enough to safely accommodate both pedestrians and cyclists and this may lead to an increased risk of pedestrian-cyclist collisions.



Recommendation

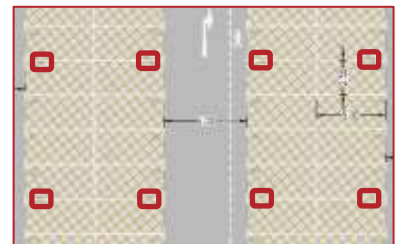
Access to the footpath should be provided for cyclists close to the short-stay, and long-stay, bicycle parking facilities which would not require cyclists to share the footpath with pedestrians over long distances.

3.4 Risk of Striking Columns when Entering/Exiting Parking Spaces

Location: Drawings CLN-CSC-XX-XX-DR-C-0107/0108 (Rev. P2)

Summary: Columns have been indicated between parking spaces in both undercroft car parks which may increase the risk of material damage collisions when entering/exiting the parking spaces.

In both undercroft car parks at Block 5 and Block 6, columns have been indicated between parking spaces. It is unclear if the columns would restrict the effective width of the parking spaces such that drivers may be at risk of striking the column when entering the parking spaces, or when exiting their vehicles once parked, resulting in material damage to their vehicle or structural damage to the columns.



Recommendation

The effective width of parking spaces adjacent to columns should be such that drivers can enter and exit the parking spaces, and their parked vehicle, without striking the column.

3.5 Risk of Collisions with Steps

Location: Drawing CLN-CSC-XX-XX-DR-C-0107 (Rev. P2)

Summary: A set of steps are indicated adjacent to, and overhanging, the carriageway within the undercroft carpark at Block 6 and this may lead to an increased risk of vehicles striking the steps resulting in material damage.

A set of steps are indicated adjacent to, and overhanging, the carriageway, within the undercroft carpark at Block 6, downstream of the carpark access. It is unclear if these steps are sufficiently offset, and provide sufficient vertical clearance, to the adjacent carriageway. If the steps are located too close to the carriageway, and do not provide sufficient vertical clearance, there is an increased risk of drivers striking the steps, particularly during the hours of darkness, resulting in material damage to vehicles or structural damage to the steps.



Recommendation

The steps should be sufficiently offset from, and provide sufficient vertical and horizontal clearance to, the adjacent carpark carriageway.

3.6 Depth of Tactile Paving

Location: Drawings CLN-CSC-XX-XX-DR-C-0107/0108 (Rev. P2)

Summary: The depth of the tactile paving on the southern side of the access to the carpark at Block 6, and on the northern side of the pedestrian crossing at the western end of Dargan Street, is insufficient for an inline crossing.

The tactile paving on the southern side of the pedestrian crossing across the access to the undercroft carpark at Block 6 is indicated as two rows of tactile paving deep. Visually impaired pedestrians approaching from the south, and using the adjacent building boundary as a guide, would be approaching in the direction of travel of the crossing which may lead to them inadvertently stepping over the tactile paving and entering the carriageway where there is an increased risk of being struck by a vehicle.



In addition, the tactile paving on the northern side of the pedestrian crossing at the western end of Dargan Street (Road 1) is also not of a sufficient depth for an inline pedestrian crossing which may also lead to visually impaired pedestrians inadvertently entering the carriageway where there is an increased risk of being struck by a vehicle.



Recommendation

Tactile paving at inline uncontrolled pedestrian crossings should be a minimum of 1.2m deep.

3.7 Buffer Between Parking Spaces and Carriageway may Encourage High Speeds

Location: Drawings CLN-CSC-XX-XX-DR-C-0107/0108 (Rev. P2)

Summary: A 0.5m wide buffer has been indicated between on-street parking spaces and the adjacent traffic lane which may give drivers the impression of a wider carriageway and encourage high speeds.

On-street parking spaces have been indicated on a number of roads within the proposed Scheme. A buffer area, 0.5m wide, has been indicated between the parking spaces and the adjacent traffic lanes. The width of the roads within the Scheme are typically indicated as 5.5m wide however the provision of a 0.5m buffer zone may give drivers the impression of a wider traffic lane and encourage higher speeds leading to an increased risk of loss of control type incidents and head-on collisions, collisions with parked vehicles, or collisions with the full height kerbs at the edge of the tree pits between parking spaces.



This is a particular concern on roads where parking spaces have been indicated on both sides as this may give the impression that the carriageway is widened by 1m, exacerbating the problem.

Recommendation

The 0.5m wide buffer should be removed.

3.8 Lack of Warning of Edge of Shared Surface Carriageway for Visually-Impaired Pedestrians

Location: Drawing CLN-CSC-XX-XX-DR-C-0120 (Rev. P2)

Summary: A dropped kerb with an upstand of between 0 – 6mm has been indicated on both sides of the proposed Shared Surface on Market Street which, although detectable by the visually impaired, may not prevent them from inadvertently entering the carriageway where they are at risk of being struck by a vehicle or cyclist.



A shared surface carriageway has been indicated on Market Street (Road 3) at the Scheme's southern boundary. A dropped kerb with an upstand of between 0 – 6mm has been indicated on both sides of the shared surface. While an upstand of this height can be detected by a visually impaired pedestrian it may sufficiently warn them of, or prevent them from continuing into, the shared surface carriageway where they may be insufficiently aware that they are entering an area shared with motorised vehicles and cyclists resulting in an increased risk of vehicle-pedestrian, or pedestrian-cyclist, collisions.

Recommendation

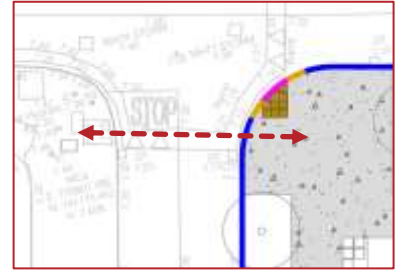
Warning tactile paving should be provided along the dropped kerb on both sides of the shared surface on Market Street to advise visually impaired pedestrians to proceed into the shared surface carriageway with caution.

3.9 No Pedestrian Crossing

Location: Drawing CLN-CSC-XX-XX-DR-C-0119 (Rev. P2)

Summary: No pedestrian crossing has been indicated across Park Street at its junction with Belltree Avenue.

A dropped kerb and tactile paving are currently provided on the western side of Park Street at its junction with Belltree Avenue. The proposed Scheme would include the provision of a footpath on the eastern side of Park Street at this location. A dropped kerb and tactile paving, however, has not been indicated on the eastern side of Park Street, within the extents of the Scheme and opposite the existing tactile paving. This may lead to pedestrians, particularly the mobility and visually impaired, crossing Park Street from the western side experiencing difficulties in accessing the footpath on the eastern side of the road resulting in an increased risk of trips and falls and personal injuries.



Recommendation

A dropped kerb and tactile paving should be provided on the eastern side of Park Street such that it is aligned with the existing dropped kerb and tactile paving on the western side of the road.

3.10 No Tactile Paving at Dropped Kerbs

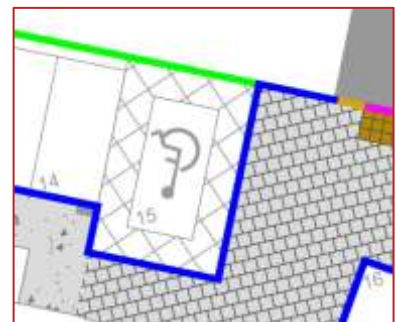
Location: Drawings CLN-CSC-XX-XX-DR-C-0119/0120 (Rev. P2)

Summary: Tactile paving has not been indicated at dropped kerbs at mobility parking spaces.

Mobility parking spaces have been indicated on the western side of Lake Street adjacent to Block 6. A dropped kerb has been indicated adjacent to each parking space however no tactile paving has been indicated at the dropped kerbs. This may lead to visually impaired pedestrians inadvertently descending the dropped kerbs and entering the parking spaces, when unoccupied, and subsequently the carriageway where there is an increased risk of being struck by a vehicle.



In addition, a mobility parking space has been indicated on Dargan Street (Road 1) at the northeastern corner of Block 5 however no dropped kerb or tactile paving has been indicated at this location. This may lead to mobility impaired vehicle occupants having to travel within the carriageway to the nearest access point where there is an increased risk of being struck by a vehicle.



Recommendation

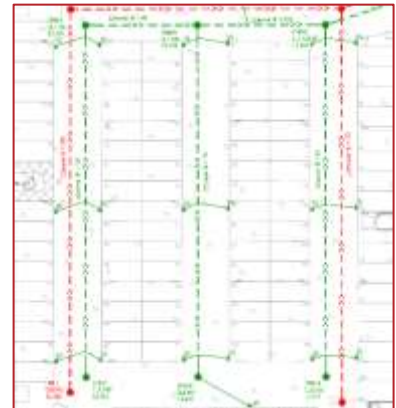
Dropped kerbs and tactile paving should be provided adjacent to all mobility parking spaces within the Scheme.

3.11 Gullies Within Pedestrian Routes may Present Trip/Slip Hazards

Location: Drawing CLN-CSC-XX-XX-DR-C-0111 (Rev. P2)

Summary: Gullies have been indicated within the pedestrian route in the undercroft carpark at Block 6 which may lead to an increased risk of slips and falls.

Gullies have been indicated directly adjacent to parking spaces within the undercroft carpark at Block 6 where the proposed pedestrian route within the carpark is located. Details of the type of gully gratings proposed at the gullies have not been indicated and it is, therefore, unclear if the gully gratings will be safe for pedestrians to traverse without presenting trip or slip hazards resulting in falls and personal injuries.



Recommendation

Gullies within the pedestrian route through the carpark should be safe for pedestrians to traverse.

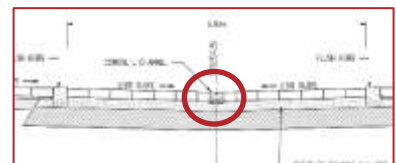
3.12 Gullies/Concrete Channel Within the Shared Surface may Present Slip Hazards

Location: Drawings CLN-CSC-XX-XX-DR-C-0112 (Rev. P2) & CLN-CSC-XX-XX-DR-C-0124 (Rev. P2)

Summary: Gullies and a concrete drainage channel have been indicated within the proposed shared surface on Market Street which may present slip hazards to pedestrians and cyclists.

Gullies have been indicated within the shared surface carriageway on Market Street (Road 3), and a concrete drainage channel has also been indicated along the centre of the road throughout its length. Details of the type of gully gratings proposed at the gullies have not been indicated and it is, therefore, unclear if the gully gratings will be safe for pedestrians to traverse without presenting trip or slip hazards resulting in falls and personal injuries.

In addition, the dimensions, including the gradient and depth, of the concrete channel have not been indicated and, if too steep or deep, it may also present a trip hazard to pedestrians resulting in falls and personal injuries.



Recommendation

Gullies and the concrete channel within the shared surface carriageway should be safe for pedestrians to traverse.

3.13 No Public Lighting Indicated

Location: General Problem

Summary: Information regarding public lighting within the proposed development has not been provided to the Audit Team.

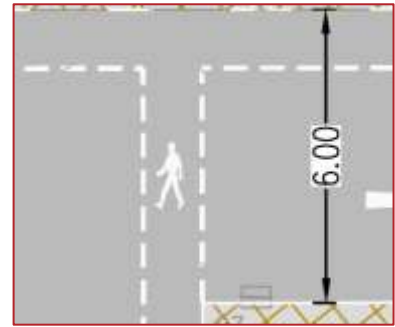
Information regarding the public lighting provision within the proposed development has not been provided to the Audit Team. It is, therefore, unclear if the development will be sufficiently lit during the hours of darkness. If the development is not sufficiently lit this could lead to dark spots within the footpath, shared surface, carparks or carriageway resulting in reduced inter-visibility between road users and an increased risk of collisions.

Recommendation

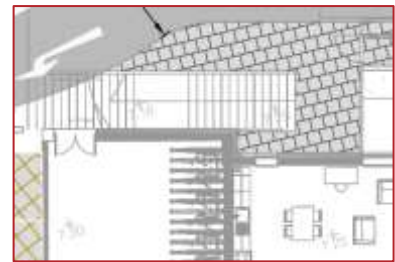
The development should be sufficiently lit during the hours of darkness.

4 Observations

4.1 The pedestrian route within the undercroft carpark at Block 5 and Block 6 crosses the carpark carriageway at a number of locations. The carriageway crossing may not be obvious to drivers at these locations and they would, therefore, benefit from Zebra road markings to increase a driver's awareness of the crossing locations.



4.2 A set of steps are indicated adjacent to, and overhanging, the carriageway, within the undercroft carpark at Block 6, downstream of the carpark access. No corduroy hazard warning tactile paving has been indicated at the bottom of the steps where they exit onto the footpath within the carpark. The Audit Team acknowledge that these steps are not located within the public footpath but rather within a private carpark however corduroy hazard warning tactile paving should be provided at the bottom of the steps to advise visually impaired pedestrians of the hazard.



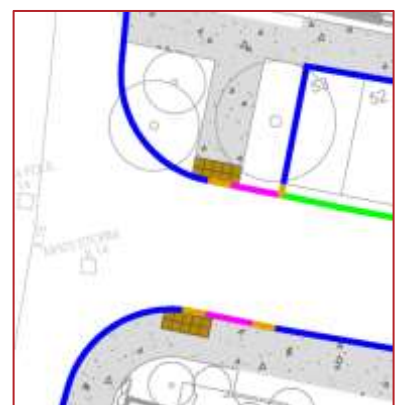
4.3 Gullies have been indicated within the raised table, and straddling the ramped section, at the intersection of Lake Street and Dargan Street (Road 1). It is unclear if these gullies will sufficiently capture surface water in the location indicated. The gullies should be relocated to the base of the ramp where they are more likely to be required.



4.4 At a number of locations throughout the Scheme the public footpath on the roads surrounding Block 5 and Block 6 are offset from the building entrances. Although assumed, no pedestrian routes between the footpath and these building entrances have been indicated. A paved route, with an appropriate gradient, should be provided between the footpath and all entrances to Block 5 and Block 6.



4.5 An uncontrolled pedestrian crossing has been indicated at the western end of Dargan Street (Road 1). The tactile paving on both sides of the uncontrolled pedestrian crossing, however, does not align with the dropped kerbs. This is assumed to be a CAD error however the drawings should be amended and the dropped kerbs and tactile paving indicated at the same locations.



5 Audit Team Statement

We certify that we have examined the drawings referred to in this report. The examination has been carried out with the sole purpose of identifying any features of the design that could be removed or modified in order to improve the safety of the scheme.

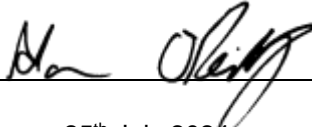
The problems identified have been noted in this report together with associated safety improvement suggestions, which we would recommend should be studied for implementation.

No one on the Road Safety Audit Team has been involved with the design of the scheme.

ROAD SAFETY AUDIT TEAM LEADER

Alan O'Reilly

Signed:



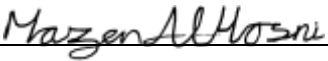
Dated:

25th July 2024

ROAD SAFETY AUDIT TEAM MEMBER

Mazen Al Hosni

Signed:



Dated:

25th July 2024

6 Road Safety Audit Feedback Form

Road Safety Audit Feedback Form

Scheme: Proposed Residential Development in Clongriffin, Co. Dublin

Route No.: Park Street, Lake Street, Beltree Avenue, Clongriffin Road

Audit Stage: 1 & 2 Date Audit Completed: 19th July 2024

Paragraph No. in Safety Audit Report	To be Completed by Designer			To be Completed by Audit Team Leader
	Problem Accepted (Yes/No)	Recommended Measure(s) Accepted (Yes/No)	Describe Alternative Measure(s). Give reasons for not accepting recommended measure. Only complete if recommended measure is not accepted	Alternative Measures or Reasons Accepted by Auditors (Yes/No)
3.1	Yes	No	The design of this road section is retained from that previously permitted under SHD ref. 305316, as it is required to tie in to the existing Lake Street and Clongriffin Road sections as also permitted under that SHD. There is also the possibility that BusConnects route D3 will follow a loop around the park, which could be prejudiced by a reduced carriageway width. Temporary traffic calming measures can be implemented within the application boundary to mitigate the effects of a 2-lane carriageway on the western side of the park. The findings of this Audit will also be communicated to the designers of future development on the lands to the east of Lake Street and Clongriffin Road.	Yes
3.2	Yes	Yes		
3.3	Yes	Yes		
3.4	Yes	Yes		
3.5	Yes	Yes		
3.6	Yes	Yes		
3.7	Yes	Yes		
3.8	Yes	Yes		
3.9	Yes	Yes		
3.10	Yes	Yes		
3.11	Yes	Yes		
3.12	Yes	Yes		
3.13	Yes	Yes		

Signed:  Designer Date 24.07.2024

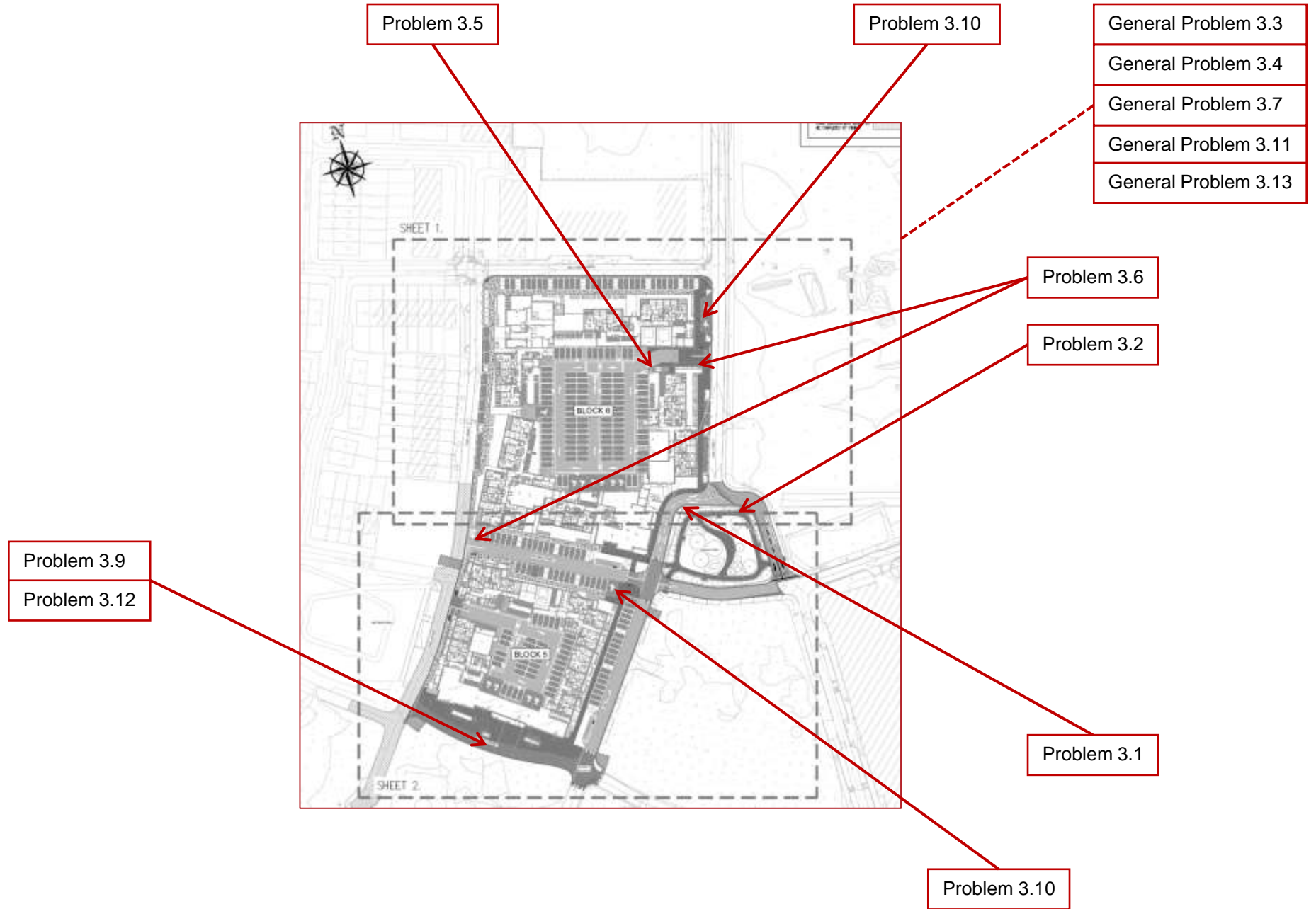
Signed:  Audit Team Leader Date 25th July 2024

Signed:  Employer Date 29.07.2024

Appendix A - Documents Submitted to the Road Safety Audit Team

DOCUMENT/DRAWING TITLE	DOCUMENT/DRAWING NO.	REVISION
Overall Layout & Drawings Key Plan	CLN-CSC-XX-XX-DR-C-0102	P2
Proposed General Arrangement Sheet 1 of 2	CLN-CSC-XX-XX-DR-C-0107	P2
General Arrangement Sheet 2 of 2	CLN-CSC-XX-XX-DR-C-0108	P2
Proposed Storm Water Layout Sheet 1 of 2	CLN-CSC-XX-XX-DR-C-0111	P2
Proposed Storm Water Layout Sheet 2 of 2	CLN-CSC-XX-XX-DR-C-0112	P2
Proposed Road Levels & Pavement Works Sheet 1 of 2	CLN-CSC-XX-XX-DR-C-0117	P2
Proposed Road Levels & Pavement Works Sheet 2 of 2	CLN-CSC-XX-XX-DR-C-0118	P2
Proposed Kerbs, Footways & Paved Areas Sheet 1 of 2	CLN-CSC-XX-XX-DR-C-0119	P2
Proposed Kerbs, Footways & Paved Areas Sheet 2 of 2	CLN-CSC-XX-XX-DR-C-0120	P2
Proposed Road Markings & Traffic Signs Sheet 1 of 2	CLN-CSC-XX-XX-DR-C-0121	P2
Proposed Road Markings & Traffic Signs Sheet 2 of 2	CLN-CSC-XX-XX-DR-C-0122	P2
Typical Cross Sections Sheet 1 of 2	CLN-CSC-XX-XX-DR-C-0123	P2
Typical Cross Sections Sheet 2 of 2	CLN-CSC-XX-XX-DR-C-0124	P2
Road Profiles Sheet 1 of 2	CLN-CSC-XX-XX-DR-C-0125	P2
Road Profiles Sheet 2 of 2	CLN-CSC-XX-XX-DR-C-0126	P2
Road Construction Details Sheet 1 of 2	CLN-CSC-XX-XX-DR-C-0127	P2
Road Construction Details Sheet 2 of 2	CLN-CSC-XX-XX-DR-C-0128	P2
Swept Path Analysis Sheet 1 of 2	CLN-CSC-XX-XX-DR-C-0139	P2
Swept Path Analysis Sheet 1 of 2	CLN-CSC-XX-XX-DR-C-0140	P2

Appendix B – Problem Locations



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