

## Document Title

Traffic and Transport Assessment

## Project

Amendment Application to Blocks A and D of GA01  
lands at Baldoyle, Co. Dublin

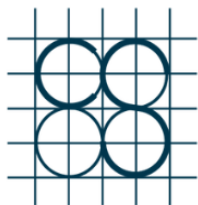
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## TRAFFIC AND TRANSPORT ASSESSMENT

### AMENDMENT APPLICATION TO BLOCKS A AND D OF GA01 LANDS AT BALDOYLE, CO. DUBLIN

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## APPENDICES

### APPENDIX A SURVEYED TRAFFIC FLOWS

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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) to accompany the proposed amendments to permitted development of GA01 Lands, as permitted under ABP Reg. Ref. 310418-21 / FCC Reg. Ref. SHD/011/20. The proposed amendments comprise of alterations to the permitted Blocks A and D and Stapolin Square only.

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

- Previously Permitted Planning Application under FCC Reg. Ref. SHD/011/20
- Fingal County Council Development Plan 2023-2029
- Baldoyle-Stapolin Local Area Plan 2013, extended to 2023
- The Institute of Highways and Transportation Guidelines for Traffic Impact Assessments
- TII Project Appraisal Guidelines 2023
- TII Traffic and Transport Assessment Guidelines
- Planning Design Standards for Apartments (Guidelines for Planning Authorities) 2025
- Sustainable Residential Development and Compact Settlements (Guidelines for Planning Authorities) 2024
- National Transport Authority (NTA) Cycle Design Manual 2023
- Greater Dublin Area Cycle Network Plan
- Trip Rate Information Computer System (TRICS)
- Design Manual for Urban Roads and Street 2019
- CSO 2022 Census Data

### 1.1 Objective

The objective of this report is to examine the traffic implications associated with the proposed amendments to permitted development, in terms of its potential to generate vehicular trips on the surrounding road network, and to assess the availability of sustainable transport options for residents of the development.

### 1.2 Study Methodology

The methodology adapted for this report is summarized as follows;

- Trip Generation - A development trip generation has been carried out using TRICS, to determine the potential vehicular trips to and from the proposed development site during peak hours.

- Parking - Car parking, bicycle, and motorcycle parking provisions for the proposed development were assessed with reference to the parking standards set out in the *Fingal County Council Development Plan 2023-2029 and Planning Design Standards for Apartments (Guidelines for Planning Authorities) 2025*.

### **1.3 Structure of Report**

As outlined above, this Traffic and Transport Assessment seeks to establish the traffic generation potential of the proposed amendments to Blocks A and D development and to assess the parking, road network and the internal undercroft layout.

The structure of this report corresponds to the various sections outlines previously, and the key tasks summarised below;

- Section 2 describes the proposed development location, existing land use and the development proposal.
- Section 3 provides an overview of the existing local road network, identifying any existing issues related to road infrastructure with special relevance to this transport appraisal.
- Section 4 examines the predicted vehicular trip generation for the proposed development.
- Section 4 assesses the proposed parking provision for the development, with reference to Local Authority standards and Apartment Guidelines 2025.
- Section 6 addresses the development's road network, internal undercroft layout, access for the motor vehicles, pedestrians and the cyclists.
- Section 7 presents the conclusions of the report.

## **2.0 SITE LOCATION AND PROPOSED DEVELOPMENT**

### **2.1 Site Location**

The proposed amendments relate to a site area of approx. 3.03 ha, which forms part of the wider c.9.1ha development permitted under ABP Reg. Ref. ABP-310418-21.

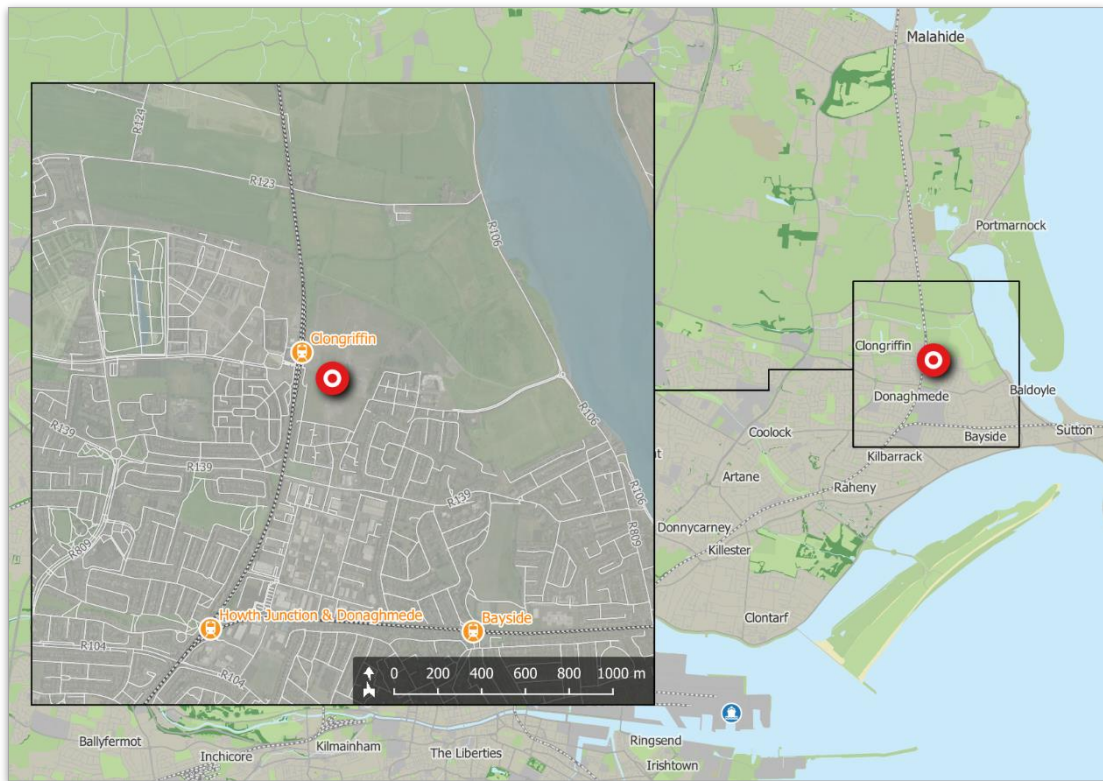


Figure 1 – Location of subject lands  
(sources: EPA, OSi, OSM Contributors, Google)

The location of the subject lands is shown in **Figure 1**; their extents and environs are shown in more detail in **Figure 2**.

The site is bounded to the west by the Dublin-Belfast railway line, with Clongriffin DART Station located just to the northwest of the applicant lands, to the east and south by Blocks B and C which are currently under construction as permitted under FCC Reg. ref. SHD/011/20 and to the north by development lands known as Growth Area 3 (GA3).



Figure 2 – Subject lands extents and environs  
(sources: NTA, OSi, OSM Contributors, Microsoft)

## 2.2 Existing Land Use

The subject lands are currently undeveloped and generates no traffic volumes.

## 2.3 Description of Permitted Development under FCC Reg. Ref. SHD/011/20

The development comprised of alterations to the permitted development, as permitted under FCC Reg. Ref. 16A/0412, ABP Reg. Ref. ABP-248970 (as amended by F20A/0258 and F21A/0046) of 544 no. residential units (385 no. apartments and 159 no. houses), retail and a crèche, to the development of 882 no. new residential dwellings (747 no. apartments, 135 no. houses), residential tenant amenity, retail, crèche, parking, and public realm, over a total site area of c. 9.1 ha, and site development area of c. 8.89 ha. Landscaping will include extensive communal amenity areas, and significant public open space provision.

## 2.4 Description of Amended Development

The proposed development will consist of the alteration of permitted development of Block A, Block D and Stapolin Square, as permitted under ABP Reg. Ref. ABP-310418-21 (and as amended under LRD/0015/S3 & LRD/0073/S3E). No amendments are proposed to any other permitted blocks. The permitted Block A and Block D are located to the south and north of

Stapolin Square and include for 528 units (277 in Block A1, A2 & A3 and 251 in Block D1, D2 & D3) and include residential tenant amenity, retail/café/restaurant, pharmacy, medical centre, crèche, gym, car and bicycle parking and public realm. The proposed alterations only relate to Block A, Block D and Stapolin Square, of the permitted development and for the most part are contained within the footprint and massing of the permitted development and relate to internal reconfiguration.

The proposed alterations result in an overall increase of 68 no. units in Block A and Block D, bringing the total units in Block A and Block D to 596, the total units permitted under ABP Reg. Ref. ABP-310418-21 (as amended) to 893 (760 apartments and 133 houses).

The proposed altered residential development of Block A and Block D will consist of a total of 596 no residential apartments, as follows:

1. Alteration of Blocks A1, A2 & A3 from permitted 4 to 7-storey buildings providing for 288 no. apartment units to a 4 to 7 storey building providing for 312 no. apartments.
2. Alteration of Blocks D1, D2 & D3 from permitted 5 to 10-storey buildings providing for 251 no. apartment units to a 5 to 10 storey building providing for 284 no apartments.
3. The reconfiguration of internal layouts of each of the blocks has resulted in the reduction of the blocks overall width and therefore increased width and area to the courtyards and increased distance between individual blocks.
4. Alteration of the permitted uses and facade at ground floor level and removal of permitted Residential Tenant Amenity Facilities located in Blocks A3 and D3 to provide for a ground floor level that includes in Blocks A1-A3, retail/restaurant/café/gym units and a creche including outdoor play space and in Blocks D1-D3, retail/restaurant/cafe units and residential units.
5. A revised central civic plaza at Stapolin Square centrally located between blocks A1-A3 and D1-D3, redesigned to address Condition 2 (a) of ABP-310418-21 which requires the removal of the two previously proposed public lifts. Stapolin Square is now designed to accommodate a gently sloped landscaped route from Longfield Road to Clongriffin Train Station.
6. Alterations to the permitted below podium areas under Block A, Stapolin Square & Block D to include for alterations to permitted layouts of car parking, cycle parking, plant, waste stores and substation locations. This includes the reduction in car parking as required under Condition 2 (b) of ABP-310418-21 which requires omission of car parking under the permitted ramped access road to the Train Station to the north of Block D. An increase in bicycle parking is proposed.

No amendments are proposed to the constructed Blocks within B3, B4, C4, C5, C6 or the permitted The Haggard Park which remains as permitted, or all other elements including surface water attenuation wetlands and associated upstream surface water network, demolition of existing temporary lift and stair enclosure and associated infrastructure to Clongriffin Train Station, road infrastructure (except where within the application boundary and requiring to be locally altered for proposed alterations), and utilities infrastructure (except where within the application boundary and requiring to be locally altered for proposed alterations), all of which remain as per permitted.

### **3.0 RECEIVING ENVIRONMENT**

#### **3.1 Existing Road Network**

##### **3.1.1 Grange Road**

- Single carriageway road with a pavement width of 13m in the vicinity of the subject development.
- Regional road with an east-west alignment overall, leading to Baldoyle village centre in the east and connecting to Clarehall Avenue in the west.
- Subject to a 50km/h speed limit.
- Raised footpaths are present along both sides of Grange Road. Mandatory cycle tracks are present in both directions.
- On-street parking is generally not prohibited along Grange Road.

##### **3.1.2 Red Arches Road**

- Single carriageway road with a pavement width of approximately 7m in the vicinity of the subject development site.
- Local road with an east-west alignment generally, leading to the subject development in the east and connecting to Coast Road in the west.
- Subject to a 30km/h speed limit in the vicinity of the subject development.
- Raised footpaths are present along both sides of Red Arches Road.
- No cycle tracks or bus lanes are present along Red Arches Road in proximity to the subject development. A two-way cycle lane is present on the northern road edge to the east of the development site.
- On-street parking is present on Red Arches Road in the form of recessed parking bays, and parking on the carriageway is not prohibited in the vicinity of the subject site.

### 3.1.3 Longfield Road

- Single carriageway road with a pavement width of approximately 7m in the vicinity of the subject development site.
- Local road with a north-south alignment generally, connecting to Grange Road in the south and to the subject development site in the north.
- Subject to a 30km/h speed limit.
- Raised footpaths are present along both sides of Longfield Road.
- On-street parking is present on Longfield Road in the form of recessed parking bays.
- No cycle lanes are present along the Longfield Road in proximity of the development site.

## 3.2 Existing Traffic Flow

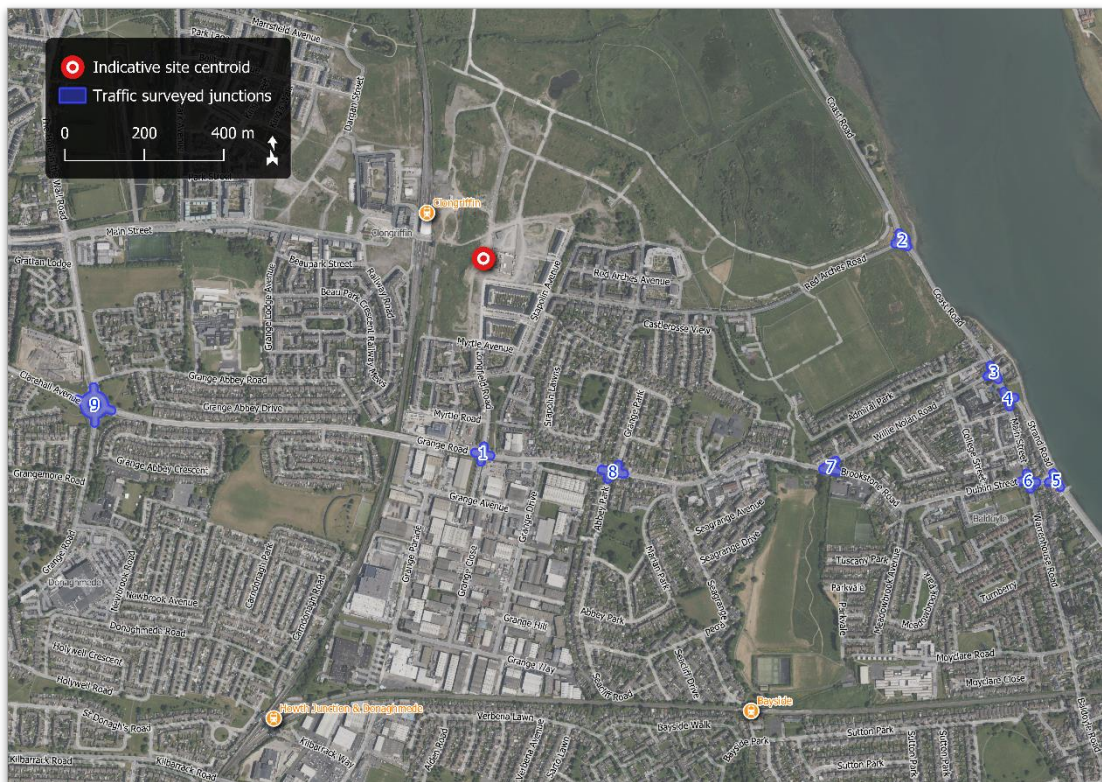


Figure 3 - Junction Surveyed  
(sources: OSM Contributors, Google)

Full turning movement classified traffic counts were carried out by ITS, on behalf of the CS Consulting over a 12-hour period on Tuesday, the 11<sup>th</sup> of November 2025. Count information was obtained at the following 9no. existing junctions. See **Figure 3**.

1. Grange Road (R139) / Longfield Road / Grange Rise  
(4-arm signal-controlled junction)

2. Coast Road (R106) / Red Arches Road  
(3-arm priority-controlled roundabout)
3. Main Street (R106) / Willie Nolan Road (R139) / Coast Road (R106)  
(3-arm signal-controlled junction)
4. Main Street (R106) / Strand Road (R106) / Main Street (R809)  
(3-arm priority-controlled junction)
5. Strand Road (R106) / The Mall  
(3-arm priority-controlled junction)
6. Main Street (R809) / The Mall / Warrenhouse Road (R809) / Dublin Street  
(4-arm signal-controlled junction)
7. Grange Road (R139) / Willie Nolan Road (R139) / Brookstone Road  
(3-arm signal-controlled junction with slip)
8. Grange Road (R139) / Grange Park / Abbey Park  
(staggered 4-arm signal-controlled junction)
9. Hole in the Wall Road / R138 / R809  
(4-arm priority-controlled roundabout)

The peak hour traffic flows across all 9no. survey sites were found to occur between 08:00 and 09:00 (AM peak hour) and between 16:15 and 17:15 (PM peak hour). Raw data from this traffic survey are provided in **Appendix A**. The traffic movements at each surveyed junction during the peak hours have been isolated from the count data and are included in the traffic flow matrices given in **Appendix C**. Total peak hour traffic movements from Thursday the 20<sup>th</sup> of November 2025 by junctions are given in **Table 1**.

| Time Period              | Total Surveyed Junction Traffic Movements (Passenger Car Units) |      |      |      |     |      |     |     |      |
|--------------------------|-----------------------------------------------------------------|------|------|------|-----|------|-----|-----|------|
|                          | J1                                                              | J2   | J3   | J4   | J5  | J6   | J7  | J8  | J9   |
| AM Peak<br>(08:00-09:00) | 1669                                                            | 1436 | 1376 | 1247 | 897 | 1104 | 941 | 964 | 2916 |
| PM Peak<br>(16:15-17:15) | 1632                                                            | 1087 | 1182 | 1082 | 787 | 1022 | 794 | 990 | 2921 |

Table 1 - Surveyed Total Weekday Peak Hour Junction Traffic Movements

### 3.3 Pedestrian Accessibility

**Figure 4** shows walking times to and from the subject LDA lands, under existing conditions. Clongriffin railway station is within a 5-minute walk of the development site, and an existing bus stop along Grange Road is also within 5-minutes walking distance of the site.

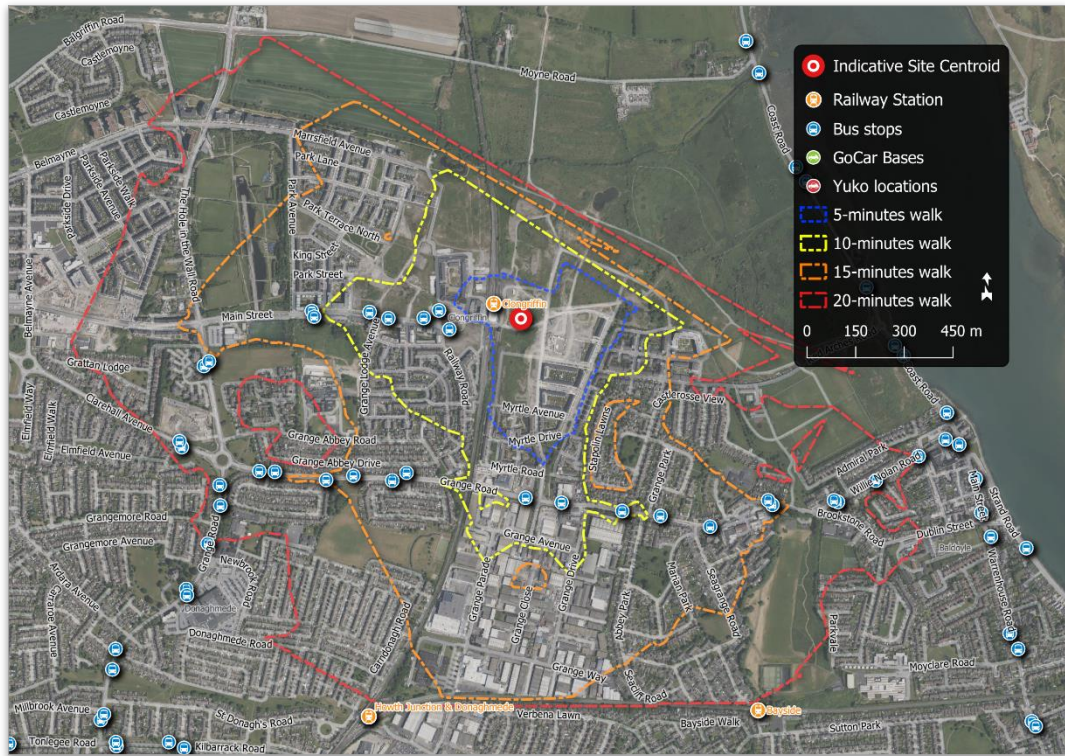


Figure 4 – Walking time catchments  
 (sources: NTA, OSi, GoCar, IrishRail, Yuko, OSM Contributors)

### 3.4 Bicycle Journey Times

**Figure 5** shows bicycle journey times to and from application site, under existing conditions.



Figure 5 – Bicycle journey times  
(sources: OSi, OSM Contributors)

### 3.5 Existing Public Transport Services

Bus stop located along Grange Road is within 10-minutes' walk of the development site, and is served by Dublin bus route H1. This is a high-frequency bus route that operates between Baldoyle and Dublin City Centre (Abbey Street).

| Route No. | Operator         | Destination  | Weekday Services | Typical Peak Hour Interval |
|-----------|------------------|--------------|------------------|----------------------------|
| H1        | Spine (arterial) | Abbey Street | 72               | 15 min                     |
|           |                  | Clongriffin  | 72               | 15 min                     |

Table 2: Existing Adjacent Bus Service

Clongriffin railway station is located adjacent to the application site. 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.

| 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                        |

Table 3: Rail Services at Clongriffin Station

### 3.6 Proposed Transport Infrastructure and Service Improvements

#### 3.6.1 BusConnects proposals – bus network redesign

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, 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 the bus ramp over the railway line (which is proposed under this amendment application) to provide a direct road connection between Station Road and Red Arches Road.

In addition to this, four new bus routes are proposed 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.

| 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 <sup>1</sup> | Spine (arterial) | City Centre            | 72               | 15 min                     |
|                 |                  | Clongriffin            | 72               | 15 min                     |

Table 4: Bus Services Proposed Under BusConnects

<sup>1</sup> Subject to extension of existing H1 service via Red Arches Road to Clongriffin Station.

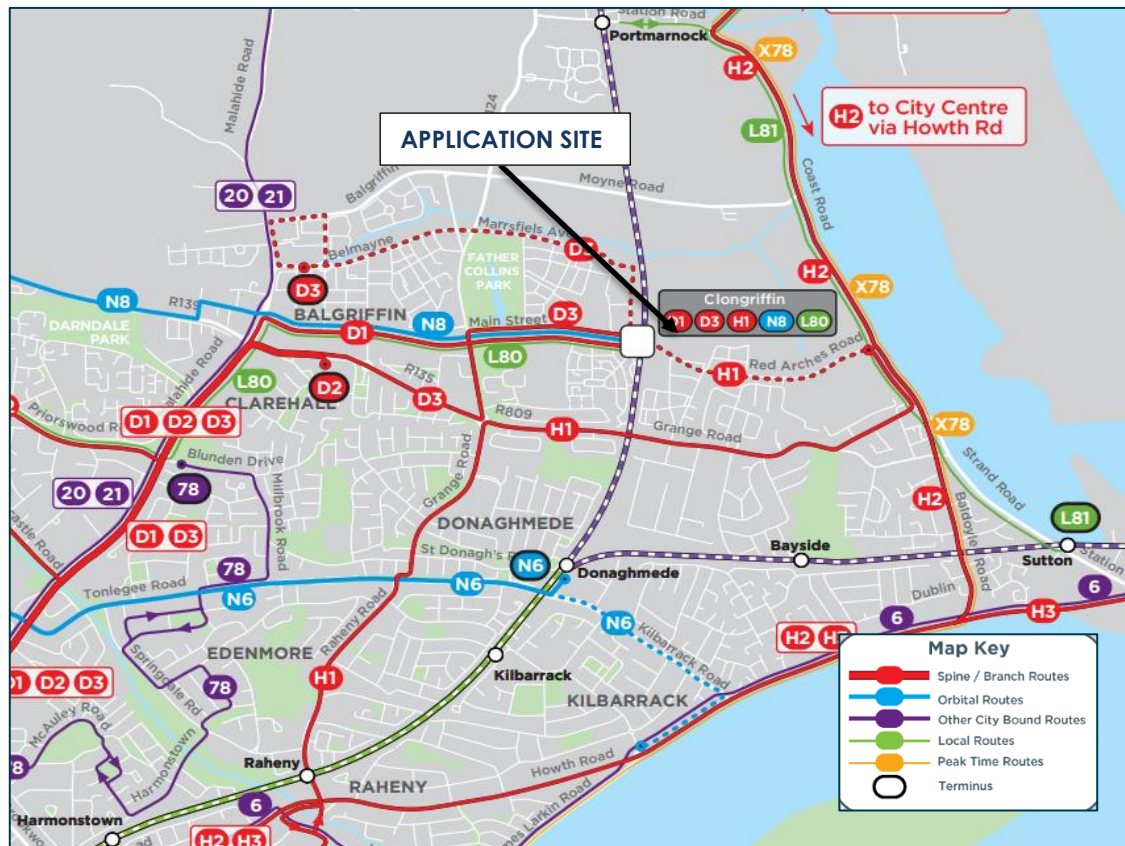


Figure 6 – BusConnects network redesign  
(source: NTA)

### 3.6.2 Greater Dublin Area Cycle Network Plan

As part of the Greater Dublin Area Cycle Network Plan, administered by the National Transport Authority, it is proposed to implement a feeder route along the Red Arches Road running along the southern boundary of the application site.

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

### 3.6.3 DART+

DART+ is the NTA and Córas Iompair Éireann (CIÉ)'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.



Figure 7 – DART+ proposal extents  
(source: NTA/CIÉ)

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)

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.

At Clongriffin specifically, the DART+ Coastal North Project will result in:

- An increase in peak hour Commuter trains from 1 per hour to 2 per hour.
- An increase in peak hour DART trains from 3 per hour to 9 per hour

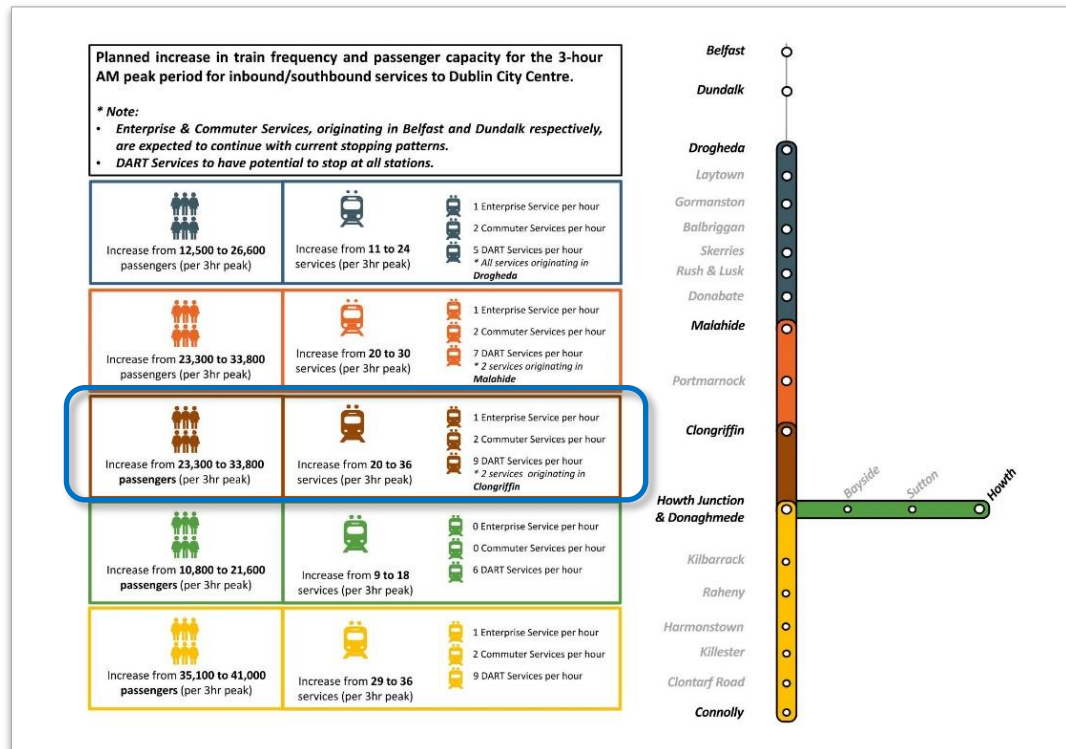


Figure 8 - Increased train frequency at Clongriffin  
(sources: NTA/CIÉ)

An Coimisiún Pleanála has approved the railway Order Application for DART+ Coastal North.

### 3.6.4 FCC Development Plan 2023-2029

As part of *Fingal Development Plan 2023–2029* and the *Baldoyle/Stapolin Local Area Plan* it is proposed to extend the Red Arches Road and bridge over the rail line at Clongriffin railway station to accommodate buses, pedestrians and cyclists. This road objective will be constructed as part of the proposed amendments to permitted development of GA01 Lands, as permitted under ABP Reg. Ref. 310418-21 / FCC Reg. Ref. SHD/011/20 (see sub-section 7.3).

### 3.7 Nearby Committed Development

#### 3.7.1 FCC reg. Ref. SHD/011/20

As previously noted, this application relates to an amendment to the previously permitted planning application under FCC Reg. Ref. SHD/011/20. Accordingly, for the purposes of this assessment, the traffic flows associated with the previously permitted development (excluding Blocks A and D) have been incorporated into the background traffic flows.

The following elements of the previously permitted scheme have therefore been taken into account;

- 135no. dwelling units
- 144no. apartment units

#### 3.7.2 GA03 - ABP 311016-21 (as amended under LRD006/S3)

The GA3 lands located to the north of the development site received granted permission under ABP 311016-21 (as amended under LRD006/S3). This application comprises a total of 702no. apartment units within 5no. blocks, a creche with a GFA of 452m<sup>2</sup>, and a café with a GFA of 205m<sup>2</sup>. This permitted application is expected to significantly influence traffic flows at the 9no. junctions considered in this report once it becomes operational.

For the purpose of this Traffic and Transport Assessment, it has been assumed that the above listed permitted development shall all proceed and shall be operational by the year 2028. The projected traffic to be generated by these developments has been included in the future year junction assessments, as described in sub-section **4.5** of this report.

### 3.8 Future Year Background Traffic Growth

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

- 2026 Baseline year
- 2028 Proposed opening year
- 2033 5 years after opening
- 2043 Design year (15 years after opening)

Unit 5.3 of the *TII Project Appraisal Guidelines (PE-PAG-02017 Travel Demand Projections)* has been used to apply growth factors to the surveyed 2025 traffic flows for the future year junction assessments. The TII annual growth rates applied are given in **Table 5**, and the resultant cumulative growth in background traffic for each assessment year is given in **Table 6**.

| Geographic Area | Background Traffic Growth per Year |           |           |
|-----------------|------------------------------------|-----------|-----------|
|                 | 2016-2030                          | 2030-2040 | 2040-2050 |
| Dublin          | + 1.62%                            | + 0.51%   | + 0.44%   |

Table 5 - TII Central Growth Rates (Light Vehicles)

| 2026<br>Baseline year | 2028<br>Year of opening | 2033<br>5 years after opening | 2043<br>15 years after opening |
|-----------------------|-------------------------|-------------------------------|--------------------------------|
| 0.16%                 | 1.04%                   | 9.9%                          | 14.9%                          |

Table 6 - Predicted Background Traffic Growth

## 4.0 VEHICULAR TRAFFIC GENERATION AND DISTRIBUTION

### 4.1 Permitted Traffic Generation

The previously permitted scheme comprised a total of 583 residential units within Blocks A and D. The associated traffic generation figures have been derived from the Traffic and Transport Assessment submitted under FCC Reg. Ref. SHD/011/20. These figures are summarised in **Table 7** below.

| Time Period     | Arrivals | Departures |
|-----------------|----------|------------|
| Weekday AM Peak | 27       | 96         |
| Weekday PM Peak | 65       | 44         |

Table 7: Permitted Development Trip Generation

### 4.2 Proposed Amendment Blocks A and D Traffic Generation

The amendment application for Blocks A and D comprises a total of 596no. units. 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 for the weekday AM and PM peak hour periods. 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 in the assessments are provided in **Appendix A**.

The TRICS sub-category '03 Residential / C – Flats Privately Owned' has been employed, being the most appropriate for this type of 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. Includes properties that are privately owned and then privately rented. 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 mean TRICS arrival and departure trip rates for similar developments indicate that the morning peak combined trip generation (AM Peak) occurs between 08:00 and 09:00, while the evening peak combined trip generation (PM Peak) occurs between 17:00 and 18:00.

| Time Period     | Arrivals<br>per hour per unit | Departures<br>per hour per unit |
|-----------------|-------------------------------|---------------------------------|
| Weekday AM Peak | 0.064                         | 0.150                           |
| Weekday PM Peak | 0.161                         | 0.083                           |

Table 8: TRICS Trip Generation Rates for Apartments

Trip numbers in this instance have been calculated as a function of the TRICS trip rates given in **Table 8** and the total number of units (596no. apartments) within the proposed development. The following trip generation figures are calculated:

| Time Period     | Arrivals | Departures |
|-----------------|----------|------------|
| Weekday AM Peak | 38       | 89         |
| Weekday PM Peak | 96       | 49         |

Table 9: Subject Development Trip Generation from TRICS Data

The development is therefore predicted to generate minimal additional traffic flows during the either peak hour periods and shall not impact significantly on the operations of the surrounding road network.

#### 4.3 Proposed Amendment Blocks Trip Distribution

The trip for this amendment application shall be distributed similar to the permitted application. The subject development's internal road network shall tie into the existing surrounding road network both at Longfield Road and at Red Arches Road. Vehicular traffic departing from and

arriving to the subject development shall therefore travel either via traffic survey site J1 (Grange Road / Longfield Road / Grange Rise junction) or via survey site J2 (Coast Road / Red Arches Road roundabout). The predicted distribution of traffic to/from the subject development is shown in **Figure 9** below.



Figure 9 – Predicted distribution of subject development traffic

#### 4.4 Proportional Increase in Traffic

**Table 10** shows the absolute and proportional increases in peak hour traffic flows that shall result from the proposed development at each of the 9no. surveyed junctions.

| Surveyed Junction No. | Background Traffic Flows at Junction 2026 Baseline) |             | Development Related Trips Through Junction |           | Proportional Increase |             |
|-----------------------|-----------------------------------------------------|-------------|--------------------------------------------|-----------|-----------------------|-------------|
|                       | AM Peak                                             | PM Peak     | AM Peak                                    | PM Peak   | AM Peak               | PM Peak     |
| <b>J1</b>             | <b>1698</b>                                         | <b>1658</b> | <b>73</b>                                  | <b>89</b> | <b>4.3%</b>           | <b>5.4%</b> |
| <b>J2</b>             | <b>1459</b>                                         | <b>1105</b> | <b>54</b>                                  | <b>55</b> | <b>3.7%</b>           | <b>5.0%</b> |
| J3                    | 1398                                                | 1201        | 49                                         | 53        | 3.5%                  | 4.4%        |
| J4                    | 1268                                                | 1099        | 42                                         | 45        | 3.3%                  | 4.1%        |
| J5                    | 912                                                 | 799         | 26                                         | 30        | 2.8%                  | 3.7%        |
| J6                    | 1121                                                | 1037        | 30                                         | 38        | 2.7%                  | 3.7%        |
| J7                    | 956                                                 | 806         | 14                                         | 21        | 1.5%                  | 2.6%        |
| J8                    | 978                                                 | 1005        | 16                                         | 25        | 1.7%                  | 2.5%        |
| J9                    | 2962                                                | 2968        | 50                                         | 53        | 1.7%                  | 1.8%        |

Table 10 - Increase in Traffic at Surveyed Junctions

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 10 above, the subject development shall not result in an increase of more than 10% at any of the surveyed junctions. However, at surveyed junctions J1 and J2, there shall be an increase in 5% in the PM peak hour period. To ensure a robust assessment Operational Assessment has been carried out using TRANSYT traffic modelling software at surveyed junctions J1 and J2 with subject development being operational.

#### 4.5 Committed Development Trip Generation and Distribution

For the committed development (Phase 1 and GA3), trip generation figures have been derived from the Traffic and Transport Assessment (TTA) prepared by CS Consulting, permitted under Reg. Ref. FCC Reg. Ref. SHD/011/20 and ABP 311016-21. The vehicular trips predicted to be generated by the committed development (with exceptions of Blocks A and D) and GA3 Lands, as identified in sub-section 3.7, have been incorporated into the background traffic flows for the future assessment year.

| Committed Development | Peak Period | Arrivals | Departures | Total Trips |
|-----------------------|-------------|----------|------------|-------------|
| <b>Phase 1</b>        | AM          | 32       | 74         | 106         |
|                       | PM          | 54       | 54         | 108         |

Table 11: Committed Development Trip Generation

| Committed Development | Peak Period | Arrivals | Departures | Total Trips |
|-----------------------|-------------|----------|------------|-------------|
| GA3 Lands             | AM          | 72       | 213        | 285         |
|                       | PM          | 142      | 102        | 244         |

Table 12: Committed Development Trip Generation

## 5.0 OPERATIONAL ASSESSMENT

### 5.1 Introduction

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

The following junctions have been modelled and assessed:

- J1. Longfield Road / Grange Road / Grange Rise  
(existing 4-arm signal-controlled junction)
- J2. Coast Road / Red Arches Road  
(existing 3-arm priority-controlled roundabout)

Junction performance is assessed based upon the five metrics defined in sub-section 5.3. Full TRANSYT and ARCADY outputs are provided in **Appendix D**.

### 5.2 Assessment Scenarios

The performance of this junction shall be assessed under the following scenarios.

- 2026 – Baseline traffic conditions
- 2028 (planned year of completion)
  - without subject development
  - with subject development operational-phase traffic
- 2033 (5 years after completion)
  - without subject development
  - with subject development operational-phase traffic
- 2043 (design year; 15 years after completion)
  - without subject development
  - with subject development operational-phase traffic

### 5.3 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).

### 5.4 Junction 1 Modelling Parameters

Assessed junction no. 1 (the existing signal-controlled junction of Longfield Road with Grange Road and Grange Rise) has been replicated in a TRANSYT model matching the junction's existing physical configuration and operational characteristics. The following parameters incorporated in the model should be noted.

#### 5.4.1 Cycle time

Networked signal-controlled junctions typically operate with a cycle time of between 100 seconds and 120 seconds. Traffic survey footage indicates however that this junction has a variable cycle time, which averaged 183 seconds in the busiest 15 minutes of the AM peak hour and 187 seconds in the busiest 15 minutes of the PM peak hour. The TRANSYT model was therefore configured to operate with a cycle time of 180 seconds in both peak hours.

#### 5.4.2 Signal phasing

The existing junction is observed to operate with six signal phasing stages, running sequentially in the order given below. One or more of these stages may be omitted in a given cycle if demand on the relevant junction approach(es) is low.

- Stage 1: Dedicated green on all approaches from east; filter green on right-turn approach from west.
- Stage 2: Dedicated green on left-turn/straight-on approach from east; dedicated green on left-turn/straight-on approach from west; filter green on right-turn approach from west.
- Stage 3: Dedicated green on all approaches from west; dedicated green on left-turn approach from south.
- Stage 4: Dedicated green on all approaches from south.
- Stage 5: Dedicated green on all approaches from north.
- Stage 6: Green for pedestrian crossings on all junction arms.

The existing signal head facing traffic entering the junction from Longfield Road comprises both a general signal and a right-turn arrow, indicating that the left-turn/straight-on traffic stream and the right-turn traffic stream could be governed by separate signal phases if required by the controller. Under existing traffic conditions, this is not required for an optimal use of signal time. However, to account for this possibility under predicted future traffic flow patterns (in particular an increase in traffic approaching from the north along Longfield Road), an additional signal stage was provided in the TRANSYT model following the existing Stage 5 (see **Figure 10**); this new stage gives green time only to right-turning traffic from the north. TRANSYT was permitted to automatically optimize the distribution of signal green time between the existing Stage 5 and this new stage.

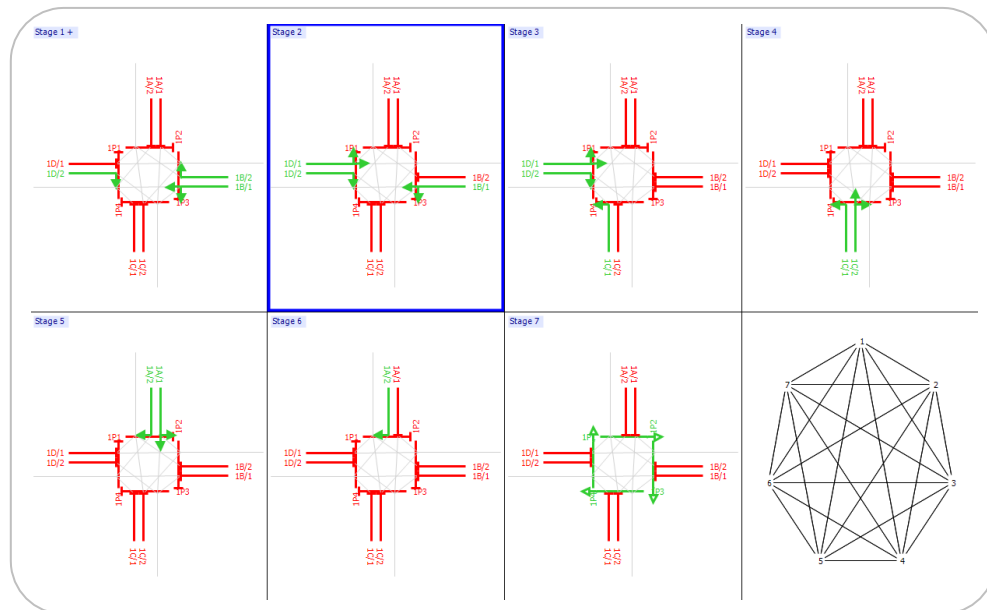


Figure 10 – Modelled TRANSYT signal phase sequence

#### 5.4.3 Pedestrian signal calls

Traffic survey footage indicates that signal green time is given simultaneously to all pedestrian crossings at the existing junction, provided that this signal stage has been requested by a call button on any one of these crossings. The pedestrian signal stage always comprises 8 seconds of green time and 8 seconds of amber time, followed by 2 seconds of all-red time before the following vehicle signal stage begins.

During the busiest 15-minute period in each of the peak hours, it was observed that the pedestrian signal phase was called in every operational cycle. The TRANSYT model has therefore been configured to include this stage within each cycle, using the fixed signal durations given above.

### 5.5 Junction 1 Primary Assessment Results

The following tables give the TRANSYT modelling results, for each of the primary assessment scenarios, at the existing signal-controlled junction of Longfield Road with Grange Road (R139) and Grange Rise (Baldoyle Industrial Estate access). Under each of the 'with development' scenarios, the assessment includes the effects of existing traffic being redirected as a result of creating a new link between Grange Road and Coast Road (R106). Full TRANSYT outputs are provided in **Appendix D**.

- Arm A: Longfield Road (to north)
- Arm B: Grange Road [R139] (to east)
- Arm C: Grange Rise (to south)

- Arm D: Grange Road [R139] (to west)

| Junction Approach Arm and Traffic Stream <sup>2</sup>                |     | Degree of Saturation (%) |    | Mean Maximum Queue (PCU) |    | Maximum Queue at End of Red (PCU) |    | Mean Delay per PCU (s) |     | Practical Reserve Capacity (%) |     |
|----------------------------------------------------------------------|-----|--------------------------|----|--------------------------|----|-----------------------------------|----|------------------------|-----|--------------------------------|-----|
|                                                                      |     | AM                       | PM | AM                       | PM | AM                                | PM | AM                     | PM  | AM                             | PM  |
| <b>2026 – Baseline Assessment</b>                                    |     |                          |    |                          |    |                                   |    |                        |     |                                |     |
| A                                                                    | S/L | 28                       | 42 | 4                        | 3  | 4                                 | 2  | 66                     | 91  | 216                            | 116 |
|                                                                      | R   | 50                       | 54 | 8                        | 4  | 7                                 | 4  | 71                     | 96  | 79                             | 67  |
| B                                                                    | S/L | 53                       | 60 | 16                       | 16 | 12                                | 13 | 32                     | 51  | 71                             | 50  |
|                                                                      | R   | 48                       | 60 | 2                        | 2  | 2                                 | 2  | 104                    | 121 | 89                             | 50  |
| C                                                                    | S/L | 39                       | 48 | 5                        | 13 | 4                                 | 11 | 75                     | 42  | 132                            | 88  |
|                                                                      | R   | 40                       | 38 | 2                        | 6  | 2                                 | 6  | 94                     | 65  | 125                            | 138 |
| D                                                                    | S/L | 50                       | 54 | 15                       | 17 | 11                                | 12 | 30                     | 33  | 81                             | 67  |
|                                                                      | R   | 70                       | 25 | 15                       | 5  | 7                                 | 3  | 47                     | 29  | 29                             | 258 |
| <b>2028 – Opening Year Assessment – Without Proposed Development</b> |     |                          |    |                          |    |                                   |    |                        |     |                                |     |
| A                                                                    | S/L | 38                       | 38 | 6                        | 6  | 6                                 | 6  | 65                     | 65  | 138                            | 138 |
|                                                                      | R   | 67                       | 67 | 12                       | 12 | 11                                | 11 | 75                     | 75  | 34                             | 34  |
| B                                                                    | S/L | 55                       | 55 | 17                       | 17 | 13                                | 13 | 34                     | 34  | 62                             | 62  |
|                                                                      | R   | 64                       | 64 | 3                        | 3  | 3                                 | 3  | 121                    | 121 | 41                             | 41  |
| C                                                                    | S/L | 43                       | 43 | 5                        | 5  | 5                                 | 5  | 78                     | 78  | 107                            | 107 |
|                                                                      | R   | 55                       | 55 | 2                        | 2  | 2                                 | 2  | 111                    | 111 | 64                             | 64  |
| D                                                                    | S/L | 58                       | 58 | 19                       | 19 | 13                                | 13 | 33                     | 33  | 57                             | 57  |
|                                                                      | R   | 75                       | 75 | 16                       | 16 | 8                                 | 8  | 54                     | 54  | 21                             | 21  |
| <b>2028 – Opening Year Assessment – With Proposed Development</b>    |     |                          |    |                          |    |                                   |    |                        |     |                                |     |
| A                                                                    | S/L | 42                       | 47 | 7                        | 5  | 6                                 | 5  | 65                     | 81  | 116                            | 90  |
|                                                                      | R   | 74                       | 63 | 14                       | 7  | 12                                | 7  | 79                     | 87  | 21                             | 43  |
| B                                                                    | S/L | 55                       | 65 | 17                       | 17 | 13                                | 14 | 34                     | 55  | 62                             | 39  |
|                                                                      | R   | 56                       | 83 | 3                        | 6  | 3                                 | 6  | 105                    | 141 | 61                             | 9   |
| C                                                                    | S/L | 45                       | 55 | 5                        | 14 | 5                                 | 12 | 80                     | 49  | 98                             | 64  |
|                                                                      | R   | 56                       | 53 | 3                        | 8  | 2                                 | 7  | 112                    | 72  | 60                             | 71  |
| D                                                                    | S/L | 61                       | 82 | 20                       | 30 | 14                                | 20 | 36                     | 55  | 47                             | 10  |
|                                                                      | R   | 76                       | 29 | 16                       | 5  | 8                                 | 4  | 56                     | 36  | 18                             | 206 |
| <b>2033 – Opening Year Assessment – Without Proposed Development</b> |     |                          |    |                          |    |                                   |    |                        |     |                                |     |
| A                                                                    | S/L | 39                       | 47 | 6                        | 5  | 6                                 | 4  | 65                     | 83  | 130                            | 94  |
|                                                                      | R   | 69                       | 62 | 13                       | 7  | 11                                | 6  | 76                     | 90  | 30                             | 44  |
| B                                                                    | S/L | 59                       | 68 | 19                       | 19 | 14                                | 15 | 37                     | 57  | 51                             | 32  |
|                                                                      | R   | 66                       | 78 | 3                        | 5  | 3                                 | 5  | 125                    | 134 | 36                             | 15  |
| C                                                                    | S/L | 42                       | 56 | 5                        | 15 | 5                                 | 12 | 76                     | 48  | 114                            | 62  |
|                                                                      | R   | 56                       | 49 | 3                        | 8  | 2                                 | 7  | 112                    | 70  | 60                             | 83  |
| D                                                                    | S/L | 60                       | 79 | 20                       | 28 | 14                                | 19 | 34                     | 52  | 50                             | 14  |
|                                                                      | R   | 77                       | 31 | 17                       | 6  | 8                                 | 4  | 58                     | 37  | 17                             | 191 |
| <b>2033 – Opening Year Assessment – With Proposed Development</b>    |     |                          |    |                          |    |                                   |    |                        |     |                                |     |

<sup>2</sup> S = straight ahead, L = left turn, R = right turn

| Junction Approach Arm and Traffic Stream <sup>2</sup>                |     | Degree of Saturation (%) |    | Mean Maximum Queue (PCU) |    | Maximum Queue at End of Red (PCU) |    | Mean Delay per PCU (s) |     | Practical Reserve Capacity (%) |     |
|----------------------------------------------------------------------|-----|--------------------------|----|--------------------------|----|-----------------------------------|----|------------------------|-----|--------------------------------|-----|
|                                                                      |     | AM                       | PM | AM                       | PM | AM                                | PM | AM                     | PM  | AM                             | PM  |
| A                                                                    | S/L | 47                       | 47 | 5                        | 5  | 4                                 | 4  | 83                     | 83  | 94                             | 94  |
|                                                                      | R   | 62                       | 62 | 7                        | 7  | 6                                 | 6  | 90                     | 90  | 44                             | 44  |
| B                                                                    | S/L | 68                       | 68 | 19                       | 19 | 15                                | 15 | 57                     | 57  | 32                             | 32  |
|                                                                      | R   | 78                       | 78 | 5                        | 5  | 5                                 | 5  | 134                    | 134 | 15                             | 15  |
| C                                                                    | S/L | 56                       | 56 | 15                       | 15 | 12                                | 12 | 48                     | 48  | 62                             | 62  |
|                                                                      | R   | 49                       | 49 | 8                        | 8  | 7                                 | 7  | 70                     | 70  | 83                             | 83  |
| D                                                                    | S/L | 79                       | 79 | 28                       | 28 | 19                                | 19 | 52                     | 52  | 14                             | 14  |
|                                                                      | R   | 31                       | 31 | 6                        | 6  | 4                                 | 4  | 37                     | 37  | 191                            | 191 |
| <b>2043 – Opening Year Assessment – Without Proposed Development</b> |     |                          |    |                          |    |                                   |    |                        |     |                                |     |
| A                                                                    | S/L | 41                       | 41 | 7                        | 7  | 6                                 | 6  | 65                     | 65  | 122                            | 122 |
|                                                                      | R   | 72                       | 72 | 14                       | 14 | 12                                | 12 | 78                     | 78  | 25                             | 25  |
| B                                                                    | S/L | 65                       | 65 | 21                       | 21 | 15                                | 15 | 41                     | 41  | 39                             | 39  |
|                                                                      | R   | 55                       | 55 | 3                        | 3  | 3                                 | 3  | 104                    | 104 | 64                             | 64  |
| C                                                                    | S/L | 39                       | 39 | 5                        | 5  | 5                                 | 5  | 72                     | 72  | 129                            | 129 |
|                                                                      | R   | 60                       | 60 | 3                        | 3  | 3                                 | 3  | 116                    | 116 | 50                             | 50  |
| D                                                                    | S/L | 64                       | 64 | 22                       | 22 | 15                                | 15 | 37                     | 37  | 40                             | 40  |
|                                                                      | R   | 79                       | 79 | 18                       | 18 | 9                                 | 9  | 61                     | 61  | 14                             | 14  |
| <b>2043 – Opening Year Assessment – With Proposed Development</b>    |     |                          |    |                          |    |                                   |    |                        |     |                                |     |
| A                                                                    | S/L | 41                       | 41 | 7                        | 7  | 6                                 | 6  | 65                     | 65  | 122                            | 122 |
|                                                                      | R   | 72                       | 72 | 14                       | 14 | 12                                | 12 | 78                     | 78  | 25                             | 25  |
| B                                                                    | S/L | 65                       | 65 | 21                       | 21 | 15                                | 15 | 41                     | 41  | 39                             | 39  |
|                                                                      | R   | 55                       | 55 | 3                        | 3  | 3                                 | 3  | 104                    | 104 | 64                             | 64  |
| C                                                                    | S/L | 39                       | 39 | 5                        | 5  | 5                                 | 5  | 72                     | 72  | 129                            | 129 |
|                                                                      | R   | 60                       | 60 | 3                        | 3  | 3                                 | 3  | 116                    | 116 | 50                             | 50  |
| D                                                                    | S/L | 64                       | 64 | 22                       | 22 | 15                                | 15 | 37                     | 37  | 40                             | 40  |
|                                                                      | R   | 79                       | 79 | 18                       | 18 | 9                                 | 9  | 61                     | 61  | 14                             | 14  |

Table 13: Junction 1 Modelling Results

The assessment results indicate that the junction currently operates within its effective capacity on all approaches during both the AM and PM peak periods. Whilst all approach streams remain below practical capacity, moderate to significant vehicle queues are experienced on a number of movements, particularly on the westbound and southbound approaches.

The highest levels of saturation are generally observed on the southbound right-turn lane (Arm D-R) and the westbound right-turn lane (Arm B-R). In the 2028 Opening Year Assessment with the proposed development in operation, the westbound right-turn lane (Arm B-R) is predicted to operate at a degree of saturation of 83% during the PM peak period. Similarly, the southbound right-turn lane (Arm D-R) is forecast to operate at degrees of saturation of 76%, 77% and 79% during the AM peak periods in the 2028, 2033 and 2043 assessment years respectively.

The longest vehicle queues are generally associated with the southbound left-turn/straight-on lane (Arm D-S/L). Mean maximum queues of 30 PCU are predicted during the PM peak period in the 2028 Opening Year Assessment with the proposed development in operation, reducing to 28 PCU and 22 PCU in the corresponding 2033 and 2043 assessment years. Significant queues are also forecast on the westbound left-turn/straight-on lane (Arm B-S/L), where mean maximum queues of up to 21 PCU are predicted in the 2043 design year.

Mean vehicle delays vary considerably between approach streams and are influenced by the signal staging arrangement and green time allocation. The highest delays are generally experienced on the right-turn lanes, particularly the westbound right-turn lane (Arm B-R), where delays of up to 141 seconds per PCU are forecast during the PM peak period in 2028 with the proposed development in operation. Despite these higher delays and queue lengths, all approach streams are predicted to remain within their practical operating capacities throughout the assessment period.

## 5.6 Junction 2 Primary Assessment Results

The following table gives the ARCADY modelling results, for each of the assessment scenarios, at the existing roundabout junction of Red Arches Road with Coast Road (R106). Full ARCADY outputs are provided in **Appendix D**.

- Arm A: Coast Road [R106] (to south)
- Arm B: Red Arches Road (to west)
- Arm C: Coast Road [R106] (to north)

| Junction Approach Arm                                                   | Degree of Saturation |    | Mean Maximum Queue (PCU) |    | Mean Delay per PCU (s) |    | Junction Residual Capacity |      |
|-------------------------------------------------------------------------|----------------------|----|--------------------------|----|------------------------|----|----------------------------|------|
|                                                                         | AM                   | PM | AM                       | PM | AM                     | PM | AM                         | PM   |
| 2026 – Baseline Assessment                                              |                      |    |                          |    |                        |    |                            |      |
| A                                                                       | 56                   | 31 | 1                        | 0  | 5                      | 3  | 62%                        | 120% |
| B                                                                       | 39                   | 42 | 1                        | 1  | 4                      | 4  |                            |      |
| C                                                                       | 22                   | 13 | 0                        | 0  | 5                      | 5  |                            |      |
| 2028 – Opening Year Assessment – Without Proposed Development           |                      |    |                          |    |                        |    |                            |      |
| A                                                                       | 61                   | 39 | 2                        | 1  | 6                      | 4  | 50%                        | 93%  |
| B                                                                       | 47                   | 48 | 1                        | 1  | 5                      | 5  |                            |      |
| C                                                                       | 25                   | 15 | 0                        | 0  | 6                      | 5  |                            |      |
| 2028 – Opening Year Assessment – With Proposed Development in Operation |                      |    |                          |    |                        |    |                            |      |
| A                                                                       | 62                   | 41 | 2                        | 1  | 6                      | 4  | 47%                        | 87%  |
| B                                                                       | 50                   | 50 | 1                        | 1  | 5                      | 5  |                            |      |
| C                                                                       | 26                   | 16 | 0                        | 0  | 6                      | 5  |                            |      |
| 2033 Assessment – Without Proposed Development                          |                      |    |                          |    |                        |    |                            |      |
| A                                                                       | 64                   | 40 | 2                        | 1  | 7                      | 4  | 43%                        | 85%  |
| B                                                                       | 49                   | 50 | 1                        | 1  | 5                      | 5  |                            |      |
| C                                                                       | 26                   | 17 | 0                        | 0  | 6                      | 5  |                            |      |
| 2033 Assessment – With Proposed Development in Operation                |                      |    |                          |    |                        |    |                            |      |
| A                                                                       | 65                   | 43 | 2                        | 1  | 7                      | 4  | 41%                        | 80%  |
| B                                                                       | 52                   | 52 | 1                        | 1  | 5                      | 5  |                            |      |
| C                                                                       | 27                   | 17 | 0                        | 0  | 6                      | 5  |                            |      |
| 2043 – Design Year Assessment – Without Proposed Development            |                      |    |                          |    |                        |    |                            |      |
| A                                                                       | 67                   | 42 | 2                        | 1  | 7                      | 4  | 37%                        | 77%  |
| B                                                                       | 51                   | 52 | 1                        | 1  | 5                      | 5  |                            |      |
| C                                                                       | 28                   | 18 | 0                        | 0  | 6                      | 5  |                            |      |
| 2043 – Design Year Assessment – With Proposed Development in Operation  |                      |    |                          |    |                        |    |                            |      |
| A                                                                       | 68                   | 44 | 2                        | 1  | 8                      | 4  | 35%                        | 72%  |
| B                                                                       | 54                   | 54 | 1                        | 1  | 6                      | 5  |                            |      |
| C                                                                       | 29                   | 18 | 0                        | 0  | 6                      | 5  |                            |      |

Table 14: Junction 2 Modelling Results

The assessment results show that this junction currently operates within its effective capacity on all approaches during both the AM and PM peak periods, with minimal mean vehicle queues and delays experienced on all junction approaches.

The future year assessments indicate that the junction will continue to operate within its effective capacity up to and including the 2043 design year, both with and without the proposed development in operation.

## 6.0 PARKING

### 6.1 Overall Car Parking for Blocks A and D

The amendment application for Blocks A and D comprises of the following;

- 302no. 1-bed units
- 283no. 2-bed units
- 10no. 3-beds units
- Retail units with a total GFA of 1,098 sqm
- Gym with a total GFA of 399m<sup>2</sup>
- Creche with a total GFA of 702.2 sqm, with 7 classrooms

The development site sits in Zone 1 in accordance with FCC Development Plan 2023-2029. The maximum car parking standards given in the FCC Development Plan 2023-2029 for residential/apartment units, retail and creche elements has been assessed for the proposed development.

It is also noted that the previously permitted development under FCC Reg. Ref. SHD/011/20 was granted under the FCC Development Plan 2017–2023, under which different car parking standards applied.

| Land Use (Zone 1)                 | Maximum Car Parking (FCC Dev. Plan 2023-2029) | Quantum             | Maximum Parking Provision (FCC Dev. Plan 2023-2029) | Car Parking Proposal for Blocks A and D |
|-----------------------------------|-----------------------------------------------|---------------------|-----------------------------------------------------|-----------------------------------------|
| Residential Car Parking Standards |                                               |                     |                                                     |                                         |
| Apartments 1-bed                  | 0.5 spaces per unit                           | 302 units           | 151 spaces                                          | 299 spaces                              |
| Apartments 2-beds                 | 0.5 spaces per unit                           | 283 units           | 141 spaces                                          |                                         |
| Apartments 3-beds                 | 1 space per unit                              | 10 units            | 10 spaces                                           |                                         |
| Retail (Food store)               | 1 space per 20m <sup>2</sup>                  | 1,098m <sup>2</sup> | 55 spaces                                           | 63 spaces                               |
| Gym                               | 1 space per 40m <sup>2</sup>                  | 399m <sup>2</sup>   | 10 spaces                                           |                                         |
| Creche                            | 0.5 spaces per classroom                      | 7 classrooms        | 4 spaces                                            | 5 drop-off spaces                       |
| Car Share                         | n/a                                           |                     |                                                     | 5 spaces                                |
| <b>Total Car Parking Spaces</b>   |                                               |                     | <b>371 spaces</b>                                   | <b>372 spaces</b>                       |

Table 15: Maximum and Proposed Car Parking Provision

The proposed development comprises of a total of 372no. car parking spaces (25no. spaces of which are outside the redline, however, these spaces were permitted for commercial use as per the parent planning permission FCC Reg. Ref. SHD/011/20), of which 63no. spaces shall

be dedicated to the retails, gym and creche elements of the development. The amendment applications for Blocks A and D shall be provided with a total of 299no. car parking spaces. All car parking spaces shall be located at the undercroft levels of the blocks. The development's overall car parking provision equates to a ratio of 0.50 space per unit excluding car share spaces. Additional 5no. car share spaces are provided to serve the residents of the proposed development.

The *Planning Design Standards for Apartment (Guidelines for Planning Authorities)*, published by the Department of Housing, Local Government and Heritage in 2025, which supersede the *Sustainable Urban Housing: Design Standards for New Apartments (Guidelines for Planning Authorities) 2023*, gives the following guidance on the provision of residential car parking spaces:

*'The availability of car parking has a critical impact on travel choices for all journeys, including local trips. The provision of car parking can also add significant cost to the development of apartment schemes, and in particular where the ratio of parking necessitates a podium or basement car park. Having regard to the types of location in cities and towns that may be suitable for apartment development, car parking ratios should be minimised, substantially reduced or wholly eliminated at locations that have good access to urban services and to public transport. Maximum car parking rates are set out in Section 5.25 (SPPR 3) of the Sustainable Residential Development and Compact Settlements Guidelines for Planning Authorities (SRDCSGs). These rates are graduated based on proximity to centres and accessibility to public transport services (refer also to Table 3.8: Accessibility of the SRDCSGs).*

Under the Sustainable Residential Development and Compact Settlement Guidelines 2024, Baldoyle is designated as 'City – Urban Neighbourhood' and is defined as:

*The city urban neighbourhood's category includes: (i) the compact medium density residential neighbourhoods around the city centre that have evolved overtime to include a greater range of land uses, (ii) strategic and sustainable development locations, (iii) town centres designated in a statutory development plan, and (iv) lands around existing or planned high-capacity public transport nodes or interchanges (defined in Table 3.8) – all within the city and suburbs area. These are highly accessible urban locations with good access to employment, education and institutional uses and public transport. It is a policy and objective of these Guidelines that residential densities in the range 50 dph to 250 dph (net) shall generally be applied in urban neighbourhoods of Dublin and Cork.'*

With regard to car parking, the Guidelines state that ***'Car parking ratios should be reduced at all urban locations, and should be minimised, substantially reduced or wholly eliminated at locations that have good access to urban services and to public transport.'*** (Page 58).

Under Table 3.8 of the Guidelines (page 30), Baldoyle is classified as a 'High Capacity Public Transport Node or Interchange' which is defined as:

High Capacity Transport Node or Interchange

- Lands within 1,000 metres (1km) walking distance of an existing or planned high capacity urban public transport node or interchange, namely an interchange or node that includes DART, high frequency Commuter Rail, light rail or MetroLink services; or locations within 500 metres walking distance of an existing or planned BusConnects 'Core Bus Corridor stop.
- Highest densities should be applied at the node or interchange and decrease with distance.
- Planned public transport' in these Guidelines refers to transport infrastructure and services identified in a Metropolitan Area Transport Strategy for the five cities and where a public authority (e.g. National Transport Authority, Transport Infrastructure Ireland or Irish Rail) has published the preferred route option and stop locations for the planned public transport.

The guidelines have introduced 4 no. Specific Planning Policy Requirements (SPPR's) with regard to SPPR 1 Separation Distances; SPPR 2 Private Open Space; SPPR 3 Car Parking; and SPPR 4 Cycle Parking.

Under SPPR 3, the Guidelines that state for locations in city centres and urban neighbourhoods, *'car-parking provision should be minimised, substantially reduced or wholly eliminated. The maximum rate of car parking provision for residential development at these locations, where such provision is justified to the satisfaction of the planning authority, shall be 1 no. space per dwelling.'*

As detailed in sub-section 3.5 of this report, the application development site is immediately adjacent to Clongriffin railway station which provides frequent DART services to Dublin City Centre. In addition, the development site also located within 5-minutes walking distance of high frequency bus route H1.

Under the BusConnects Dublin Area Revised Bus Network initiative, it is proposed to extend the H1 arterial route, as far as Clongriffin railway station. In addition, four new bus routes are proposed in close proximity of the development site 2no. of which shall be high frequency routes. Refer to sub-section 3.6.1 for further details.

Hence, the proposed development is considered as an appropriate candidate to reduce the car parking, in accordance with the guidelines set out by the Department of Housing, Local Government and Heritage and FCC Development Plan 2023-2029. Reduction in car parking provision within the proposed development shall also support planning objectives of encouraging a shift to more sustainable modes of transport.

## 6.2 Disabled-Accessible Car Parking

The *Fingal County Council Development Plan 2023–2029* 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 16** applies this requirement to the proposed development.

| Proposed Car Parking Provision         | Minimum Required Proportion | Accessible Spaces Required | Accessible Spaces Proposed |
|----------------------------------------|-----------------------------|----------------------------|----------------------------|
| Disabled-Accessible Car Parking spaces |                             |                            |                            |
| 353 spaces                             | 5%                          | 18                         | 18                         |

Table 16: Accessible Car Parking Provision

## 6.3 Electric Vehicle Charging Facilities

The *Fingal County Council Development Plan 2023-2029* requires that at least 20% of all car parking spaces in the multi-unit residential developments shall incorporate EV charging points and appropriate infrastructure (e.g. ducting) to allow for future fit out of a charging point at all parking spaces.

A total of 66no. spaces shall be provided with BEV charging points within the undercroft level of Blocks A and D. 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.

| Proposed Car Parking Provision | Required Proportion | BEV Charge Points Required | BEV Charge Points Proposed |
|--------------------------------|---------------------|----------------------------|----------------------------|
| EV Charging Car Parking spaces |                     |                            |                            |
| 299 residential spaces         | 20%                 | 60                         | 60                         |
| 38 commercial spaces           | 10%                 | 4                          | 6                          |
| <b>Total</b>                   |                     |                            | <b>66</b>                  |

Table 17: BEV Charging Point Provision

#### 6.4 Motorcycle Parking

In regard to motorcycle parking the *Fingal County Council Development Plan 2023-2029* states that;

*'Motorcycle parking should be provided to meet the requirements of any development. Parking spaces should be provided on the basis of one motorcycle parking bay per 10 car parking spaces provided for non-residential developments and apartment developments.'*

| Proposed Car Parking Provision | Required Proportion | Motorcycle Spaces Required | Motorcycle Spaces Proposed |
|--------------------------------|---------------------|----------------------------|----------------------------|
| Motorcycle Parking spaces      |                     |                            |                            |
| 353 spaces                     | 10%                 | 35                         | 24                         |

Table 18: Motorcycle Parking Provision

The development shall include a total of 24no. motorcycle parking spaces, all these spaces shall be allocated within the undercroft level of Blocks A and D. Suitable rails, hoops, or posts shall be provided at their locations, allowing motorcycles to be secured using a chain or similar device.

Considering the infill nature of the development and its close proximity to high-frequency public transport services, the provision of 24 no. motorcycle parking spaces is considered appropriate, notwithstanding that this is marginally below the standards set out in the Development Plan.

#### 6.5 Bicycle Parking

The bicycle parking spaces for Blocks A and D are assessed with respect to the *Fingal County Council Development Plan 2023-2029* and the policy document *Planning Design Standards for Apartment (Guidelines for Planning Authorities)*, published by the Department of Housing, Local Government and Heritage in 2025, which defines the minimum standard bicycle parking provision to the development. These are given in the **Table 19** and **Table 20** below.

It is also noted that the previously permitted development under FCC Reg. Ref. SHD/011/20 was granted under the FCC Development Plan 2017–2023, under which different bicycle parking standards applied. Therefore, the current proposal of bicycle parking spaces complies with the current development plan.



| Land Use<br>(Zone 1)                        | Element                     | Standard                 | Quantum                     | Minimum<br>Provision | Proposed<br>Provision       |
|---------------------------------------------|-----------------------------|--------------------------|-----------------------------|----------------------|-----------------------------|
| Residential Bicycle Parking                 |                             |                          |                             |                      |                             |
| Residential<br>(1-2<br>Bedroom)             | Long-stay                   | 1, plus 1 per<br>bedroom | 596 units (899<br>Bedrooms) | 1,495 spaces         | 1,190 spaces<br>(Long-stay) |
|                                             | Short-stay                  | 1 space per 2<br>units   | 596 units                   | 298 spaces           |                             |
| Residential<br>(3+<br>Bedroom)              | Long-stay                   | 2, plus 1 per<br>bedroom | 10 units (30<br>Bedrooms)   | 50 spaces            | 300 spaces<br>(Short-stay)  |
|                                             | Short-stay                  | 1 space per 2<br>units   | 10 units                    | 5 spaces             |                             |
|                                             | Cargo<br>Bikes <sup>3</sup> | n/a                      |                             |                      | 51 spaces                   |
| Sub-Total (Blocks A and D)                  |                             |                          |                             | 1,848 spaces         | 1,541 spaces                |
| Non-Residential Bicycle Parking Provision   |                             |                          |                             |                      |                             |
| Retail<br>(Food<br>Store)                   | Long-stay                   | 1 per 100m <sup>2</sup>  | 1,075m <sup>2</sup>         | 11 spaces            | 12 spaces                   |
|                                             | Short-stay                  | 1 per 80m <sup>2</sup>   |                             | 14 spaces            | 14 spaces                   |
| Gym                                         | Long-stay                   | 1 per 2 staff            | 6 staff <sup>4</sup>        | 3 spaces             | 4 spaces                    |
|                                             | Short-stay                  | 1 per 30m <sup>2</sup>   | 430m <sup>2</sup>           | 15 spaces            | 16 spaces                   |
| Crèche                                      | Long-stay                   | 1 per<br>classroom       | 7 classrooms                | 7 spaces             | 8 spaces                    |
|                                             | Short-stay                  | 5 per<br>classroom       |                             | 35 spaces            | 36 spaces                   |
| Sub-Total (Retail + Gym + Creche)           |                             |                          |                             | 85 spaces            | 90 spaces                   |
| Total (Residential + Retail + Gym + Creche) |                             |                          |                             | 1,933 spaces         | 1,631 spaces                |

Table 19 - Bicycle Parking Requirements  
(Source: FCC Development Plan 2023-2029)

<sup>3</sup> 5% in accordance with Cycle Design Manual 2023 included within the long-stay spaces

<sup>4</sup> Assumed Staff Numbers

| Land Use (Zone 1) | Element            | Standard                                | Quantum                  | Minimum Provision   | Proposed Provision                             |
|-------------------|--------------------|-----------------------------------------|--------------------------|---------------------|------------------------------------------------|
| Apartment         | Long-stay          | 1 space per bedroom                     | 899 bedrooms (596 units) | 899no. spaces       | 1,150no. spaces (including 50no. cargo spaces) |
|                   | Short-stay         | Visitor cycle spaces should be provided |                          |                     | 300no. spaces                                  |
|                   | Cargo <sup>2</sup> | n/a                                     |                          |                     | 50no. space                                    |
| <b>Total</b>      |                    |                                         |                          | <b>1,848 spaces</b> | <b>1,450 spaces</b>                            |

Table 20 - Bicycle Parking Requirements

(Source: Planning Design Standards for Apartment 2025)

The proposed development shall include a total of 1,631 bicycle spaces. The commercial elements of the development (Retail + Gym + Creche) shall be provided with a total of 90no. bicycle spaces (including long-stay and short-stay spaces). All long-term spaces shall be provided within a secure storage area within the blocks and all short-stay spaces shall be provided in close proximity of each of these elements.

The residential development shall include a total of 1,541no. bicycle spaces, of which 1,241no. bicycle spaces (including 51no. cargo spaces) shall be long-stay spaces to serve the residents of the proposed development and shall be provided within multiple secure storage areas at ground floor level of Blocks A and D, and the remaining 300no. spaces shall be short-stay (visitor) spaces.

It is worth noting that a phased approach shall be taken for the provision of visitor bicycle parking to serve the development's residential units, consistent with the permitted scheme. Initially 50% (150no. spaces) of the total publicly accessible short-stay shall be delivered within the public realm, with designated areas identified/ set aside for the future provision of additional visitor bicycle parking, up to full quantum recommended as per **Table 19** and **Table 20**. The need and usage of visitor bicycle parking shall be monitored by the Mobility Management Coordinator, and additional visitor cycle parking facilities shall be installed in response, this will be a commitment to be made by the facilities management of the development.

In line with the recommendations received during the S247 meeting with FCC, the proposed development will provide a range of long-stay bicycle parking types, including Sheffield stands, double-stack spaces, e-charging bicycle stands, battery power station, service area, changing rooms locker facilities and cargo bicycle spaces.

## **7.0 ACCESS, INTERNAL LAYOUT, PEDESTRIANS & CYCLISTS, SWEEPED PATHS, SERVICING**

### **7.1 Vehicular Access**

The vehicular access for Blocks A and D shall be via 2no. primary access points as per permitted development;

- The undercroft level for Block A shall be accessed via Red Arches Road along the southern boundary of the development site extents; and
- The undercroft level of Block D shall be accessed via the Bus Ramp which is proposed under this application along the northern boundary of the site extents. See sub-section 7.3 for details of the proposed bus ramp. The vehicles exiting Block D shall only be allowed to turn right onto the bus ramp to travel eastwards to join Longfield Road.

The undercroft level for Blocks A and D shall comprise of 330no. car parking spaces to serve the residents and staff of the development. The undercroft level shall also comprise of 5no. bicycle storage areas which shall have a total of 1,124no. bicycle spaces.

Unobstructed sight distances of 49m in either direction along Red Arches Road and the proposed Bus Ramp are achieved for vehicles exiting the undercroft level, as measured from a set-back of 2.4m from the road edge, in accordance with the requirements of the *Design Manual for Urban Roads and Streets (DMURS)*.

For further details of undercroft level of Blocks A and D, refer to CS Consulting drawing no. **L108-CSC-XX-XX-DR-C-0104**.

### **7.2 Pedestrian & Cyclists**

Cyclists shall use the same access points as vehicles to access the bicycle storage areas within the undercroft level.

The development layout ensures a high degree of pedestrian and cyclist permeability into and through the development. A pedestrian plaza shall be created at Stapolin Square (providing an east-west link across the square). Access to Clongriffin railway station for pedestrians and cyclists from the eastern side of the railway line is currently possible via lifts and stairs located within the subject site. As part of the proposed development, new lifts and stairs shall be provided at Stapolin Square, providing access to the railway station. The existing lifts and stairs shall be maintained in operation until such time as the proposed new lifts and stairs have been completed. Raised footpath shall also be provided along the entire extent of the bus ramp.

### 7.3 Bus Ramp

As noted previously, a bus ramp is proposed to provide for a road link across the railway line at Clongriffin railway station, between Clongriffin and Stapolin, to allow for the east-west passage of public transport.

The existing road on the western side is ramped up to the level of the railway station podium (approx. 16m AOD), where it terminates. As part of the subject development, it is proposed to provide a similar ramped road connection on the eastern side to complete the road link.

The proposed ramp shall begin immediately to the north of Stapolin Square turning to the left to run along the western side of Stapolin Square before turning right and connecting to the existing railway station podium. The ramp shall have a maximum gradient of 1:21 and shall be restricted to the use of pedestrians, cyclists, and public service vehicles. In compliance with TII design standard DN-REQ-03034, a high containment vehicle restraint barrier shall be provided along either side of the bus ramp, extending a minimum distance of 45m from the existing station podium.

Refer to CS Consulting drawings **L108-CSC-XX-XX-DR-C-0104** and **L108-CSC-XX-XX-DR-C-0108** for further details of the proposed bus ramp connection.

### 7.4 Servicing and Waste Collection

The internal layout of the development has been designed to accommodate incoming servicing requirements such as deliveries, as well as to facilitate efficient waste collection. On-street loading bays and drop-off areas are provided on Longfield Road and Red Arches Road, in proximity to Stapolin Square which are currently under construction. Block A and D shall utilise these loading bays and drop-off areas for servicing and waste collections.

An Operational Waste Management Plan (OWMP) in respect of Stapolin Square has been prepared by AWN Consulting and is submitted separately in support of this application. Refer to this document for full details of the anticipated waste generation of Stapolin Square and its planned waste collection arrangements. An OWMP was previously submitted and will be updated for the LRD Application.

### 7.5 Swept Path Analysis

Swept path analyses have been carried out for cars manoeuvring within the proposed development, as well as for a refuse vehicle and a fire tender. These analyses, provided on drawing **L108-CSC-XX-XX-DR-C-0107** within this planning application, indicate that the design

of the development accesses and road layout can accommodate these vehicle movements where required.

In addition, swept path analysis has also been carried out for an EV Dublin Bus along the proposed bus ramp. The analysis shows that the design of the bus ramp can accommodate the bus movement for the entire extents of the bus ramp.

Refer to CS Consulting drawing no. **L108-CSC-XX-XX-DR-C-0106** for further details.

## **8.0 RESPONSES TO ITEMS RAISED IN FCC OPINION BY TRANSPORTATION DEPARTMENT**

*'The applicant shall address the following points in the proposed planning application. Further detailed feedback on the proposal is included in the Transportation Planning Section report contained in Appendix 3, and the applicant should address all matters raised alongside the following':*

### **8.1 Item 1**

#### **8.1.1 Item 1(a)**

*'We recommend further developed details be provided of the vehicular access ramp and the entire western edge of the development and how it interacts with the existing rail line infrastructure; including detailed elevations and section drawings. Details of all fences and access gates etc should be included'.*

#### **Response to Item 8(a)**

Please refer to CS Consulting drawing no. **L108-CSC-XX-XX-DR-C-0128\_PH2\_Proposed Bus Route** for further details of the bus ramp running along the entire western boundary of the development and how it interacts with the existing rail line infrastructure. The proposed bus ramp shall tie into the existing bus ramp south of the Clongriffin Rail station and shall use the existing pedestrian crossing.

#### **8.1.2 Item 1(b)**

*'We recommend the detail is further developed and presented of the area at the top of the 'stapolin square' pedestrian ramp and how it interacts with the existing structure crossing the rail line; with an emphasis on the public realm details of pedestrian crossings, surface materials, street furniture, lighting, road markings, signage, bus stops etc'.*

#### **Response to Item 1(b)**

Please refer to landscape architects drawing prepared by TPHC for details of the area at the top of the 'stapolin square' pedestrian ramp and how it interacts with the existing structure crossing the rail line; with an emphasis on the public realm details of pedestrian

crossings, surface materials, street furniture, lighting, road markings, signage, bus stops etc.

In addition, please also refer to CS Consulting drawing no. **L108-CSC-XX-XX-DR-C-0104\_PH2\_Proposed Road Layout** for further details of pedestrians crossing. It is proposed to retain the existing locations of pedestrian crossings.

#### 8.1.3 Item 1(c)

*'We recommend further consideration be given to the detail of the bus ramp, and we recommend the applicant liaise with the NTA in regard to the requirements for swept path analysis for the ramp, and the locations of bus stops'.*

##### Response to Item 1(c)

CS Consulting shall liaise with NTA regarding the bus ramp running along the western boundary of the development site including the swept path analysis and the locations of the bus stops during the detailed design stage as part of the application.

## 8.2 **Item 2**

#### 8.2.1 Item 2(a)

*'The applicant should provide a detailed justification and rationale for the proposed carparking provision, with regard to the Fingal Development Plan and the 'Sustainable Residential Development and Compact Settlements Guidelines for Planning Authorities'.*

##### Response to Item 2(a)

Please refer to section **6.1** which provides detailed justification and rationale for the proposed development's car parking provision, with regard to the Fingal Development Plan and the Sustainable Residential Development and Compact Settlements Guidelines for Planning Authorities.

#### 8.2.2 Item 2(b)

*'The applicant should provide a dedicated carparking drawing that demonstrates what each carparking space is assigned to, and should also include the proposed EV charging provision and details of ducting etc. to allow for future retrofitting of EV charging facilities'.*

##### Response to Item 2(b)

Please refer to CS Consulting drawing no **L108-CSC-XX-XX-DR-C-0112\_PH2\_Proposed Parking Arrangement** which shows the dedicated car parking drawing for each element of the development. In addition, please refer to OCSC's drawing submitted with this

application which provides details of the proposed EV charging provision and details of ducting etc. to allow for future retrofitting of the EV charging facilities.

### 8.3 Item 3

#### 8.3.1 Item 3

*'The carparking layout should be designed as per the relevant guidance documents, including DMURS, the Traffic Signs Manual, the Traffic Management Guidelines, and Part M of the building regulations. If necessary, a 'swept path analyses' should be considered to be carried out on the carparking layout, for an appropriately sized 'large saloon car'.*

#### Response to Item 3

Please refer to CS Consulting drawing no **L108-CSC-XX-XX-DR-C-0129\_PH2\_Swept Path Analysis-Undercroft** which provides details of the swept path of large cars entering and exiting the car parking spaces within the undercroft area and also within the on-street car parking spaces. All car parking within the amendment applications are designed in accordance with DMURS, the Traffic Signs Manual, the Traffic Management Guidelines, and Part M of the building regulations.

### 8.4 Item 4

#### 8.4.1 Item 4

*'The application should be accompanied with highly developed details of the proposed bicycle parking provision, demonstrating clearly how it aligns with the standards of the Fingal Development Plan, the 'Sustainable Residential Development and Compact Settlements Guidelines for Planning Authorities', and Chapter 6 of the Cycle Design Manual'.*

#### Response to Item 4

The bicycle parking spaces for Blocks A and D are assessed with respect to the Fingal County Council Development Plan 2023-2029 and the policy document Planning Design Standards for Apartment (Guidelines for Planning Authorities), published by the Department of Housing, Local Government and Heritage in 2025, which defines the minimum standard bicycle parking provision to the development. The proposed development shall include a total of 1,631 bicycle spaces. The commercial elements of the development (Retail + Gym + Creche) shall be provided with a total of 90no. bicycle spaces (including long-stay and short-stay spaces). All long-term spaces shall be provided within a secure storage area within the blocks and all short-stay spaces shall be provided in close proximity of each of these elements.

The residential development shall include a total of 1,541no. bicycle spaces, of which 1,241no. bicycle spaces (including 51no. cargo spaces) shall be long-stay spaces to serve the residents of the proposed development and shall be provided within multiple secure storage areas at ground floor level of Blocks A and D, and the remaining 300no. spaces shall be short-stay (visitor) spaces.

It is worth noting that a phased approach shall be taken for the provision of visitor bicycle parking to serve the development's residential units, consistent with the permitted scheme. Initially 50% (150no. spaces) of the total publicly accessible short-stay shall be delivered within the public realm, with designated areas identified/ set aside for the future provision of additional visitor bicycle parking.

In addition, please refer to HJL Architects' drawing submitted with this application which provides details of the bicycle stands, storage facilities etc within the bicycle storage areas of each of the blocks.

## **8.5 Item 5**

### **8.5.1 Item 5**

*'Where necessary, the pedestrian-Vehicular Inter-visibility should be considered at the intersection of the new vehicular entrances/junctions with the public footpath, as set out in TII publication DN-GEO-03060 Section 5.6.3.7'.*

#### Response to Item 5

Please refer to CS Consulting drawing no. TBC which shows that adequate pedestrian-visibility intervisibility can be achieved.

## **8.6 Item 6**

### **8.6.1 Item 6(a)**

*'A statement of consistency with DMURS should be provided with any future planning application, with a rationale for the internal road layout.'*

#### Response to Item 6(a)

Please refer to Statement of Design Consistency for DMURS has been prepared by CS Consulting under separate report and submitted under this Stage 3 LRD submission for further details.

### **8.6.2 Item 6(b)**

*'The dimensions of carparking spaces should be provided, and should meet the minimum standard as per the guidance in the DMURS'.*

Response to Item 6(b)

Please refer to CS Consulting drawing no **L108-CSC-XX-XX-DR-C-0112\_PH2\_Proposed Parking Arrangement** which shows that the car dimensions (4.8m x 2.4m) of the on-street car parking spaces are in accordance with DMURS.

8.6.3 Item 6(c)

*'Access for a refuse collection truck and fire tender should be considered and a swept path analysis provided where necessary'.*

Response to Item 6(c)

Please refer to CS Consulting drawing no **L108-CSC-XX-XX-DR-C-0107\_PH2\_Swept Path Analysis-Fire Tender-Refuse Vehicle** which shows the swept path for the refuse vehicles and fire tender accessing and egressing the development where required.

8.6.4 Item 6(d)

*'Appropriate pedestrian crossings should be provided on the pedestrian desire lines, with tactile/blister paving where necessary/appropriate'.*

Response to Item 6(d)

Please refer to CS Consulting drawing no **L108-CSC-XX-XX-DR-C-0104\_PH2\_Proposed Road Layout** which shows the locations of the pedestrian crossing on the pedestrian desire lines, with tactile paving.

## **8.7 Item 7**

8.7.1 Item 7

*'The applicant should consider and confirm the access requirements for emergency service vehicles to all necessary elevations of the apartment buildings as per Building Regulations Technical Guidance Document B Section 5.2'.*

Response to Item 7

Please refer to CS Consulting drawing no **L108-CSC-XX-XX-DR-C-0107\_PH2\_Swept Path Analysis-Fire Tender-Refuse Vehicle** which shows the swept path for the fire tender access and egressing the development where required. This access arrangement has been agreed with Fire Engineers.

## **8.8 Item 8**

### **8.8.1 Item 8(a)**

*'The applicant should demonstrate adequate pedestrian and cycling connectivity and permeability into and through the site'.*

#### Response to Item 8(a)

The proposed development site is an infill site and adequate provision has been made within the application for pedestrian and cyclists permeability into and through out the site. In addition, segregated footpath with a minimum width of 2m has been proposed along the external road network of the proposed development, including adjacent to the bus ramp.

### **8.8.2 Item 8(b)**

*'The boundary details and layout should be clearly presented'.*

#### Response to Item 8(b)

Please refer to landscape boundary details drawing prepared by TPHC submitted with this application for further details.

## **8.9 Item 9**

### **8.9.1 Item 9**

*'A Stage 1 Road Safety Audit should be completed and submitted by the Applicant with the Planning Application, in compliance with the TH Publication 'Road Safety Audit GESTY-01024'.*

#### Response to Item 9

A Stage 1/ 2 Road Safety Audit has been carried out by RoadPlan. Please refer to Road Safety Audit Response document which provides responses to each of the recommendations carried out in the audit. The final Road Safety Audit is also appended to the Road Safety Audit response document.

## **8.10 Item 10**

### **8.10.1 Item 10**

*'The applicant should consider any objectives in the Fingal Development Plan (including the Development Plan Map Sheets) and any relevant Local Area Plans and Masterplans; for future proposed roads upgrades, transportation upgrades and active travel upgrades'.*

### Response to Item 10

This application has taken into consideration any roads and transport related objectives in the Fingal Development Plan and relevant Local Area Plans and Masterplans, including extensions of the bus ramp within the Stapolin lands..

## **8.11 Item 11**

### **8.11.1 Item11(a)**

*'If necessary, a proposed taking in charge drawing should be provided, that takes cognisance of the location of public services such as streetlighting and surface/stormwater drainage; and also of the requirement for EV charging infrastructure'.*

#### Response to Item 11(a)

Please refer to Taking in Charge drawing prepared by HJL Architects for further details.

### **8.11.2 Item11(b)**

*'All areas proposed for taking-in-charge should meet the standards of the Councils Taking in Charge Policy and Specifications'.*

#### Response to Item 11(b)

All areas proposed for Taking in Charge shall be in accordance with the standards specification of the FCC's Taking in Charge Policy and Specification.

### **8.11.3 Item11(c) - The applicant is advised to take cognisance of the following points;**

- *'The Councils Taking in Charge Policy/Specification Appendix 6 Section 8 states the following: " All roads to be taken in charge will be taken in charge at a minimum from the back of footpath/cyclepath on one side of the road to the back of footpath/cyclepath on the other side of the road in line with the definition of a road in the 1993 Roads Act Part 1 Section 2(1).'*
- *The consequence of the above point, is that the Councils taking in charge policy, by default, requires all 'non in-curtilage carparking/on-street car parking spaces' located on or directly adjacent to streets/roads proposed to be taken in charge by the Council to not be designated to any particular unit and to become public carparking spaces, unless otherwise agreed with the Councils taking-in-charge section*
- *All areas that are proposed to be 'taken in charge' by the Council, should be constructed and maintained to the Councils standards for taking in charge,*

*including roads, footpaths, verges, public lighting, open space, sewers, watermains or drains, forming part of the development.*

- *Public infrastructure such as stormwater drainage and streetlighting, should be located in areas to be taken-in-charge by the Council'.*

Response to Item 11(c)

Please refer to taking in Charge drawings prepared by HJL submitted with this applications which incorporates all the comments from item 11(c).

**8.12 Item 12 - The proposed development should consider Section 14.17.10 of the FDP 2023-2029 which states:**

8.12.1 Item12(a)

*'All multi-unit residential developments shall incorporate EV charging points at 20% of the proposed parking spaces and appropriate infrastructure (e.g. ducting) to allow for future fit out of a charging point at all parking spaces'.*

Response to Item 12(a)

Please refer to sub-section 6.3 which provides details of the EV Charging spaces for the proposed development. A minimum of 20% of total residential car parking spaces shall be provided with EV charging facilities and all remaining spaces shall be future proofed with appropriate infrastructure.

8.12.2 Item12(b)

*'Non-residential development shall be required to provide functioning EV charging points at a minimum of 10% of all spaces and all other spaces shall incorporate appropriate infrastructure (ducting) to allow for future fit out of a charging point at all spaces. Publicly accessible EV parking spaces should be clearly marked and be capable of communicating usage data with the National Charge Point Management System. EV parking spaces for accessible spaces should also be included in the development where these exist.'*

Response to Item 12(b)

Please refer to sub-section 6.3 which provides details of the EV Charging spaces for the proposed development. A minimum of 10% of total non-residential car parking spaces shall be provided with EV charging facilities and all remaining spaces shall be future proofed with appropriate infrastructure.

### 8.13 Item 13

#### 8.13.1 Item 13

*'The requirement for bin storage and the bin collection should be considered'.*

#### Response to Item 13

Bin staging area has been provided to each of Block A and Block D. Refer to CS Consulting drawing no **L108-CSC-XX-XX-DR-C-0107\_PH2\_Swept Path Analysis-Fire Tender-Refuse Vehicle** for the swept path analysis of bin trucks for further details.

### 8.14 Item 14

#### 8.14.1 Item 14

*'A report should be provided on the traffic impact of the proposed development'.*

#### Response to Item 14

Refer to present report Traffic and Transport Assessment prepared by CS Consulting which provides a full traffic impact assessment results for the proposed development.

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

- The subject site is located within GA01 Lands, Baldoyle, Dublin 13, within the administrative jurisdiction of Fingal County Council.
- The development benefits from excellent public transportation. Clongriffin railway station is located adjacent to the subject site, and the site is located within 10-minutes walking distance of high-frequency bus route.
- The proposed provision of car, motorcycle, and bicycle parking within the development (including disabled-accessible car parking spaces) complies with Local Authority development plan standards.
- Swept path analyses have been conducted for a fire tender, EV Dublin bus and a refuse vehicle. These indicate that the design of the development's internal layout and the bus ramp can accommodate these vehicle movements where required.

### 8.15 Item 15

#### 8.15.1 Item 15

*'A detailed Preliminary Construction Management Plan should be provided'.*

#### Response to Item 15

Refer to Outline Construction Management Plan prepared by CS Consulting under separate heading submitted with this application for further details.

## **9.0 SUMMARY AND CONCLUSIONS**

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

- The subject site is located within GA01 Lands, Baldoyle, Dublin 13, within the administrative jurisdiction of Fingal County Council.
- The development benefits from excellent public transportation. Clongriffin railway station is located adjacent to the subject site, and the site is located within 10-minutes walking distance of high-frequency bus route.
- The proposed provision of car, motorcycle, and bicycle parking within the development (including disabled-accessible car parking spaces) complies with Local Authority development plan standards.
- Swept path analyses have been conducted for a fire tender, EV Dublin bus and a refuse vehicle. These indicate that the design of the development's internal layout and the bus ramp can accommodate these vehicle movements where required.

In summary, the assessment indicates that the proposed development can be supported by the existing road infrastructure, that the parking provision for the proposed development confirms to the relevant standards, and that the development access design and internal layout are fit for purpose and comply with the *Design Manual for Urban Roads and Streets*.

## **APPENDIX A**

### **SURVEYED TRAFFIC FLOWS**



CS CONSULTING  
Civil, Structural & Traffic Engineering

|                                   |  |  |  |  |  |  |  |  |  |                       |  |  |  |  |  |  |  |  |  |
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| D14, D15, D16, D17, D18, D19, D20 |  |  |  |  |  |  |  |  |  |                       |  |  |  |  |  |  |  |  |  |
| J. Smith                          |  |  |  |  |  |  |  |  |  |                       |  |  |  |  |  |  |  |  |  |
| M. Jones                          |  |  |  |  |  |  |  |  |  |                       |  |  |  |  |  |  |  |  |  |
| Sunny                             |  |  |  |  |  |  |  |  |  |                       |  |  |  |  |  |  |  |  |  |
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| 10                                |  |  |  |  |  |  |  |  |  |                       |  |  |  |  |  |  |  |  |  |
| 20                                |  |  |  |  |  |  |  |  |  |                       |  |  |  |  |  |  |  |  |  |
| 10                                |  |  |  |  |  |  |  |  |  |                       |  |  |  |  |  |  |  |  |  |
| 20                                |  |  |  |  |  |  |  |  |  |                       |  |  |  |  |  |  |  |  |  |
| 10                                |  |  |  |  |  |  |  |  |  |                       |  |  |  |  |  |  |  |  |  |
| 20                                |  |  |  |  |  |  |  |  |  |                       |  |  |  |  |  |  |  |  |  |
| 10                                |  |  |  |  |  |  |  |  |  |                       |  |  |  |  |  |  |  |  |  |
| 20                                |  |  |  |  |  |  |  |  |  |                       |  |  |  |  |  |  |  |  |  |
| 10                                |  |  |  |  |  |  |  |  |  |                       |  |  |  |  |  |  |  |  |  |
| 20                                |  |  |  |  |  |  |  |  |  |                       |  |  |  |  |  |  |  |  |  |
| 10                                |  |  |  |  |  |  |  |  |  |                       |  |  |  |  |  |  |  |  |  |
| 20                                |  |  |  |  |  |  |  |  |  |                       |  |  |  |  |  |  |  |  |  |
| 10                                |  |  |  |  |  |  |  |  |  |                       |  |  |  |  |  |  |  |  |  |
| 20                                |  |  |  |  |  |  |  |  |  |                       |  |  |  |  |  |  |  |  |  |
| 10                                |  |  |  |  |  |  |  |  |  |                       |  |  |  |  |  |  |  |  |  |
| 20                                |  |  |  |  |  |  |  |  |  |                       |  |  |  |  |  |  |  |  |  |
| 10                                |  |  |  |  |  |  |  |  |  |                       |  |  |  |  |  |  |  |  |  |
| 20                                |  |  |  |  |  |  |  |  |  |                       |  |  |  |  |  |  |  |  |  |
| 10                                |  |  |  |  |  |  |  |  |  |                       |  |  |  |  |  |  |  |  |  |
| 20                                |  |  |  |  |  |  |  |  |  |                       |  |  |  |  |  |  |  |  |  |
| 10                                |  |  |  |  |  |  |  |  |  |                       |  |  |  |  |  |  |  |  |  |
| 20                                |  |  |  |  |  |  |  |  |  |                       |  |  |  |  |  |  |  |  |  |
| 10                                |  |  |  |  |  |  |  |  |  |                       |  |  |  |  |  |  |  |  |  |
| 20                                |  |  |  |  |  |  |  |  |  |                       |  |  |  |  |  |  |  |  |  |
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| 20                                |  |  |  |  |  |  |  |  |  |                       |  |  |  |  |  |  |  |  |  |
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| 20                                |  |  |  |  |  |  |  |  |  |                       |  |  |  |  |  |  |  |  |  |
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| 20                                |  |  |  |  |  |  |  |  |  |                       |  |  |  |  |  |  |  |  |  |
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| 20                                |  |  |  |  |  |  |  |  |  |                       |  |  |  |  |  |  |  |  |  |
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| 20                                |  |  |  |  |  |  |  |  |  |                       |  |  |  |  |  |  |  |  |  |
| 10                                |  |  |  |  |  |  |  |  |  |                       |  |  |  |  |  |  |  |  |  |
| 20                                |  |  |  |  |  |  |  |  |  |                       |  |  |  |  |  |  |  |  |  |
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| 20                                |  |  |  |  |  |  |  |  |  |                       |  |  |  |  |  |  |  |  |  |
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| 20                                |  |  |  |  |  |  |  |  |  |                       |  |  |  |  |  |  |  |  |  |
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| 12 HRTOT | 36 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 3907 | 428 | 38 | 13 | 58 | 11 | 23 | 4478 | 347 | 47 | 5 | 0 | 0 | 2 | 19 | 420 | 3683 | 402 | 45 | 17 | 66 | 14 | 30 | 4257 | 56 | 1 | 0 | 0 | 51 | 0 | 0 | 108 | 423 | 36 | 0 | 0 | 0 | 2 | 21 | 462 | 385 | 46 | 1 | 0 | 0 | 2 | 14 | 448 | 468 | 28 | 1 | 0 | 0 | 1 | 13 | 511 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
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|--|----------------|---|---|---|---|---|---|---|---|----|-----------------|----|----|----|----|----|----|----|----|----|-----------------|----|----|----|----|----|----|----|----|----|-----------------|---|---|---|---|---|---|---|---|---|-----------------|----|----|----|----|----|----|----|----|----|-----------------|----|----|----|----|----|----|----|----|----|----------------|----|---|---|---|---|---|---|---|---|-----------------|----|----|----|----|----|----|----|----|----|-----------------|----|----|----|----|----|----|----|----|----|-----------------|----|----|---|---|---|---|---|---|---|-----------------|---|----|----|----|----|----|----|----|----|-----------------|----|----|----|----|----|----|----|----|----|----------------|----|----|----|---|---|---|---|---|---|-----------------|---|---|----|----|----|----|----|----|----|-----------------|----|----|----|----|----|----|----|----|----|-----------------|----|----|----|----|---|---|---|---|---|-----------------|---|---|---|----|----|----|----|----|----|-----------------|----|----|----|----|----|----|----|----|----|----------------|----|----|----|----|----|---|---|---|---|-----------------|---|---|---|---|----|----|----|----|----|-----------------|----|----|----|----|----|----|----|----|----|-----------------|----|----|----|----|----|----|---|---|---|-----------------|---|---|---|---|---|----|----|----|----|-----------------|----|----|----|----|----|----|----|----|----|----------------|----|----|----|----|----|----|----|---|---|-----------------|---|---|---|---|---|---|----|----|----|-----------------|----|----|----|----|----|----|----|----|----|----------------|----|----|----|----|----|----|----|----|---|-----------------|---|---|---|---|---|---|---|----|----|-----------------|----|----|----|----|----|----|----|----|----|-----------------|----|----|----|----|----|----|----|----|----|-----------------|---|---|---|---|---|---|---|---|----|-----------------|----|----|----|----|----|----|----|----|----|----------------|----|----|----|----|----|----|----|----|----|-----------------|---|---|---|---|---|---|---|---|---|-----------------|----|----|----|----|----|----|----|----|----|-----------------|----|----|----|----|----|----|----|----|----|---------|----|---|---|---|---|---|---|---|---|---------|----|----|----|----|----|----|----|----|----|---------|----|----|----|----|----|----|----|----|----|---------|----|----|---|---|---|---|---|---|---|---------|---|----|----|----|----|----|----|----|----|---------|----|----|----|----|----|----|----|----|----|---------|----|----|----|---|---|---|---|---|---|---------|---|---|----|----|----|----|----|----|----|---------|----|----|----|----|----|----|----|----|----|---------|----|----|----|----|---|---|---|---|---|---------|---|---|---|----|----|----|----|----|----|---------|----|----|----|----|----|----|----|----|----|---------|----|----|----|----|----|---|---|---|---|---------|---|---|---|---|----|----|----|----|----|---------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|---|---|---|---|---|---|---|---|----|----|----|-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|  | Jan 1 - Jan 10 |   |   |   |   |   |   |   |   |    | Jan 11 - Jan 20 |    |    |    |    |    |    |    |    |    | Jan 21 - Jan 30 |    |    |    |    |    |    |    |    |    | Jan 31 - Feb 10 |   |   |   |   |   |   |   |   |   | Feb 11 - Feb 20 |    |    |    |    |    |    |    |    |    | Feb 21 - Feb 28 |    |    |    |    |    |    |    |    |    | Mar 1 - Mar 10 |    |   |   |   |   |   |   |   |   | Mar 11 - Mar 20 |    |    |    |    |    |    |    |    |    | Mar 21 - Mar 30 |    |    |    |    |    |    |    |    |    | Mar 31 - Apr 10 |    |    |   |   |   |   |   |   |   | Apr 11 - Apr 20 |   |    |    |    |    |    |    |    |    | Apr 21 - Apr 30 |    |    |    |    |    |    |    |    |    | May 1 - May 10 |    |    |    |   |   |   |   |   |   | May 11 - May 20 |   |   |    |    |    |    |    |    |    | May 21 - May 30 |    |    |    |    |    |    |    |    |    | May 31 - Jun 10 |    |    |    |    |   |   |   |   |   | Jun 11 - Jun 20 |   |   |   |    |    |    |    |    |    | Jun 21 - Jun 30 |    |    |    |    |    |    |    |    |    | Jul 1 - Jul 10 |    |    |    |    |    |   |   |   |   | Jul 11 - Jul 20 |   |   |   |   |    |    |    |    |    | Jul 21 - Jul 30 |    |    |    |    |    |    |    |    |    | Jul 31 - Aug 10 |    |    |    |    |    |    |   |   |   | Aug 11 - Aug 20 |   |   |   |   |   |    |    |    |    | Aug 21 - Aug 30 |    |    |    |    |    |    |    |    |    | Sep 1 - Sep 10 |    |    |    |    |    |    |    |   |   | Sep 11 - Sep 20 |   |   |   |   |   |   |    |    |    | Sep 21 - Sep 30 |    |    |    |    |    |    |    |    |    | Oct 1 - Oct 10 |    |    |    |    |    |    |    |    |   | Oct 11 - Oct 20 |   |   |   |   |   |   |   |    |    | Oct 21 - Oct 30 |    |    |    |    |    |    |    |    |    | Oct 31 - Nov 10 |    |    |    |    |    |    |    |    |    | Nov 11 - Nov 20 |   |   |   |   |   |   |   |   |    | Nov 21 - Nov 30 |    |    |    |    |    |    |    |    |    | Dec 1 - Dec 10 |    |    |    |    |    |    |    |    |    | Dec 11 - Dec 20 |   |   |   |   |   |   |   |   |   | Dec 21 - Dec 30 |    |    |    |    |    |    |    |    |    | Dec 31 - Jan 10 |    |    |    |    |    |    |    |    |    |         |    |   |   |   |   |   |   |   |   |         |    |    |    |    |    |    |    |    |    |         |    |    |    |    |    |    |    |    |    |         |    |    |   |   |   |   |   |   |   |         |   |    |    |    |    |    |    |    |    |         |    |    |    |    |    |    |    |    |    |         |    |    |    |   |   |   |   |   |   |         |   |   |    |    |    |    |    |    |    |         |    |    |    |    |    |    |    |    |    |         |    |    |    |    |   |   |   |   |   |         |   |   |   |    |    |    |    |    |    |         |    |    |    |    |    |    |    |    |    |         |    |    |    |    |    |   |   |   |   |         |   |   |   |   |    |    |    |    |    |         |    |    |    |    |    |    |  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   |    |    |    |    |    |    |    |    |    |    |    |    |    |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |   |   |   |   |   |   |   |   |   |    |    |    |    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  |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  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|  | 1              | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11              | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21              | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31              | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10              | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20              | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30             | 31 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9               | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19              | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29              | 30 | 31 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8               | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18              | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28             | 29 | 30 | 31 | 1 | 2 | 3 | 4 | 5 | 6 | 7               | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17              | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27              | 28 | 29 | 30 | 31 | 1 | 2 | 3 | 4 | 5 | 6               | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16              | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26             | 27 | 28 | 29 | 30 | 31 | 1 | 2 | 3 | 4 | 5               | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15              | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25              | 26 | 27 | 28 | 29 | 30 | 31 | 1 | 2 | 3 | 4               | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14              | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24             | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 1 | 2 | 3               | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13              | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23             | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 1 | 2               | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12              | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22              | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 1               | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11              | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21             | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31              | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10              | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20              | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30      | 31 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9       | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19      | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29      | 30 | 31 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8       | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18      | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28      | 29 | 30 | 31 | 1 | 2 | 3 | 4 | 5 | 6 | 7       | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17      | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27      | 28 | 29 | 30 | 31 | 1 | 2 | 3 | 4 | 5 | 6       | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16      | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26      | 27 | 28 | 29 | 30 | 31 | 1 | 2 | 3 | 4 | 5       | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15      | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 1 | 2</ |

[illegible]

[illegible]

[illegible]

## **APPENDIX B**

### **TRICS DATA**



CS CONSULTING  
Civil, Structural & Traffic Engineering

Audit Code: 3356f004-3444-47d1-9c3c-ae8aa88cb4d4

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use: 03 - RESIDENTIAL

Category: C - FLATS PRIVATELY OWNED

Selected Vehicle Type: Total Vehicles

Selected regions and areas:

|    |                |               |        |
|----|----------------|---------------|--------|
| 01 | GREATER LONDON |               |        |
|    | HO             | HOUNSLOW      | 1 day  |
| 02 | SOUTH EAST     |               |        |
|    | HF             | HERTFORDSHIRE | 3 days |
|    | WS             | WEST SUSSEX   | 1 day  |
| 04 | EAST ANGLIA    |               |        |
|    | NF             | NORFOLK       | 1 day  |
|    | SF             | SUFFOLK       | 1 day  |
| 05 | EAST MIDLANDS  |               |        |
|    | DY             | DERBY         | 1 day  |
| 09 | NORTH          |               |        |
|    | TW             | TYNE & WEAR   | 1 day  |

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

Audit Code: 3356f004-3444-47d1-9c3c-ae8aa88cb4d4

#### 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:              | DWELLS                  |
| Actual Range:           | 6 to 724 (units:DWELLS) |
| Range Selected by User: | 6 to 724 (units:DWELLS) |
| Parking Spaces Range:   | 0 - 550                 |

#### Public Transport Provision:

|               |                      |
|---------------|----------------------|
| Selection by: | All Surveys Included |
| Date Range:   | 01/01/16 to 04/09/24 |

*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:

|           |        |
|-----------|--------|
| Friday    | 1 days |
| Monday    | 1 days |
| Thursday  | 1 days |
| Tuesday   | 2 days |
| Wednesday | 4 days |

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

#### Selected survey types:

|                     |   |
|---------------------|---|
| Manual count        | 9 |
| Direction ATC Count | 0 |

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

#### Selected Locations:

|                      |        |
|----------------------|--------|
| Edge of Town         | 3 days |
| Neighbourhood Centre | 3 days |
| Suburban Area        | 3 days |

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

#### Selected Location Sub Categories:

|                  |        |
|------------------|--------|
| Residential Zone | 9 days |
|------------------|--------|

*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 Vehicle Counts:

|                             |        |
|-----------------------------|--------|
| Servicing vehicles Excluded | 1 days |
| Servicing vehicles Included | 8 days |

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Secondary Filtering Selection:

Use Class:

|    |           |
|----|-----------|
| C3 | 9 surveys |
|----|-----------|

*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:

1450 - 9872

Population within 1 mile:

|                  |           |
|------------------|-----------|
| 20,001 to 25,000 | 6 surveys |
| 25,001 to 50,000 | 3 surveys |

*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 surveys |
| 250,001 to 500,000 | 2 surveys |

*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 | 6 surveys |
| 1.1 to 1.5 | 3 surveys |

*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.*

Audit Code: 3356f004-3444-47d1-9c3c-ae8aa88cb4d4

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Petrol filling station:

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

Travel Plan:

|     |           |
|-----|-----------|
| No  | 5 surveys |
| Yes | 4 surveys |

*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:

|                 |           |
|-----------------|-----------|
| 3 - Moderate    | 1 surveys |
| No PTAL Present | 8 surveys |

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

COVID-19 Restrictions:

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

**Audit Code:** 3356f004-3444-47d1-9c3c-ae8aa88cb4d4

|                                                                                                                                                |            |                      |               |
|------------------------------------------------------------------------------------------------------------------------------------------------|------------|----------------------|---------------|
| 1                                                                                                                                              | DY-03-C-03 | BLOCKS OF FLATS      | DERBY         |
| CAESAR STREET<br>DERBY<br>Suburban Area<br>Residential Zone<br>Site area: 0.17 hect<br>Survey date: Wednesday 25/09/2019                       |            |                      |               |
| Survey Type: Manual                                                                                                                            |            |                      |               |
| 2                                                                                                                                              | HF-03-C-06 | BLOCKS OF FLATS      | HERTFORDSHIRE |
| FERNDOWN ROAD<br>WATFORD<br>SOUTH OXHEY<br>Edge of Town<br>Residential Zone<br>Site area: 0.26 hect<br>Survey date: Thursday 08/06/2023        |            |                      |               |
| Survey Type: Manual                                                                                                                            |            |                      |               |
| 3                                                                                                                                              | HF-03-C-07 | BLOCKS OF FLATS      | HERTFORDSHIRE |
| OXHEY DRIVE<br>WATFORD<br>SOUTH OXHEY<br>Neighbourhood Centre<br>Residential Zone<br>Site area: 0.65 hect<br>Survey date: Wednesday 07/06/2023 |            |                      |               |
| Survey Type: Manual                                                                                                                            |            |                      |               |
| 4                                                                                                                                              | HF-03-C-08 | BLOCKS OF FLATS      | HERTFORDSHIRE |
| HAYLING ROAD<br>WATFORD<br>SOUTH OXHEY<br>Edge of Town<br>Residential Zone<br>Site area: 0.19 hect<br>Survey date: Tuesday 06/06/2023          |            |                      |               |
| Survey Type: Manual                                                                                                                            |            |                      |               |
| 5                                                                                                                                              | HO-03-C-04 | BLOCKS OF FLATS      | HOUNSLOW      |
| LONDON ROAD<br>ISLEWORTH<br>Neighbourhood Centre<br>Residential Zone<br>Site area: 1.02 hect<br>Survey date: Tuesday 03/07/2018                |            |                      |               |
| Survey Type: Manual                                                                                                                            |            |                      |               |
| 6                                                                                                                                              | NF-03-C-02 | MIXED FLATS & HOUSES | NORFOLK       |
| HALL ROAD<br>NORWICH<br>LAKENHAM<br>Suburban Area<br>Residential Zone<br>Site area: 2.04 hect<br>Survey date: Monday 18/11/2019                |            |                      |               |
| Survey Type: Manual                                                                                                                            |            |                      |               |
| 7                                                                                                                                              | SF-03-C-04 | BLOCKS OF FLATS      | SUFFOLK       |
| SAINT MARY'S ROAD<br>IPSWICH<br>Suburban Area<br>Residential Zone<br>Site area: 0.7467 hect<br>Survey date: Wednesday 16/09/2020               |            |                      |               |
| Survey Type: Manual                                                                                                                            |            |                      |               |
| 8                                                                                                                                              | TW-03-C-01 | BLOCKS OF FLATS      | TYNE & WEAR   |
| CAULDWELL AVENUE<br>WHITLEY BAY                                                                                                                |            |                      |               |

Audit Code: 3356f004-3444-47d1-9c3c-ae8aa88cb4d4

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MONKESEATON  
Edge of Town  
Residential Zone  
Site area: 0.4 hect  
Survey date: Friday 15/10/2021

Survey Type: Manual

---

|   |            |                 |             |
|---|------------|-----------------|-------------|
| 9 | WS-03-C-01 | BLOCKS OF FLATS | WEST SUSSEX |
|---|------------|-----------------|-------------|

GORING ROAD  
WORTHING  
GORING-BY-SEA  
Neighbourhood Centre  
Residential Zone  
Site area: 0.32 hect  
Survey date: Wednesday 11/05/2022

Survey Type: Manual

Audit Code: 3356f004-3444-47d1-9c3c-ae8aa88cb4d4

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

Total Vehicles

Calculation factor: 1 DWELLS

*\*BOLD print indicates peak (busiest) period*

| Time Range          | No. Days | Ave. DWELLS | Arrivals     | Departures   | Totals       |
|---------------------|----------|-------------|--------------|--------------|--------------|
| 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         | 9        | 63          | 0.030        | 0.136        | 0.166        |
| 08:00-09:00         | 9        | 63          | 0.064        | 0.150        | 0.214        |
| 09:00-10:00         | 9        | 63          | 0.064        | 0.069        | 0.133        |
| 10:00-11:00         | 9        | 63          | 0.053        | 0.088        | 0.141        |
| 11:00-12:00         | 9        | 63          | 0.081        | 0.080        | 0.161        |
| 12:00-13:00         | 9        | 63          | 0.083        | 0.095        | 0.178        |
| 13:00-14:00         | 9        | 63          | 0.065        | 0.087        | 0.152        |
| 14:00-15:00         | 9        | 63          | 0.080        | 0.072        | 0.152        |
| 15:00-16:00         | 9        | 63          | 0.125        | 0.088        | 0.213        |
| 16:00-17:00         | 9        | 63          | 0.122        | 0.078        | 0.200        |
| 17:00-18:00         | 9        | 63          | 0.161        | 0.083        | 0.244        |
| 18:00-19:00         | 9        | 63          | 0.138        | 0.090        | 0.228        |
| 19:00-20:00         | 1        | 203         | 0.113        | 0.064        | 0.177        |
| 20:00-21:00         | 1        | 203         | 0.069        | 0.049        | 0.118        |
| 21:00-22:00         |          |             |              |              |              |
| 22:00-23:00         |          |             |              |              |              |
| 23:00-00:00         |          |             |              |              |              |
| <b>Total Rates:</b> |          |             | <b>1.248</b> | <b>1.229</b> | <b>2.477</b> |

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

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

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Audit Code: 3356f004-3444-47d1-9c3c-ae8aa88cb4d4

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Parameter Summary:

|                                               |                         |
|-----------------------------------------------|-------------------------|
| Trip rate parameter range selected:           | 6 - 724 (units: DWELLS) |
| Survey date date range:                       | 03/07/2018 - 08/06/2023 |
| Number of weekdays (Monday-Friday):           | 9                       |
| 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 shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.*

Audit Code: 3356f004-3444-47d1-9c3c-ae8aa88cb4d4

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

Cyclists

Calculation factor: 1 DWELLS

\*BOLD print indicates peak (busiest) period

| Time Range          | No. Days | Ave. DWELLS | Arrivals | Departures | Totals |
|---------------------|----------|-------------|----------|------------|--------|
| 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         | 9        | 63          | 0.002    | 0.014      | 0.016  |
| 08:00-09:00         | 9        | 63          | 0.000    | 0.014      | 0.014  |
| 09:00-10:00         | 9        | 63          | 0.000    | 0.000      | 0.000  |
| 10:00-11:00         | 9        | 63          | 0.000    | 0.000      | 0.000  |
| 11:00-12:00         | 9        | 63          | 0.002    | 0.002      | 0.004  |
| 12:00-13:00         | 9        | 63          | 0.002    | 0.004      | 0.006  |
| 13:00-14:00         | 9        | 63          | 0.000    | 0.002      | 0.002  |
| 14:00-15:00         | 9        | 63          | 0.005    | 0.007      | 0.012  |
| 15:00-16:00         | 9        | 63          | 0.002    | 0.002      | 0.004  |
| 16:00-17:00         | 9        | 63          | 0.007    | 0.004      | 0.011  |
| 17:00-18:00         | 9        | 63          | 0.014    | 0.004      | 0.018  |
| 18:00-19:00         | 9        | 63          | 0.011    | 0.004      | 0.015  |
| 19:00-20:00         | 1        | 203         | 0.000    | 0.000      | 0.000  |
| 20:00-21:00         | 1        | 203         | 0.005    | 0.000      | 0.005  |
| 21:00-22:00         |          |             |          |            |        |
| 22:00-23:00         |          |             |          |            |        |
| 23:00-00:00         |          |             |          |            |        |
| <b>Total Rates:</b> |          |             | 0.050    | 0.057      | 0.107  |

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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Audit Code: 3356f004-3444-47d1-9c3c-ae8aa88cb4d4

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Parameter Summary:

|                                               |                         |
|-----------------------------------------------|-------------------------|
| Trip rate parameter range selected:           | 6 - 724 (units: DWELLS) |
| Survey date date range:                       | 03/07/2018 - 08/06/2023 |
| 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 shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.*

Audit Code: 3356f004-3444-47d1-9c3c-ae8aa88cb4d4

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

PSVs

Calculation factor: 1 DWELLS

\*BOLD print indicates peak (busiest) period

| Time Range          | No. Days | Ave. DWELLS | Arrivals | Departures | Totals |
|---------------------|----------|-------------|----------|------------|--------|
| 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         | 9        | 63          | 0.000    | 0.000      | 0.000  |
| 08:00-09:00         | 9        | 63          | 0.000    | 0.000      | 0.000  |
| 09:00-10:00         | 9        | 63          | 0.000    | 0.000      | 0.000  |
| 10:00-11:00         | 9        | 63          | 0.000    | 0.000      | 0.000  |
| 11:00-12:00         | 9        | 63          | 0.000    | 0.000      | 0.000  |
| 12:00-13:00         | 9        | 63          | 0.000    | 0.000      | 0.000  |
| 13:00-14:00         | 9        | 63          | 0.000    | 0.000      | 0.000  |
| 14:00-15:00         | 9        | 63          | 0.000    | 0.000      | 0.000  |
| 15:00-16:00         | 9        | 63          | 0.000    | 0.000      | 0.000  |
| 16:00-17:00         | 9        | 63          | 0.000    | 0.000      | 0.000  |
| 17:00-18:00         | 9        | 63          | 0.000    | 0.000      | 0.000  |
| 18:00-19:00         | 9        | 63          | 0.000    | 0.000      | 0.000  |
| 19:00-20:00         | 1        | 203         | 0.000    | 0.000      | 0.000  |
| 20:00-21:00         | 1        | 203         | 0.000    | 0.000      | 0.000  |
| 21:00-22:00         |          |             |          |            |        |
| 22:00-23:00         |          |             |          |            |        |
| 23:00-00:00         |          |             |          |            |        |
| <b>Total Rates:</b> |          |             | 0.000    | 0.000      | 0.000  |

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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Audit Code: 3356f004-3444-47d1-9c3c-ae8aa88cb4d4

Parameter Summary:

|                                               |                         |
|-----------------------------------------------|-------------------------|
| Trip rate parameter range selected:           | 6 - 724 (units: DWELLS) |
| Survey date date range:                       | N/A - N/A               |
| Number of weekdays (Monday-Friday):           | 0                       |
| 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.*

Audit Code: 3356f004-3444-47d1-9c3c-ae8aa88cb4d4

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

OGVs

Calculation factor: 1 DWELLS

\*BOLD print indicates peak (busiest) period

| Time Range          | No. Days | Ave. DWELLS | Arrivals | Departures | Totals |
|---------------------|----------|-------------|----------|------------|--------|
| 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         | 9        | 63          | 0.000    | 0.000      | 0.000  |
| 08:00-09:00         | 9        | 63          | 0.004    | 0.000      | 0.004  |
| 09:00-10:00         | 9        | 63          | 0.004    | 0.002      | 0.006  |
| 10:00-11:00         | 9        | 63          | 0.009    | 0.005      | 0.014  |
| 11:00-12:00         | 9        | 63          | 0.002    | 0.007      | 0.009  |
| 12:00-13:00         | 9        | 63          | 0.002    | 0.002      | 0.004  |
| 13:00-14:00         | 9        | 63          | 0.000    | 0.000      | 0.000  |
| 14:00-15:00         | 9        | 63          | 0.000    | 0.004      | 0.004  |
| 15:00-16:00         | 9        | 63          | 0.002    | 0.000      | 0.002  |
| 16:00-17:00         | 9        | 63          | 0.002    | 0.002      | 0.004  |
| 17:00-18:00         | 9        | 63          | 0.000    | 0.002      | 0.002  |
| 18:00-19:00         | 9        | 63          | 0.000    | 0.000      | 0.000  |
| 19:00-20:00         | 1        | 203         | 0.000    | 0.000      | 0.000  |
| 20:00-21:00         | 1        | 203         | 0.000    | 0.000      | 0.000  |
| 21:00-22:00         |          |             |          |            |        |
| 22:00-23:00         |          |             |          |            |        |
| 23:00-00:00         |          |             |          |            |        |
| <b>Total Rates:</b> |          |             | 0.025    | 0.024      | 0.049  |

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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Audit Code: 3356f004-3444-47d1-9c3c-ae8aa88cb4d4

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Parameter Summary:

|                                               |                         |
|-----------------------------------------------|-------------------------|
| Trip rate parameter range selected:           | 6 - 724 (units: DWELLS) |
| Survey date date range:                       | 03/07/2018 - 16/09/2020 |
| Number of weekdays (Monday-Friday):           | 3                       |
| 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 shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.*

Audit Code: 3356f004-3444-47d1-9c3c-ae8aa88cb4d4

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

Taxis

Calculation factor: 1 DWELLS

\*BOLD print indicates peak (busiest) period

| Time Range          | No. Days | Ave. DWELLS | Arrivals | Departures | Totals |
|---------------------|----------|-------------|----------|------------|--------|
| 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         | 9        | 63          | 0.004    | 0.004      | 0.008  |
| 08:00-09:00         | 9        | 63          | 0.002    | 0.002      | 0.004  |
| 09:00-10:00         | 9        | 63          | 0.004    | 0.004      | 0.008  |
| 10:00-11:00         | 9        | 63          | 0.000    | 0.000      | 0.000  |
| 11:00-12:00         | 9        | 63          | 0.002    | 0.002      | 0.004  |
| 12:00-13:00         | 9        | 63          | 0.005    | 0.005      | 0.010  |
| 13:00-14:00         | 9        | 63          | 0.000    | 0.000      | 0.000  |
| 14:00-15:00         | 9        | 63          | 0.002    | 0.002      | 0.004  |
| 15:00-16:00         | 9        | 63          | 0.002    | 0.002      | 0.004  |
| 16:00-17:00         | 9        | 63          | 0.004    | 0.004      | 0.008  |
| 17:00-18:00         | 9        | 63          | 0.000    | 0.000      | 0.000  |
| 18:00-19:00         | 9        | 63          | 0.000    | 0.000      | 0.000  |
| 19:00-20:00         | 1        | 203         | 0.005    | 0.005      | 0.010  |
| 20:00-21:00         | 1        | 203         | 0.000    | 0.000      | 0.000  |
| 21:00-22:00         |          |             |          |            |        |
| 22:00-23:00         |          |             |          |            |        |
| 23:00-00:00         |          |             |          |            |        |
| <b>Total Rates:</b> |          |             | 0.030    | 0.030      | 0.060  |

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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Audit Code: 3356f004-3444-47d1-9c3c-ae8aa88cb4d4

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Parameter Summary:

|                                               |                         |
|-----------------------------------------------|-------------------------|
| Trip rate parameter range selected:           | 6 - 724 (units: DWELLS) |
| Survey date date range:                       | 03/07/2018 - 08/06/2023 |
| Number of weekdays (Monday-Friday):           | 6                       |
| 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.*

Audit Code: 3356f004-3444-47d1-9c3c-ae8aa88cb4d4

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

Cars

Calculation factor: 1 DWELLS

\*BOLD print indicates peak (busiest) period

| Time Range          | No. Days | Ave. DWELLS | Arrivals | Departures | Totals |
|---------------------|----------|-------------|----------|------------|--------|
| 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         | 9        | 63          | 0.019    | 0.122      | 0.141  |
| 08:00-09:00         | 9        | 63          | 0.053    | 0.140      | 0.193  |
| 09:00-10:00         | 9        | 63          | 0.042    | 0.057      | 0.099  |
| 10:00-11:00         | 9        | 63          | 0.037    | 0.065      | 0.102  |
| 11:00-12:00         | 9        | 63          | 0.067    | 0.053      | 0.120  |
| 12:00-13:00         | 9        | 63          | 0.058    | 0.067      | 0.125  |
| 13:00-14:00         | 9        | 63          | 0.055    | 0.069      | 0.124  |
| 14:00-15:00         | 9        | 63          | 0.071    | 0.060      | 0.131  |
| 15:00-16:00         | 9        | 63          | 0.110    | 0.078      | 0.188  |
| 16:00-17:00         | 9        | 63          | 0.104    | 0.065      | 0.169  |
| 17:00-18:00         | 9        | 63          | 0.145    | 0.072      | 0.217  |
| 18:00-19:00         | 9        | 63          | 0.120    | 0.078      | 0.198  |
| 19:00-20:00         | 1        | 203         | 0.084    | 0.044      | 0.128  |
| 20:00-21:00         | 1        | 203         | 0.059    | 0.044      | 0.103  |
| 21:00-22:00         |          |             |          |            |        |
| 22:00-23:00         |          |             |          |            |        |
| 23:00-00:00         |          |             |          |            |        |
| <b>Total Rates:</b> |          |             | 1.024    | 1.014      | 2.038  |

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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Audit Code: 3356f004-3444-47d1-9c3c-ae8aa88cb4d4

Parameter Summary:

|                                               |                         |
|-----------------------------------------------|-------------------------|
| Trip rate parameter range selected:           | 6 - 724 (units: DWELLS) |
| Survey date date range:                       | 03/07/2018 - 08/06/2023 |
| Number of weekdays (Monday-Friday):           | 9                       |
| 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.*

Audit Code: 3356f004-3444-47d1-9c3c-ae8aa88cb4d4

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

LGVs

Calculation factor: 1 DWELLS

\*BOLD print indicates peak (busiest) period

| Time Range          | No. Days | Ave. DWELLS | Arrivals | Departures | Totals |
|---------------------|----------|-------------|----------|------------|--------|
| 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         | 9        | 63          | 0.007    | 0.011      | 0.018  |
| 08:00-09:00         | 9        | 63          | 0.005    | 0.009      | 0.014  |
| 09:00-10:00         | 9        | 63          | 0.014    | 0.007      | 0.021  |
| 10:00-11:00         | 9        | 63          | 0.007    | 0.016      | 0.023  |
| 11:00-12:00         | 9        | 63          | 0.009    | 0.016      | 0.025  |
| 12:00-13:00         | 9        | 63          | 0.014    | 0.014      | 0.028  |
| 13:00-14:00         | 9        | 63          | 0.004    | 0.011      | 0.015  |
| 14:00-15:00         | 9        | 63          | 0.007    | 0.007      | 0.014  |
| 15:00-16:00         | 9        | 63          | 0.011    | 0.007      | 0.018  |
| 16:00-17:00         | 9        | 63          | 0.011    | 0.005      | 0.016  |
| 17:00-18:00         | 9        | 63          | 0.012    | 0.005      | 0.017  |
| 18:00-19:00         | 9        | 63          | 0.016    | 0.011      | 0.027  |
| 19:00-20:00         | 1        | 203         | 0.015    | 0.010      | 0.025  |
| 20:00-21:00         | 1        | 203         | 0.010    | 0.000      | 0.010  |
| 21:00-22:00         |          |             |          |            |        |
| 22:00-23:00         |          |             |          |            |        |
| 23:00-00:00         |          |             |          |            |        |
| <b>Total Rates:</b> |          |             | 0.142    | 0.129      | 0.271  |

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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Audit Code: 3356f004-3444-47d1-9c3c-ae8aa88cb4d4

Parameter Summary:

|                                               |                         |
|-----------------------------------------------|-------------------------|
| Trip rate parameter range selected:           | 6 - 724 (units: DWELLS) |
| Survey date date range:                       | 03/07/2018 - 08/06/2023 |
| Number of weekdays (Monday-Friday):           | 9                       |
| 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.*

Audit Code: 3356f004-3444-47d1-9c3c-ae8aa88cb4d4

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

Motorcycles

Calculation factor: 1 DWELLS

\*BOLD print indicates peak (busiest) period

| Time Range          | No. Days | Ave. DWELLS | Arrivals     | Departures   | Totals       |
|---------------------|----------|-------------|--------------|--------------|--------------|
| 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         | 9        | 63          | 0.000        | 0.000        | 0.000        |
| 08:00-09:00         | 9        | 63          | 0.000        | 0.000        | 0.000        |
| 09:00-10:00         | 9        | 63          | 0.000        | 0.000        | 0.000        |
| 10:00-11:00         | 9        | 63          | 0.000        | 0.002        | 0.002        |
| 11:00-12:00         | 9        | 63          | 0.002        | 0.002        | 0.004        |
| 12:00-13:00         | 9        | 63          | 0.004        | 0.007        | 0.011        |
| 13:00-14:00         | 9        | 63          | 0.007        | 0.007        | 0.014        |
| 14:00-15:00         | 9        | 63          | 0.000        | 0.000        | 0.000        |
| 15:00-16:00         | 9        | 63          | 0.002        | 0.002        | 0.004        |
| 16:00-17:00         | 9        | 63          | 0.002        | 0.002        | 0.004        |
| 17:00-18:00         | 9        | 63          | 0.004        | 0.004        | 0.008        |
| 18:00-19:00         | 9        | 63          | 0.002        | 0.002        | 0.004        |
| 19:00-20:00         | 1        | 203         | 0.010        | 0.005        | 0.015        |
| 20:00-21:00         | 1        | 203         | 0.000        | 0.005        | 0.005        |
| 21:00-22:00         |          |             |              |              |              |
| 22:00-23:00         |          |             |              |              |              |
| 23:00-00:00         |          |             |              |              |              |
| <b>Total Rates:</b> |          |             | <b>0.033</b> | <b>0.038</b> | <b>0.071</b> |

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

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

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Audit Code: 3356f004-3444-47d1-9c3c-ae8aa88cb4d4

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Parameter Summary:

|                                               |                         |
|-----------------------------------------------|-------------------------|
| Trip rate parameter range selected:           | 6 - 724 (units: DWELLS) |
| Survey date date range:                       | 03/07/2018 - 08/06/2023 |
| Number of weekdays (Monday-Friday):           | 5                       |
| 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.*

## APPENDIX C TRAFFIC MATRICES



CS CONSULTING  
Civil, Structural & Traffic Engineering

J1 Peak Hour Traffic Flow Matrices (Passenger Car Units)

| 2025 AM Peak (08:00-09:00) |                  |               |                 |               |        |  | 2025 PM Peak (16:15-17:15) |                  |               |                 |               |        |  |
|----------------------------|------------------|---------------|-----------------|---------------|--------|--|----------------------------|------------------|---------------|-----------------|---------------|--------|--|
| SURVEYED TRAFFIC FLOWS     |                  |               |                 |               |        |  | SURVEYED TRAFFIC FLOWS     |                  |               |                 |               |        |  |
| From \ To                  | Longfield Road N | Grange Road E | Grange Avenue S | Grange Road W | TOTALS |  | From \ To                  | Longfield Road N | Grange Road E | Grange Avenue S | Grange Road W | TOTALS |  |
| Longfield Road N           | 0                | 61            | 31              | 168           | 260    |  | Longfield Road N           | 0                | 42            | 7               | 69            | 118    |  |
| Grange Road E              | 37               | 0             | 107             | 363           | 507    |  | Grange Road E              | 41               | 0             | 59              | 324           | 424    |  |
| Grange Avenue S            | 8                | 31            | 0               | 95            | 134    |  | Grange Avenue S            | 25               | 109           | 0               | 339           | 473    |  |
| Grange Road W              | 138              | 322           | 308             | 0             | 768    |  | Grange Road W              | 100              | 378           | 139             | 0             | 617    |  |
| TOTALS                     | 183              | 414           | 446             | 626           | 1669   |  | TOTALS                     | 166              | 529           | 205             | 732           | 1632   |  |

| 2026 AM Peak                                                |                  |               |                 |               |        |  | 2026 PM Peak                                                |                  |               |                 |               |        |  |
|-------------------------------------------------------------|------------------|---------------|-----------------|---------------|--------|--|-------------------------------------------------------------|------------------|---------------|-----------------|---------------|--------|--|
| BASELINE TRAFFIC FLOWS (surveyed flows + TII growth factor) |                  |               |                 |               |        |  | BASELINE TRAFFIC FLOWS (surveyed flows + TII growth factor) |                  |               |                 |               |        |  |
| From \ To                                                   | Longfield Road N | Grange Road E | Grange Avenue S | Grange Road W | TOTALS |  | From \ To                                                   | Longfield Road N | Grange Road E | Grange Avenue S | Grange Road W | TOTALS |  |
| Longfield Road N                                            | 0                | 62            | 32              | 171           | 265    |  | Longfield Road N                                            | 0                | 43            | 7               | 70            | 120    |  |
| Grange Road E                                               | 38               | 0             | 109             | 369           | 516    |  | Grange Road E                                               | 42               | 0             | 60              | 329           | 431    |  |
| Grange Avenue S                                             | 8                | 32            | 0               | 97            | 137    |  | Grange Avenue S                                             | 25               | 111           | 0               | 344           | 480    |  |
| Grange Road W                                               | 140              | 327           | 313             | 0             | 780    |  | Grange Road W                                               | 102              | 384           | 141             | 0             | 627    |  |
| TOTALS                                                      | 186              | 421           | 454             | 637           | 1698   |  | TOTALS                                                      | 169              | 538           | 208             | 743           | 1658   |  |

| 2027 AM Peak                      |                  |               |                 |               |        |  | 2027 PM Peak                      |                  |               |                 |               |        |  |
|-----------------------------------|------------------|---------------|-----------------|---------------|--------|--|-----------------------------------|------------------|---------------|-----------------|---------------|--------|--|
| Other committed development flows |                  |               |                 |               |        |  | Other committed development flows |                  |               |                 |               |        |  |
| From \ To                         | Longfield Road N | Grange Road E | Grange Avenue S | Grange Road W | TOTALS |  | From \ To                         | Longfield Road N | Grange Road E | Grange Avenue S | Grange Road W | TOTALS |  |
| Longfield Road N                  | 0                | 29            | 15              | 79            | 123    |  | Longfield Road N                  | 0                | 34            | 6               | 56            | 95     |  |
| Grange Road E                     | 13               | 0             | 0               | 0             | 13     |  | Grange Road E                     | 41               | 0             | 0               | 0             | 41     |  |
| Grange Avenue S                   | 3                | 0             | 0               | 0             | 3      |  | Grange Avenue S                   | 24               | 0             | 0               | 0             | 24     |  |
| Grange Road W                     | 46               | 0             | 0               | 0             | 46     |  | Grange Road W                     | 100              | 0             | 0               | 0             | 100    |  |
| TOTALS                            | 61               | 29            | 15              | 79            | 184    |  | TOTALS                            | 166              | 34            | 6               | 56            | 261    |  |

| 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                                                                                | Longfield Road N | Grange Road E | Grange Avenue S | Grange Road W | TOTALS |  | From \ To                                                                                | Longfield Road N | Grange Road E | Grange Avenue S | Grange Road W | TOTALS |  |
| Longfield Road N                                                                         | 0                | 92            | 47              | 253           | 392    |  | Longfield Road N                                                                         | 0                | 77            | 13              | 127           | 217    |  |
| Grange Road E                                                                            | 51               | 0             | 110             | 375           | 536    |  | Grange Road E                                                                            | 83               | 0             | 61              | 335           | 479    |  |
| Grange Avenue S                                                                          | 11               | 32            | 0               | 98            | 141    |  | Grange Avenue S                                                                          | 50               | 113           | 0               | 350           | 513    |  |
| Grange Road W                                                                            | 189              | 333           | 318             | 0             | 840    |  | Grange Road W                                                                            | 203              | 390           | 144             | 0             | 737    |  |
| TOTALS                                                                                   | 251              | 457           | 475             | 726           | 1909   |  | TOTALS                                                                                   | 336              | 580           | 218             | 812           | 1946   |  |

| 2027 AM Peak                                  |                  |               |                 |               |        |  | 2027 PM Peak                                  |                  |               |                 |               |        |  |
|-----------------------------------------------|------------------|---------------|-----------------|---------------|--------|--|-----------------------------------------------|------------------|---------------|-----------------|---------------|--------|--|
| SUBJECT DEVELOPMENT FLOWS - CONSTRUCTION PEAK |                  |               |                 |               |        |  | SUBJECT DEVELOPMENT FLOWS - CONSTRUCTION PEAK |                  |               |                 |               |        |  |
| From \ To                                     | Longfield Road N | Grange Road E | Grange Avenue S | Grange Road W | TOTALS |  | From \ To                                     | Longfield Road N | Grange Road E | Grange Avenue S | Grange Road W | TOTALS |  |
| Longfield Road N                              | 0                | 0             | 0               | 0             | 0      |  | Longfield Road N                              | 0                | 0             | 0               | 0             | 0      |  |
| Grange Road E                                 | 0                | 0             | 0               | 0             | 0      |  | Grange Road E                                 | 0                | 0             | 0               | 0             | 0      |  |
| Grange Avenue S                               | 0                | 0             | 0               | 0             | 0      |  | Grange Avenue S                               | 0                | 0             | 0               | 0             | 0      |  |
| Grange Road W                                 | 0                | 0             | 0               | 0             | 0      |  | Grange Road W                                 | 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 UNDER CONSTRUCTION (surveyed + TII growth factor + committed dev. + subject dev.) |                  |               |                 |               |        |  | WITH SUBJECT DEVELOPMENT UNDER CONSTRUCTION (surveyed + TII growth factor + committed dev. + subject dev.) |                  |               |                 |               |        |  |
| From \ To                                                                                                  | Longfield Road N | Grange Road E | Grange Avenue S | Grange Road W | TOTALS |  | From \ To                                                                                                  | Longfield Road N | Grange Road E | Grange Avenue S | Grange Road W | TOTALS |  |
| Longfield Road N                                                                                           | 0                | 92            | 47              | 253           | 392    |  | Longfield Road N                                                                                           | 0                | 77            | 13              | 127           | 217    |  |
| Grange Road E                                                                                              | 51               | 0             | 110             | 375           | 536    |  | Grange Road E                                                                                              | 83               | 0             | 61              | 335           | 479    |  |
| Grange Avenue S                                                                                            | 11               | 32            | 0               | 98            | 141    |  | Grange Avenue S                                                                                            | 50               | 113           | 0               | 350           | 513    |  |
| Grange Road W                                                                                              | 189              | 333           | 318             | 0             | 840    |  | Grange Road W                                                                                              | 203              | 390           | 144             | 0             | 737    |  |
| TOTALS                                                                                                     | 251              | 457           | 475             | 726           | 1909   |  | TOTALS                                                                                                     | 336              | 580           | 218             | 812           | 1946   |  |

| 2028 AM Peak                                                                             |                  |               |                 |               |        |  | 2028 PM Peak                                                                             |                  |               |                 |               |        |  |
|------------------------------------------------------------------------------------------|------------------|---------------|-----------------|---------------|--------|--|------------------------------------------------------------------------------------------|------------------|---------------|-----------------|---------------|--------|--|
| WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development) |                  |               |                 |               |        |  | WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development) |                  |               |                 |               |        |  |
| From \ To                                                                                | Longfield Road N | Grange Road E | Grange Avenue S | Grange Road W | TOTALS |  | From \ To                                                                                | Longfield Road N | Grange Road E | Grange Avenue S | Grange Road W | TOTALS |  |
| Longfield Road N                                                                         | 0                | 93            | 47              | 256           | 396    |  | Longfield Road N                                                                         | 0                | 78            | 13              | 128           | 219    |  |
| Grange Road E                                                                            | 51               | 0             | 112             | 381           | 544    |  | Grange Road E                                                                            | 84               | 0             | 62              | 340           | 486    |  |
| Grange Avenue S                                                                          | 11               | 33            | 0               | 100           | 144    |  | Grange Avenue S                                                                          | 51               | 114           | 0               | 356           | 521    |  |
| Grange Road W                                                                            | 191              | 338           | 323             | 0             | 852    |  | Grange Road W                                                                            | 205              | 397           | 146             | 0             | 748    |  |
| TOTALS                                                                                   | 253              | 464           | 482             | 737           | 1936   |  | TOTALS                                                                                   | 340              | 589           | 221             | 824           | 1974   |  |

| 2028 AM Peak                                  |                  |               |                 |               |        |  | 2028 PM Peak                                  |                  |               |                 |               |        |  |
|-----------------------------------------------|------------------|---------------|-----------------|---------------|--------|--|-----------------------------------------------|------------------|---------------|-----------------|---------------|--------|--|
| SUBJECT DEVELOPMENT FLOWS - OPERATIONAL PHASE |                  |               |                 |               |        |  | SUBJECT DEVELOPMENT FLOWS - OPERATIONAL PHASE |                  |               |                 |               |        |  |
| From \ To                                     | Longfield Road N | Grange Road E | Grange Avenue S | Grange Road W | TOTALS |  | From \ To                                     | Longfield Road N | Grange Road E | Grange Avenue S | Grange Road W | TOTALS |  |
| Longfield Road N                              | 0                | 12            | 6               | 33            | 51     |  | Longfield Road N                              | 0                | 11            | 2               | 17            | 30     |  |
| Grange Road E                                 | 5                | 0             | 0               | 0             | 5      |  | Grange Road E                                 | 15               | 0             | 0               | 0             | 15     |  |
| Grange Avenue S                               | 1                | 0             | 0               | 0             | 1      |  | Grange Avenue S                               | 9                | 0             | 0               | 0             | 9      |  |
| Grange Road W                                 | 17               | 0             | 0               | 0             | 17     |  | Grange Road W                                 | 36               | 0             | 0               | 0             | 36     |  |
| TOTALS                                        | 22               | 12            | 6               | 33            | 73     |  | TOTALS                                        | 59               | 11            | 2               | 17            | 89     |  |

| 2028 AM Peak                                                                                         |                  |               |                 |               |        |  | 2028 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                                                                                            | Longfield Road N | Grange Road E | Grange Avenue S | Grange Road W | TOTALS |  | From \ To                                                                                            | Longfield Road N | Grange Road E | Grange Avenue S | Grange Road W | TOTALS |  |
| Longfield Road N                                                                                     | 0                | 105           | 53              | 289           | 447    |  | Longfield Road N                                                                                     | 0                | 89            | 15              | 145           | 249    |  |
| Grange Road E                                                                                        | 56               | 0             | 112             | 381           | 549    |  | Grange Road E                                                                                        | 99               | 0             | 62              | 340           | 501    |  |
| Grange Avenue S                                                                                      | 12               | 33            | 0               | 100           | 145    |  | Grange Avenue S                                                                                      | 60               | 114           | 0               | 356           | 530    |  |
| Grange Road W                                                                                        | 208              | 338           | 323             | 0             | 869    |  | Grange Road W                                                                                        | 241              | 397           | 146             | 0             | 784    |  |
| TOTALS                                                                                               | 275              | 476           | 488             | 770           | 2009   |  | TOTALS                                                                                               | 399              | 600           | 223             | 841           | 2063   |  |

| 2033 AM Peak                                                                             |                  |               |                 |               |        |  | 2033 PM Peak                                                                             |                  |               |                 |               |        |  |
|------------------------------------------------------------------------------------------|------------------|---------------|-----------------|---------------|--------|--|------------------------------------------------------------------------------------------|------------------|---------------|-----------------|---------------|--------|--|
| WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development) |                  |               |                 |               |        |  | WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development) |                  |               |                 |               |        |  |
| From \ To                                                                                | Longfield Road N | Grange Road E | Grange Avenue S | Grange Road W | TOTALS |  | From \ To                                                                                | Longfield Road N | Grange Road E | Grange Avenue S | Grange Road W | TOTALS |  |
| Longfield Road N                                                                         | 0                | 96            | 49              | 264           | 409    |  | Longfield Road N                                                                         | 0                | 80            | 13              | 131           | 224    |  |
| Grange Road E                                                                            | 53               | 0             | 118             | 399           | 570    |  | Grange Road E                                                                            | 86               | 0             | 65              | 357           | 508    |  |
| Grange Avenue S                                                                          | 11               | 34            | 0               | 105           | 150    |  | Grange Avenue S                                                                          | 52               | 120           | 0               | 373           | 545    |  |
| Grange Road W                                                                            | 198              | 354           | 339             | 0             | 891    |  | Grange Road W                                                                            | 210              | 416           | 153             | 0             | 779    |  |
| TOTALS                                                                                   | 262              | 484           | 506             | 768           | 2020   |  | TOTALS                                                                                   | 348              | 616           | 231             | 861           | 2056   |  |

| 2033 AM Peak                                                                                         |                  |               |                 |               |        |  | 2033 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                                                                                            | Longfield Road N | Grange Road E | Grange Avenue S | Grange Road W | TOTALS |  | From \ To                                                                                            | Longfield Road N | Grange Road E | Grange Avenue S | Grange Road W | TOTALS |  |
| Longfield Road N                                                                                     | 0                | 108           | 55              | 297           | 460    |  | Longfield Road N                                                                                     | 0                | 91            | 15              | 148           | 254    |  |
| Grange Road E                                                                                        | 58               | 0             | 118             | 399           | 575    |  | Grange Road E                                                                                        | 101              | 0             | 65              | 357           | 523    |  |
| Grange Avenue S                                                                                      | 12               | 34            | 0               | 105           | 151    |  | Grange Avenue S                                                                                      | 61               | 120           | 0               | 373           | 554    |  |
| Grange Road W                                                                                        | 215              | 354           | 339             | 0             | 908    |  | Grange Road W                                                                                        | 246              | 416           | 153             | 0             | 815    |  |
| TOTALS                                                                                               | 284              | 496           | 512             | 801           | 2093   |  | TOTALS                                                                                               | 407              | 627           | 233             | 878           | 2145   |  |

| 2043 AM Peak                                                                             |                  |               |                 |               |        |  | 2043 PM Peak                                                                             |                  |               |                 |               |        |  |
|------------------------------------------------------------------------------------------|------------------|---------------|-----------------|---------------|--------|--|------------------------------------------------------------------------------------------|------------------|---------------|-----------------|---------------|--------|--|
| WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development) |                  |               |                 |               |        |  | WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development) |                  |               |                 |               |        |  |
| From \ To                                                                                | Longfield Road N | Grange Road E | Grange Avenue S | Grange Road W | TOTALS |  | From \ To                                                                                | Longfield Road N | Grange Road E | Grange Avenue S | Grange Road W | TOTALS |  |
| Longfield Road N                                                                         | 0                | 99            | 51              | 274           | 424    |  | Longfield Road N                                                                         | 0                | 83            | 14              | 135           | 232    |  |
| Grange Road E                                                                            | 55               | 0             | 124             | 419           | 598    |  | Grange Road E                                                                            | 89               | 0             | 68              | 374           | 531    |  |
| Grange Avenue S                                                                          | 12               | 36            | 0               | 110           | 158    |  | Grange Avenue S                                                                          | 53               | 126           | 0               | 392           | 571    |  |
| Grange Road W                                                                            | 206              | 372           | 356             | 0             | 934    |  | Grange Road W                                                                            | 215              | 437           | 161             | 0             | 813    |  |
| TOTALS                                                                                   | 273              | 507           | 531             | 803           | 2114   |  | TOTALS                                                                                   | 357              | 646           | 243             | 901           | 2147   |  |

| 2043 AM Peak                                                                                         |                  |               |                 |               |        |  | 2043 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                                                                                            | Longfield Road N | Grange Road E | Grange Avenue S | Grange Road W | TOTALS |  | From \ To                                                                                            | Longfield Road N | Grange Road E | Grange Avenue S | Grange Road W | TOTALS |  |
| Longfield Road N                                                                                     | 0                | 111           | 57              | 307           | 475    |  | Longfield Road N                                                                                     | 0                | 94            | 16              | 152           | 262    |  |
| Grange Road E                                                                                        | 60               | 0             | 124             | 419           | 603    |  | Grange Road E                                                                                        | 104              | 0             | 68              | 374           | 546    |  |
| Grange Avenue S                                                                                      | 13               | 36            | 0               | 110           | 159    |  | Grange Avenue S                                                                                      | 62               | 126           | 0               | 392           | 580    |  |
| Grange Road W                                                                                        | 223              | 372           | 356             | 0             | 951    |  | Grange Road W                                                                                        | 251              | 437           | 161             | 0             | 849    |  |
| TOTALS                                                                                               | 295              | 519           | 537             | 836           | 2187   |  | TOTALS                                                                                               | 416              | 657           | 245             | 918           | 2233   |  |

J2 Peak Hour Traffic Flow Matrices (Passenger Car Units)

| 2025 AM Peak (08:00-09:00) SURVEYED TRAFFIC FLOWS |        |                  |        |        |
|---------------------------------------------------|--------|------------------|--------|--------|
| From \ To                                         | R106 S | Red Archies Road | R106 N | TOTALS |
| R106 S                                            | 3      | 676              | 85     | 764    |
| Red Archies Road                                  | 430    | 13               | 50     | 493    |
| R106 N                                            | 74     | 104              | 1      | 179    |
| TOTALS                                            | 507    | 793              | 136    | 1436   |

| 2026 AM Peak BASELINE TRAFFIC FLOWS (surveyed flows + TII growth factor) |        |                  |        |        |
|--------------------------------------------------------------------------|--------|------------------|--------|--------|
| From \ To                                                                | R106 S | Red Archies Road | R106 N | TOTALS |
| R106 S                                                                   | 3      | 687              | 86     | 776    |
| Red Archies Road                                                         | 437    | 13               | 51     | 501    |
| R106 N                                                                   | 75     | 106              | 1      | 182    |
| TOTALS                                                                   | 515    | 806              | 138    | 1459   |

| 2027 AM Peak Other committed development flows |        |                  |        |        |
|------------------------------------------------|--------|------------------|--------|--------|
| From \ To                                      | R106 S | Red Archies Road | R106 N | TOTALS |
| R106 S                                         | 0      | 36               | 0      | 36     |
| Red Archies Road                               | 81     | 3                | 9      | 94     |
| R106 N                                         | 0      | 6                | 0      | 6      |
| TOTALS                                         | 81     | 45               | 9      | 136    |

| 2027 AM Peak WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development) |        |                  |        |        |
|-------------------------------------------------------------------------------------------------------|--------|------------------|--------|--------|
| From \ To                                                                                             | R106 S | Red Archies Road | R106 N | TOTALS |
| R106 S                                                                                                | 3      | 734              | 88     | 825    |
| Red Archies Road                                                                                      | 525    | 17               | 61     | 603    |
| R106 N                                                                                                | 76     | 113              | 1      | 190    |
| TOTALS                                                                                                | 604    | 864              | 150    | 1618   |

| 2027 AM Peak SUBJECT DEVELOPMENT FLOWS - CONSTRUCTION PEAK |        |                  |        |        |
|------------------------------------------------------------|--------|------------------|--------|--------|
| From \ To                                                  | R106 S | Red Archies Road | R106 N | TOTALS |
| R106 S                                                     |        |                  |        | 0      |
| Red Archies Road                                           |        |                  |        | 0      |
| R106 N                                                     |        |                  |        | 0      |
| TOTALS                                                     | 0      | 0                | 0      | 0      |

| 2027 AM Peak WITH SUBJECT DEVELOPMENT UNDER CONSTRUCTION (surveyed + TII growth factor + committed dev. + subject dev.) |        |                  |        |        |
|-------------------------------------------------------------------------------------------------------------------------|--------|------------------|--------|--------|
| From \ To                                                                                                               | R106 S | Red Archies Road | R106 N | TOTALS |
| R106 S                                                                                                                  | 3      | 734              | 88     | 825    |
| Red Archies Road                                                                                                        | 525    | 17               | 61     | 603    |
| R106 N                                                                                                                  | 76     | 113              | 1      | 190    |
| TOTALS                                                                                                                  | 604    | 864              | 150    | 1618   |

| 2028 AM Peak WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development) |        |                  |        |        |
|-------------------------------------------------------------------------------------------------------|--------|------------------|--------|--------|
| From \ To                                                                                             | R106 S | Red Archies Road | R106 N | TOTALS |
| R106 S                                                                                                | 3      | 746              | 89     | 838    |
| Red Archies Road                                                                                      | 532    | 17               | 62     | 611    |
| R106 N                                                                                                | 78     | 115              | 1      | 194    |
| TOTALS                                                                                                | 613    | 878              | 152    | 1643   |

| 2028 AM Peak SUBJECT DEVELOPMENT FLOWS - OPERATIONAL PHASE |        |                  |        |        |
|------------------------------------------------------------|--------|------------------|--------|--------|
| From \ To                                                  | R106 S | Red Archies Road | R106 N | TOTALS |
| R106 S                                                     | 0      | 13               | 0      | 13     |
| Red Archies Road                                           | 33     | 1                | 4      | 39     |
| R106 N                                                     | 0      | 2                | 0      | 2      |
| TOTALS                                                     | 33     | 17               | 4      | 54     |

| 2028 AM Peak WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.) |        |                  |        |        |
|-------------------------------------------------------------------------------------------------------------------|--------|------------------|--------|--------|
| From \ To                                                                                                         | R106 S | Red Archies Road | R106 N | TOTALS |
| R106 S                                                                                                            | 3      | 759              | 89     | 851    |
| Red Archies Road                                                                                                  | 565    | 18               | 66     | 650    |
| R106 N                                                                                                            | 78     | 117              | 1      | 196    |
| TOTALS                                                                                                            | 646    | 895              | 156    | 1697   |

| 2033 AM Peak WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development) |        |                  |        |        |
|-------------------------------------------------------------------------------------------------------|--------|------------------|--------|--------|
| From \ To                                                                                             | R106 S | Red Archies Road | R106 N | TOTALS |
| R106 S                                                                                                | 3      | 780              | 94     | 877    |
| Red Archies Road                                                                                      | 554    | 17               | 64     | 635    |
| R106 N                                                                                                | 81     | 120              | 1      | 202    |
| TOTALS                                                                                                | 638    | 917              | 159    | 1714   |

| 2033 AM Peak WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.) |        |                  |        |        |
|-------------------------------------------------------------------------------------------------------------------|--------|------------------|--------|--------|
| From \ To                                                                                                         | R106 S | Red Archies Road | R106 N | TOTALS |
| R106 S                                                                                                            | 3      | 793              | 94     | 890    |
| Red Archies Road                                                                                                  | 587    | 18               | 68     | 674    |
| R106 N                                                                                                            | 81     | 122              | 1      | 204    |
| TOTALS                                                                                                            | 671    | 934              | 163    | 1768   |

| 2043 AM Peak WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development) |        |                  |        |        |
|-------------------------------------------------------------------------------------------------------|--------|------------------|--------|--------|
| From \ To                                                                                             | R106 S | Red Archies Road | R106 N | TOTALS |
| R106 S                                                                                                | 3      | 817              | 98     | 918    |
| Red Archies Road                                                                                      | 578    | 18               | 67     | 663    |
| R106 N                                                                                                | 85     | 126              | 1      | 212    |
| TOTALS                                                                                                | 666    | 961              | 166    | 1793   |

| 2043 AM Peak WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.) |        |                  |        |        |
|-------------------------------------------------------------------------------------------------------------------|--------|------------------|--------|--------|
| From \ To                                                                                                         | R106 S | Red Archies Road | R106 N | TOTALS |
| R106 S                                                                                                            | 3      | 830              | 98     | 931    |
| Red Archies Road                                                                                                  | 611    | 19               | 71     | 702    |
| R106 N                                                                                                            | 85     | 128              | 1      | 214    |
| TOTALS                                                                                                            | 699    | 978              | 170    | 1847   |

| 2025 PM Peak (16:15-17:15) SURVEYED TRAFFIC FLOWS |        |                  |        |        |
|---------------------------------------------------|--------|------------------|--------|--------|
| From \ To                                         | R106 S | Red Archies Road | R106 N | TOTALS |
| R106 S                                            | 2      | 399              | 35     | 436    |
| Red Archies Road                                  | 478    | 8                | 62     | 548    |
| R106 N                                            | 50     | 52               | 1      | 103    |
| TOTALS                                            | 530    | 459              | 98     | 1087   |

| 2026 PM Peak BASELINE TRAFFIC FLOWS (surveyed flows + TII growth factor) |        |                  |        |        |
|--------------------------------------------------------------------------|--------|------------------|--------|--------|
| From \ To                                                                | R106 S | Red Archies Road | R106 N | TOTALS |
| R106 S                                                                   | 2      | 405              | 36     | 443    |
| Red Archies Road                                                         | 486    | 8                | 63     | 557    |
| R106 N                                                                   | 51     | 53               | 1      | 105    |
| TOTALS                                                                   | 539    | 466              | 100    | 1105   |

| 2027 PM Peak Other committed development flows |        |                  |        |        |
|------------------------------------------------|--------|------------------|--------|--------|
| From \ To                                      | R106 S | Red Archies Road | R106 N | TOTALS |
| R106 S                                         | 0      | 88               | 0      | 88     |
| Red Archies Road                               | 53     | 3                | 7      | 63     |
| R106 N                                         | 0      | 12               | 0      | 12     |
| TOTALS                                         | 53     | 102              | 7      | 162    |

| 2027 PM Peak WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development) |        |                  |        |        |
|-------------------------------------------------------------------------------------------------------|--------|------------------|--------|--------|
| From \ To                                                                                             | R106 S | Red Archies Road | R106 N | TOTALS |
| R106 S                                                                                                | 2      | 500              | 36     | 538    |
| Red Archies Road                                                                                      | 547    | 11               | 71     | 629    |
| R106 N                                                                                                | 52     | 65               | 1      | 118    |
| TOTALS                                                                                                | 601    | 576              | 108    | 1285   |

| 2027 PM Peak SUBJECT DEVELOPMENT FLOWS - CONSTRUCTION PEAK |        |                  |        |        |
|------------------------------------------------------------|--------|------------------|--------|--------|
| From \ To                                                  | R106 S | Red Archies Road | R106 N | TOTALS |
| R106 S                                                     |        |                  |        | 0      |
| Red Archies Road                                           |        |                  |        | 0      |
| R106 N                                                     |        |                  |        | 0      |
| TOTALS                                                     | 0      | 0                | 0      | 0      |

| 2027 PM Peak WITH SUBJECT DEVELOPMENT UNDER CONSTRUCTION (surveyed + TII growth factor + committed dev. + subject dev.) |        |                  |        |        |
|-------------------------------------------------------------------------------------------------------------------------|--------|------------------|--------|--------|
| From \ To                                                                                                               | R106 S | Red Archies Road | R106 N | TOTALS |
| R106 S                                                                                                                  | 2      | 500              | 36     | 538    |
| Red Archies Road                                                                                                        | 547    | 11               | 71     | 629    |
| R106 N                                                                                                                  | 52     | 65               | 1      | 118    |
| TOTALS                                                                                                                  | 601    | 576              | 108    | 1285   |

| 2028 PM Peak WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development) |        |                  |        |        |
|-------------------------------------------------------------------------------------------------------|--------|------------------|--------|--------|
| From \ To                                                                                             | R106 S | Red Archies Road | R106 N | TOTALS |
| R106 S                                                                                                | 2      | 507              | 37     | 546    |
| Red Archies Road                                                                                      | 555    | 11               | 72     | 638    |
| R106 N                                                                                                | 52     | 66               | 1      | 119    |
| TOTALS                                                                                                | 609    | 584              | 110    | 1303   |

| 2028 PM Peak SUBJECT DEVELOPMENT FLOWS - OPERATIONAL PHASE |        |                  |        |        |
|------------------------------------------------------------|--------|------------------|--------|--------|
| From \ To                                                  | R106 S | Red Archies Road | R106 N | TOTALS |
| R106 S                                                     | 0      | 31               | 0      | 31     |
| Red Archies Road                                           | 17     | 1                | 2      | 20     |
| R106 N                                                     | 0      | 4                | 0      | 4      |
| TOTALS                                                     | 17     | 36               | 2      | 55     |

| 2028 PM Peak WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.) |        |                  |        |        |
|-------------------------------------------------------------------------------------------------------------------|--------|------------------|--------|--------|
| From \ To                                                                                                         | R106 S | Red Archies Road | R106 N | TOTALS |
| R106 S                                                                                                            | 2      | 538              | 37     | 577    |
| Red Archies Road                                                                                                  | 572    | 12               | 74     | 658    |
| R106 N                                                                                                            | 52     | 70               | 1      | 123    |
| TOTALS                                                                                                            | 626    | 620              | 112    | 1358   |

| 2033 PM Peak WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development) |        |                  |        |        |
|-------------------------------------------------------------------------------------------------------|--------|------------------|--------|--------|
| From \ To                                                                                             | R106 S | Red Archies Road | R106 N | TOTALS |
| R106 S                                                                                                | 2      | 527              | 39     | 568    |
| Red Archies Road                                                                                      | 579    | 11               | 75     | 665    |
| R106 N                                                                                                | 55     | 69               | 1      | 125    |
| TOTALS                                                                                                | 636    | 607              | 115    | 1358   |

| 2033 PM Peak WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.) |        |                  |        |        |
|-------------------------------------------------------------------------------------------------------------------|--------|------------------|--------|--------|
| From \ To                                                                                                         | R106 S | Red Archies Road | R106 N | TOTALS |
| R106 S                                                                                                            | 2      | 558              | 39     | 599    |
| Red Archies Road                                                                                                  | 596    | 12               | 77     | 685    |
| R106 N                                                                                                            | 55     | 73               | 1      | 129    |
| TOTALS                                                                                                            | 653    | 643              | 117    | 1413   |

| 2043 PM Peak WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development) |        |                  |        |        |
|-------------------------------------------------------------------------------------------------------|--------|------------------|--------|--------|
| From \ To                                                                                             | R106 S | Red Archies Road | R106 N | TOTALS |
| R106 S                                                                                                | 2      | 549              | 40     | 591    |
| Red Archies Road                                                                                      | 605    | 12               | 79     | 696    |
| R106 N                                                                                                | 58     | 72               | 1      | 131    |
| TOTALS                                                                                                | 665    | 633              | 120    | 1418   |

| 2043 PM Peak WITH SUBJECT DEVELOPMENT IN OPERATION (surveyed + TII growth factor + committed dev. + subject dev.) |        |                  |        |        |
|-------------------------------------------------------------------------------------------------------------------|--------|------------------|--------|--------|
| From \ To                                                                                                         | R106 S | Red Archies Road | R106 N | TOTALS |
| R106 S                                                                                                            | 2      | 580              | 40     | 622    |
| Red Archies Road                                                                                                  | 622    | 13               | 81     | 716    |
| R106 N                                                                                                            | 58     | 76               | 1      | 135    |
| TOTALS                                                                                                            | 682    | 669              | 122    | 1473   |

J2 Peak Hour Traffic Flow Matrices (Passenger Car Units)

| 2025 AM Peak (08:00-09:00) |  | SURVEYED TRAFFIC FLOWS |        |        |        |
|----------------------------|--|------------------------|--------|--------|--------|
| From \ To                  |  | R809 S                 | R809 W | R106 N | TOTALS |
| R809 S                     |  | 0                      | 30     | 410    | 440    |
| R809 W                     |  | 146                    | 0      | 52     | 198    |
| R106 N                     |  | 639                    | 99     | 0      | 738    |
| TOTALS                     |  | 785                    | 129    | 462    | 1376   |

| 2026 AM Peak |  | BASELINE TRAFFIC FLOWS<br>(surveyed flows + TII growth factor) |        |        |        |
|--------------|--|----------------------------------------------------------------|--------|--------|--------|
| From \ To    |  | R809 S                                                         | R809 W | R106 N | TOTALS |
| R809 S       |  | 0                                                              | 30     | 417    | 447    |
| R809 W       |  | 148                                                            | 0      | 53     | 201    |
| R106 N       |  | 649                                                            | 101    | 0      | 750    |
| TOTALS       |  | 797                                                            | 131    | 470    | 1398   |

| 2027 AM Peak |  | Other committed development flows |        |        |        |
|--------------|--|-----------------------------------|--------|--------|--------|
| From \ To    |  | R809 S                            | R809 W | R106 N | TOTALS |
| R809 S       |  | 0                                 | 0      | 32     | 33     |
| R809 W       |  | 1                                 | 0      | 5      | 6      |
| R106 N       |  | 70                                | 12     | 0      | 83     |
| TOTALS       |  | 72                                | 13     | 37     | 121    |

| 2027 AM Peak |  | WITHOUT SUBJECT DEVELOPMENT<br>(surveyed flows + TII growth factor + committed development) |        |        |        |
|--------------|--|---------------------------------------------------------------------------------------------|--------|--------|--------|
| From \ To    |  | R809 S                                                                                      | R809 W | R106 N | TOTALS |
| R809 S       |  | 0                                                                                           | 31     | 456    | 487    |
| R809 W       |  | 152                                                                                         | 0      | 58     | 210    |
| R106 N       |  | 730                                                                                         | 115    | 0      | 845    |
| TOTALS       |  | 882                                                                                         | 146    | 514    | 1542   |

| 2027 AM Peak |  | SUBJECT DEVELOPMENT FLOWS - CONSTRUCTION PEAK |        |        |        |
|--------------|--|-----------------------------------------------|--------|--------|--------|
| From \ To    |  | R809 S                                        | R809 W | R106 N | TOTALS |
| R809 S       |  |                                               |        |        | 0      |
| R809 W       |  |                                               |        |        | 0      |
| R106 N       |  |                                               |        |        | 0      |
| TOTALS       |  | 0                                             | 0      | 0      | 0      |

| 2027 AM Peak |  | WITH SUBJECT DEVELOPMENT UNDER CONSTRUCTION<br>(surveyed + TII growth factor + committed dev. + subject dev.) |        |        |        |
|--------------|--|---------------------------------------------------------------------------------------------------------------|--------|--------|--------|
| From \ To    |  | R809 S                                                                                                        | R809 W | R106 N | TOTALS |
| R809 S       |  | 0                                                                                                             | 31     | 456    | 487    |
| R809 W       |  | 152                                                                                                           | 0      | 58     | 210    |
| R106 N       |  | 730                                                                                                           | 115    | 0      | 845    |
| TOTALS       |  | 882                                                                                                           | 146    | 514    | 1542   |

| 2028 AM Peak |  | WITHOUT SUBJECT DEVELOPMENT<br>(surveyed flows + TII growth factor + committed development) |        |        |        |
|--------------|--|---------------------------------------------------------------------------------------------|--------|--------|--------|
| From \ To    |  | R809 S                                                                                      | R809 W | R106 N | TOTALS |
| R809 S       |  | 0                                                                                           | 32     | 462    | 494    |
| R809 W       |  | 155                                                                                         | 0      | 59     | 214    |
| R106 N       |  | 741                                                                                         | 116    | 0      | 857    |
| TOTALS       |  | 896                                                                                         | 148    | 521    | 1565   |

| 2028 AM Peak |  | SUBJECT DEVELOPMENT FLOWS - OPERATIONAL PHASE |        |        |        |
|--------------|--|-----------------------------------------------|--------|--------|--------|
| From \ To    |  | R809 S                                        | R809 W | R106 N | TOTALS |
| R809 S       |  | 0                                             | 0      | 12     | 12     |
| R809 W       |  | 1                                             | 0      | 2      | 2      |
| R106 N       |  | 29                                            | 5      | 0      | 34     |
| TOTALS       |  | 30                                            | 5      | 14     | 49     |

| 2028 AM Peak |  | WITH SUBJECT DEVELOPMENT IN OPERATION<br>(surveyed + TII growth factor + committed dev. + subject dev.) |        |        |        |
|--------------|--|---------------------------------------------------------------------------------------------------------|--------|--------|--------|
| From \ To    |  | R809 S                                                                                                  | R809 W | R106 N | TOTALS |
| R809 S       |  | 0                                                                                                       | 32     | 474    | 506    |
| R809 W       |  | 156                                                                                                     | 0      | 61     | 216    |
| R106 N       |  | 770                                                                                                     | 121    | 0      | 891    |
| TOTALS       |  | 926                                                                                                     | 153    | 535    | 1614   |

| 2033 AM Peak |  | WITHOUT SUBJECT DEVELOPMENT<br>(surveyed flows + TII growth factor + committed development) |        |        |        |
|--------------|--|---------------------------------------------------------------------------------------------|--------|--------|--------|
| From \ To    |  | R809 S                                                                                      | R809 W | R106 N | TOTALS |
| R809 S       |  | 0                                                                                           | 33     | 483    | 516    |
| R809 W       |  | 162                                                                                         | 0      | 62     | 224    |
| R106 N       |  | 773                                                                                         | 121    | 0      | 894    |
| TOTALS       |  | 935                                                                                         | 154    | 545    | 1634   |

| 2033 AM Peak |  | WITH SUBJECT DEVELOPMENT IN OPERATION<br>(surveyed + TII growth factor + committed dev. + subject dev.) |        |        |        |
|--------------|--|---------------------------------------------------------------------------------------------------------|--------|--------|--------|
| From \ To    |  | R809 S                                                                                                  | R809 W | R106 N | TOTALS |
| R809 S       |  | 0                                                                                                       | 33     | 495    | 528    |
| R809 W       |  | 163                                                                                                     | 0      | 64     | 226    |
| R106 N       |  | 802                                                                                                     | 126    | 0      | 928    |
| TOTALS       |  | 965                                                                                                     | 159    | 559    | 1683   |

| 2043 AM Peak |  | WITHOUT SUBJECT DEVELOPMENT<br>(surveyed flows + TII growth factor + committed development) |        |        |        |
|--------------|--|---------------------------------------------------------------------------------------------|--------|--------|--------|
| From \ To    |  | R809 S                                                                                      | R809 W | R106 N | TOTALS |
| R809 S       |  | 0                                                                                           | 35     | 506    | 541    |
| R809 W       |  | 170                                                                                         | 0      | 65     | 235    |
| R106 N       |  | 808                                                                                         | 127    | 0      | 935    |
| TOTALS       |  | 978                                                                                         | 162    | 571    | 1711   |

| 2043 AM Peak |  | WITH SUBJECT DEVELOPMENT IN OPERATION<br>(surveyed + TII growth factor + committed dev. + subject dev.) |        |        |        |
|--------------|--|---------------------------------------------------------------------------------------------------------|--------|--------|--------|
| From \ To    |  | R809 S                                                                                                  | R809 W | R106 N | TOTALS |
| R809 S       |  | 0                                                                                                       | 35     | 518    | 553    |
| R809 W       |  | 171                                                                                                     | 0      | 67     | 237    |
| R106 N       |  | 837                                                                                                     | 132    | 0      | 969    |
| TOTALS       |  | 1008                                                                                                    | 167    | 585    | 1760   |

| 2025 PM Peak (16:15-17:15) |  | SURVEYED TRAFFIC FLOWS |        |        |        |
|----------------------------|--|------------------------|--------|--------|--------|
| From \ To                  |  | R809 S                 | R809 W | R106 N | TOTALS |
| R809 S                     |  | 0                      | 56     | 478    | 534    |
| R809 W                     |  | 136                    | 0      | 55     | 191    |
| R106 N                     |  | 398                    | 59     | 0      | 457    |
| TOTALS                     |  | 534                    | 115    | 533    | 1182   |

| 2026 PM Peak |  | BASELINE TRAFFIC FLOWS<br>(surveyed flows + TII growth factor) |        |        |        |
|--------------|--|----------------------------------------------------------------|--------|--------|--------|
| From \ To    |  | R809 S                                                         | R809 W | R106 N | TOTALS |
| R809 S       |  | 0                                                              | 57     | 486    | 543    |
| R809 W       |  | 138                                                            | 0      | 56     | 194    |
| R106 N       |  | 404                                                            | 60     | 0      | 464    |
| TOTALS       |  | 542                                                            | 117    | 542    | 1201   |

| 2027 PM Peak |  | Other committed development flows |        |        |        |
|--------------|--|-----------------------------------|--------|--------|--------|
| From \ To    |  | R809 S                            | R809 W | R106 N | TOTALS |
| R809 S       |  | 0                                 | 5      | 79     | 85     |
| R809 W       |  | 1                                 | 0      | 10     | 11     |
| R106 N       |  | 46                                | 13     | 0      | 59     |
| TOTALS       |  | 48                                | 18     | 89     | 154    |

| 2027 PM Peak |  | WITHOUT SUBJECT DEVELOPMENT<br>(surveyed flows + TII growth factor + committed development) |        |        |        |
|--------------|--|---------------------------------------------------------------------------------------------|--------|--------|--------|
| From \ To    |  | R809 S                                                                                      | R809 W | R106 N | TOTALS |
| R809 S       |  | 0                                                                                           | 63     | 573    | 636    |
| R809 W       |  | 142                                                                                         | 0      | 66     | 208    |
| R106 N       |  | 457                                                                                         | 74     | 0      | 531    |
| TOTALS       |  | 599                                                                                         | 137    | 639    | 1375   |

| 2027 PM Peak |  | SUBJECT DEVELOPMENT FLOWS - CONSTRUCTION PEAK |        |        |        |
|--------------|--|-----------------------------------------------|--------|--------|--------|
| From \ To    |  | R809 S                                        | R809 W | R106 N | TOTALS |
| R809 S       |  |                                               |        |        | 0      |
| R809 W       |  |                                               |        |        | 0      |
| R106 N       |  |                                               |        |        | 0      |
| TOTALS       |  | 0                                             | 0      | 0      | 0      |

| 2027 PM Peak |  | WITH SUBJECT DEVELOPMENT UNDER CONSTRUCTION<br>(surveyed + TII growth factor + committed dev. + subject dev.) |        |        |        |
|--------------|--|---------------------------------------------------------------------------------------------------------------|--------|--------|--------|
| From \ To    |  | R809 S                                                                                                        | R809 W | R106 N | TOTALS |
| R809 S       |  | 0                                                                                                             | 63     | 573    | 636    |
| R809 W       |  | 142                                                                                                           | 0      | 66     | 208    |
| R106 N       |  | 457                                                                                                           | 74     | 0      | 531    |
| TOTALS       |  | 599                                                                                                           | 137    | 639    | 1375   |

| 2028 PM Peak |  | WITHOUT SUBJECT DEVELOPMENT<br>(surveyed flows + TII growth factor + committed development) |        |        |        |
|--------------|--|---------------------------------------------------------------------------------------------|--------|--------|--------|
| From \ To    |  | R809 S                                                                                      | R809 W | R106 N | TOTALS |
| R809 S       |  | 0                                                                                           | 64     | 581    | 645    |
| R809 W       |  | 144                                                                                         | 0      | 67     | 211    |
| R106 N       |  | 464                                                                                         | 75     | 0      | 539    |
| TOTALS       |  | 608                                                                                         | 139    | 648    | 1395   |

| 2028 PM Peak |  | SUBJECT DEVELOPMENT FLOWS - OPERATIONAL PHASE |        |        |        |
|--------------|--|-----------------------------------------------|--------|--------|--------|
| From \ To    |  | R809 S                                        | R809 W | R106 N | TOTALS |
| R809 S       |  | 0                                             | 2      | 28     | 30     |
| R809 W       |  | 1                                             | 0      | 4      | 4      |
| R106 N       |  | 15                                            | 4      | 0      | 19     |
| TOTALS       |  | 15                                            | 6      | 32     | 53     |

| 2028 PM Peak |  | WITH SUBJECT DEVELOPMENT IN OPERATION<br>(surveyed + TII growth factor + committed dev. + subject dev.) |        |        |        |
|--------------|--|---------------------------------------------------------------------------------------------------------|--------|--------|--------|
| From \ To    |  | R809 S                                                                                                  | R809 W | R106 N | TOTALS |
| R809 S       |  | 0                                                                                                       | 66     | 609    | 675    |
| R809 W       |  | 145                                                                                                     | 0      | 71     | 215    |
| R106 N       |  | 479                                                                                                     | 79     | 0      | 558    |
| TOTALS       |  | 623                                                                                                     | 145    | 680    | 1448   |

| 2033 PM Peak |  | WITHOUT SUBJECT DEVELOPMENT<br>(surveyed flows + TII growth factor + committed development) |        |        |        |
|--------------|--|---------------------------------------------------------------------------------------------|--------|--------|--------|
| From \ To    |  | R809 S                                                                                      | R809 W | R106 N | TOTALS |
| R809 S       |  | 0                                                                                           | 67     | 605    | 672    |
| R809 W       |  | 151                                                                                         | 0      | 70     | 221    |
| R106 N       |  | 484                                                                                         | 78     | 0      | 562    |
| TOTALS       |  | 635                                                                                         | 145    | 675    | 1455   |

| 2033 PM Peak |  | WITH SUBJECT DEVELOPMENT IN OPERATION<br>(surveyed + TII growth factor + committed dev. + subject dev.) |        |        |        |
|--------------|--|---------------------------------------------------------------------------------------------------------|--------|--------|--------|
| From \ To    |  | R809 S                                                                                                  | R809 W | R106 N | TOTALS |
| R809 S       |  | 0                                                                                                       | 69     | 633    | 702    |
| R809 W       |  | 152                                                                                                     | 0      | 74     | 225    |
| R106 N       |  | 499                                                                                                     | 82     | 0      | 581    |
| TOTALS       |  | 650                                                                                                     | 151    | 707    | 1508   |

| 2043 PM Peak |  | WITHOUT SUBJECT DEVELOPMENT<br>(surveyed flows + TII growth factor + committed development) |        |        |        |
|--------------|--|---------------------------------------------------------------------------------------------|--------|--------|--------|
| From \ To    |  | R809 S                                                                                      | R809 W | R106 N | TOTALS |
| R809 S       |  | 0                                                                                           | 70     | 631    | 701    |
| R809 W       |  | 159                                                                                         | 0      | 73     | 232    |
| R106 N       |  | 506                                                                                         | 81     | 0      | 587    |
| TOTALS       |  | 665                                                                                         | 151    | 704    | 1520   |

| 2043 PM Peak |  | WITH SUBJECT DEVELOPMENT IN OPERATION<br>(surveyed + TII growth factor + committed dev. + subject dev.) |        |        |        |
|--------------|--|---------------------------------------------------------------------------------------------------------|--------|--------|--------|
| From \ To    |  | R809 S                                                                                                  | R809 W | R106 N | TOTALS |
| R809 S       |  | 0                                                                                                       | 72     | 659    | 731    |
| R809 W       |  | 160                                                                                                     | 0      | 77     | 236    |
| R106 N       |  | 521                                                                                                     | 85     | 0      | 606    |
| TOTALS       |  | 680                                                                                                     | 157    | 736    | 1573   |

J2 Peak Hour Traffic Flow Matrices (Passenger Car Units)

| 2025      |  | AM Peak | (08:00-09:00) | SURVEYED TRAFFIC FLOWS |        |  |  |
|-----------|--|---------|---------------|------------------------|--------|--|--|
| From \ To |  | R809 N  | R106 E        | R809 S                 | TOTALS |  |  |
| R809 N    |  | 0       | 421           | 361                    | 782    |  |  |
| R106 E    |  | 159     | 0             | 6                      | 165    |  |  |
| R809 S    |  | 293     | 7             | 0                      | 300    |  |  |
| TOTALS    |  | 452     | 428           | 367                    | 1247   |  |  |

| 2026      |  | AM Peak |        | BASELINE TRAFFIC FLOWS<br>(surveyed flows + TII growth factor) |        |  |
|-----------|--|---------|--------|----------------------------------------------------------------|--------|--|
| From \ To |  | R809 N  | R106 E | R809 S                                                         | TOTALS |  |
| R809 N    |  | 0       | 428    | 367                                                            | 795    |  |
| R106 E    |  | 162     | 0      | 6                                                              | 168    |  |
| R809 S    |  | 298     | 7      | 0                                                              | 305    |  |
| TOTALS    |  | 460     | 435    | 373                                                            | 1268   |  |

| 2027      |  | AM Peak | Other committed development flows |        |        |
|-----------|--|---------|-----------------------------------|--------|--------|
| From \ To |  | R809 N  | R106 E                            | R809 S | TOTALS |
| R809 N    |  | 0       | 39                                | 33     | 72     |
| R106 E    |  | 12      | 0                                 | 0      | 12     |
| R809 S    |  | 21      | 0                                 | 0      | 21     |
| TOTALS    |  | 33      | 39                                | 33     | 104    |

| 2027      |  | AM Peak |        | WITHOUT SUBJECT DEVELOPMENT<br>(surveyed flows + TII growth factor + committed development) |        |  |
|-----------|--|---------|--------|---------------------------------------------------------------------------------------------|--------|--|
| From \ To |  | R809 N  | R106 E | R809 S                                                                                      | TOTALS |  |
| R809 N    |  | 0       | 473    | 406                                                                                         | 879    |  |
| R106 E    |  | 176     | 0      | 6                                                                                           | 182    |  |
| R809 S    |  | 324     | 7      | 0                                                                                           | 331    |  |
| TOTALS    |  | 500     | 480    | 412                                                                                         | 1392   |  |

| 2027   |  | AM Peak |        | SUBJECT DEVELOPMENT FLOWS - CONSTRUCTION PEAK |        |   |  |
|--------|--|---------|--------|-----------------------------------------------|--------|---|--|
| To     |  | R809 N  | R106 E | R809 S                                        | TOTALS |   |  |
| From   |  |         |        |                                               |        |   |  |
| R809 N |  |         |        |                                               |        | 0 |  |
| R106 E |  |         |        |                                               |        | 0 |  |
| R809 S |  |         |        |                                               |        | 0 |  |
| TOTALS |  | 0       | 0      | 0                                             | 0      | 0 |  |

| 2027    |  | WITH SUBJECT DEVELOPMENT UNDER CONSTRUCTION<br>(surveyed + TII growth factor + committed dev. + subject dev.) |        |        |        |
|---------|--|---------------------------------------------------------------------------------------------------------------|--------|--------|--------|
| AM Peak |  |                                                                                                               |        |        |        |
|         |  |                                                                                                               |        |        |        |
| To      |  |                                                                                                               |        |        |        |
| From    |  | R809 N                                                                                                        | R106 E | R809 S | TOTALS |
| R809 N  |  | 0                                                                                                             | 473    | 406    | 879    |
| R106 E  |  | 176                                                                                                           | 0      | 6      | 182    |
| R809 S  |  | 324                                                                                                           | 7      | 0      | 331    |
| TOTALS  |  | 500                                                                                                           | 480    | 412    | 1392   |

| 2028      |  | AM Peak |        | WITHOUT SUBJECT DEVELOPMENT<br>(surveyed flows + TII growth factor + committed development) |        |  |
|-----------|--|---------|--------|---------------------------------------------------------------------------------------------|--------|--|
| From \ To |  | R809 N  | R106 E | R809 S                                                                                      | TOTALS |  |
| R809 N    |  | 0       | 480    | 412                                                                                         | 892    |  |
| R106 E    |  | 178     | 0      | 6                                                                                           | 184    |  |
| R809 S    |  | 329     | 7      | 0                                                                                           | 336    |  |
| TOTALS    |  | 507     | 487    | 418                                                                                         | 1412   |  |

| 2028   |  | AM Peak |        | SUBJECT DEVELOPMENT FLOWS - OPERATIONAL PHASE |        |    |  |
|--------|--|---------|--------|-----------------------------------------------|--------|----|--|
| To     |  | R809 N  | R106 E | R809 S                                        | TOTALS |    |  |
| From   |  |         |        |                                               |        |    |  |
| R809 N |  | 0       | 16     | 14                                            |        | 30 |  |
| R106 E |  | 4       | 0      | 0                                             |        | 4  |  |
| R809 S |  | 8       | 0      | 0                                             |        | 8  |  |
| TOTALS |  | 12      | 16     | 14                                            |        | 42 |  |

| 2028      |    | WITH SUBJECT DEVELOPMENT IN OPERATION<br>(surveyed + TII growth factor + committed dev. + subject dev.) |        |        |        |
|-----------|----|---------------------------------------------------------------------------------------------------------|--------|--------|--------|
| AM Peak   |    |                                                                                                         |        |        |        |
| From \ To | To | R809 N                                                                                                  | R106 E | R809 S | TOTALS |
| R809 N    |    | 0                                                                                                       | 496    | 426    | 922    |
| R106 E    |    | 182                                                                                                     | 0      | 6      | 188    |
| R809 S    |    | 337                                                                                                     | 7      | 0      | 344    |
| TOTALS    |    | 519                                                                                                     | 503    | 432    | 1454   |

| 2033      |  | AM Peak |        | WITHOUT SUBJECT DEVELOPMENT<br>(surveyed flows + TII growth factor + committed development) |        |  |
|-----------|--|---------|--------|---------------------------------------------------------------------------------------------|--------|--|
| From \ To |  | R809 N  | R106 E | R809 S                                                                                      | TOTALS |  |
| R809 N    |  | 0       | 502    | 430                                                                                         | 932    |  |
| R106 E    |  | 186     | 0      | 7                                                                                           | 193    |  |
| R809 S    |  | 344     | 8      | 0                                                                                           | 352    |  |
| TOTALS    |  | 530     | 510    | 437                                                                                         | 1477   |  |

| 2033      |  | WITH SUBJECT DEVELOPMENT IN OPERATION                          |        |        |        |
|-----------|--|----------------------------------------------------------------|--------|--------|--------|
| AM Peak   |  | (surveyed + TII growth factor + committed dev. + subject dev.) |        |        |        |
| From \ To |  | R809 N                                                         | R106 E | R809 S | TOTALS |
| R809 N    |  | 0                                                              | 518    | 444    | 962    |
| R106 E    |  | 190                                                            | 0      | 7      | 197    |
| R809 S    |  | 352                                                            | 8      | 0      | 360    |
| TOTALS    |  | 542                                                            | 526    | 451    | 1519   |

| 2043      |  | AM Peak |        | WITHOUT SUBJECT DEVELOPMENT<br>(surveyed flows + TII growth factor + committed development) |        |  |
|-----------|--|---------|--------|---------------------------------------------------------------------------------------------|--------|--|
| From \ To |  | R809 N  | R106 E | R809 S                                                                                      | TOTALS |  |
| R809 N    |  | 0       | 525    | 450                                                                                         | 975    |  |
| R106 E    |  | 195     | 0      | 7                                                                                           | 202    |  |
| R809 S    |  | 360     | 8      | 0                                                                                           | 368    |  |
| TOTALS    |  | 555     | 533    | 457                                                                                         | 1545   |  |

| 2043    |  | WITH SUBJECT DEVELOPMENT IN OPERATION<br>(surveyed + TII growth factor + committed dev. + subject dev.) |        |        |        |
|---------|--|---------------------------------------------------------------------------------------------------------|--------|--------|--------|
| AM Peak |  |                                                                                                         |        |        |        |
|         |  |                                                                                                         |        |        |        |
| To      |  |                                                                                                         |        |        |        |
| From    |  | R809 N                                                                                                  | R106 E | R809 S | TOTALS |
| R809 N  |  | 0                                                                                                       | 541    | 464    | 1005   |
| R106 E  |  | 199                                                                                                     | 0      | 7      | 206    |
| R809 S  |  | 368                                                                                                     | 8      | 0      | 376    |
| TOTALS  |  | 567                                                                                                     | 549    | 471    | 1587   |

| 2025      |  | PM Peak | (16:15-17:15) | SURVEYED TRAFFIC FLOWS |        |  |  |
|-----------|--|---------|---------------|------------------------|--------|--|--|
| From \ To |  | R809 N  | R106 E        | R809 S                 | TOTALS |  |  |
| R809 N    |  | 0       | 314           | 223                    | 537    |  |  |
| R106 E    |  | 195     | 0             | 5                      | 200    |  |  |
| R809 S    |  | 339     | 6             | 0                      | 345    |  |  |
| TOTALS    |  | 534     | 320           | 228                    | 1082   |  |  |

| 2026      |  | PM Peak |        | BASELINE TRAFFIC FLOWS<br>(surveyed flows + TII growth factor) |        |  |
|-----------|--|---------|--------|----------------------------------------------------------------|--------|--|
| From \ To |  | R809 N  | R106 E | R809 S                                                         | TOTALS |  |
| R809 N    |  | 0       | 319    | 227                                                            | 546    |  |
| R106 E    |  | 198     | 0      | 5                                                              | 203    |  |
| R809 S    |  | 344     | 6      | 0                                                              | 350    |  |
| TOTALS    |  | 542     | 325    | 232                                                            | 1099   |  |

| 2027      |  | PM Peak | Other committed development flows |        |        |
|-----------|--|---------|-----------------------------------|--------|--------|
| From \ To |  | R809 N  | R106 E                            | R809 S | TOTALS |
| R809 N    |  | 0       | 28                                | 20     | 48     |
| R106 E    |  | 31      | 0                                 | 0      | 31     |
| R809 S    |  | 54      | 0                                 | 0      | 54     |
| TOTALS    |  | 85      | 28                                | 20     | 132    |

| 2027      |  | PM Peak |        | WITHOUT SUBJECT DEVELOPMENT<br>(surveyed flows + TII growth factor + committed development) |        |  |
|-----------|--|---------|--------|---------------------------------------------------------------------------------------------|--------|--|
| From \ To |  | R809 N  | R106 E | R809 S                                                                                      | TOTALS |  |
| R809 N    |  | 0       | 352    | 250                                                                                         | 602    |  |
| R106 E    |  | 232     | 0      | 5                                                                                           | 237    |  |
| R809 S    |  | 404     | 6      | 0                                                                                           | 410    |  |
| TOTALS    |  | 636     | 358    | 255                                                                                         | 1249   |  |

| 2027   |  | PM Peak |        | SUBJECT DEVELOPMENT FLOWS - CONSTRUCTION PEAK |        |  |  |
|--------|--|---------|--------|-----------------------------------------------|--------|--|--|
| To     |  | R809 N  | R106 E | R809 S                                        | TOTALS |  |  |
| From   |  |         |        |                                               |        |  |  |
| R809 N |  |         |        |                                               |        |  |  |
| R106 E |  |         |        |                                               |        |  |  |
| R809 S |  |         |        |                                               |        |  |  |
| TOTALS |  | 0       | 0      | 0                                             | 0      |  |  |

| 2027    |  | WITH SUBJECT DEVELOPMENT UNDER CONSTRUCTION<br>(surveyed + TII growth factor + committed dev. + subject dev.) |        |        |        |
|---------|--|---------------------------------------------------------------------------------------------------------------|--------|--------|--------|
| PM Peak |  |                                                                                                               |        |        |        |
| To      |  | R809 N                                                                                                        | R106 E | R809 S | TOTALS |
| From    |  |                                                                                                               |        |        |        |
| R809 N  |  | 0                                                                                                             | 352    | 250    | 602    |
| R106 E  |  | 232                                                                                                           | 0      | 5      | 237    |
| R809 S  |  | 404                                                                                                           | 6      | 0      | 410    |
| TOTALS  |  | 636                                                                                                           | 358    | 255    | 1249   |

| 2028      |  | PM Peak |        | WITHOUT SUBJECT DEVELOPMENT<br>(surveyed flows + TII growth factor + committed development) |        |  |
|-----------|--|---------|--------|---------------------------------------------------------------------------------------------|--------|--|
| From \ To |  | R809 N  | R106 E | R809 S                                                                                      | TOTALS |  |
| R809 N    |  | 0       | 357    | 254                                                                                         | 611    |  |
| R106 E    |  | 236     | 0      | 5                                                                                           | 241    |  |
| R809 S    |  | 409     | 6      | 0                                                                                           | 415    |  |
| TOTALS    |  | 645     | 363    | 259                                                                                         | 1267   |  |

| 2028      |  | PM Peak | SUBJECT DEVELOPMENT FLOWS - OPERATIONAL PHASE |        |        |  |
|-----------|--|---------|-----------------------------------------------|--------|--------|--|
| From \ To |  | R809 N  | R106 E                                        | R809 S | TOTALS |  |
| R809 N    |  | 0       | 9                                             | 6      | 15     |  |
| R106 E    |  | 11      | 0                                             | 0      | 11     |  |
| R809 S    |  | 19      | 0                                             | 0      | 19     |  |
| TOTALS    |  | 30      | 9                                             | 6      | 45     |  |

| 2028      |    | WITH SUBJECT DEVELOPMENT IN OPERATION<br>(surveyed + TII growth factor + committed dev. + subject dev.) |        |        |        |
|-----------|----|---------------------------------------------------------------------------------------------------------|--------|--------|--------|
| PM Peak   |    |                                                                                                         |        |        |        |
| From \ To | To | R809 N                                                                                                  | R106 E | R809 S | TOTALS |
| R809 N    |    | 0                                                                                                       | 366    | 260    | 626    |
| R106 E    |    | 247                                                                                                     | 0      | 5      | 252    |
| R809 S    |    | 428                                                                                                     | 6      | 0      | 434    |
| TOTALS    |    | 675                                                                                                     | 372    | 265    | 1312   |

| 2033      |  | PM Peak |        | WITHOUT SUBJECT DEVELOPMENT<br>(surveyed flows + TII growth factor + committed development) |        |  |
|-----------|--|---------|--------|---------------------------------------------------------------------------------------------|--------|--|
| From \ To |  | R809 N  | R106 E | R809 S                                                                                      | TOTALS |  |
| R809 N    |  | 0       | 373    | 265                                                                                         | 638    |  |
| R106 E    |  | 245     | 0      | 6                                                                                           | 251    |  |
| R809 S    |  | 427     | 7      | 0                                                                                           | 434    |  |
| TOTALS    |  | 672     | 380    | 271                                                                                         | 1323   |  |

| 2033    |  | WITH SUBJECT DEVELOPMENT IN OPERATION<br>(surveyed + TII growth factor + committed dev. + subject dev.) |        |        |        |
|---------|--|---------------------------------------------------------------------------------------------------------|--------|--------|--------|
| PM Peak |  |                                                                                                         |        |        |        |
|         |  |                                                                                                         |        |        |        |
| To      |  |                                                                                                         |        |        |        |
| From    |  | R809 N                                                                                                  | R106 E | R809 S | TOTALS |
| R809 N  |  | 0                                                                                                       | 382    | 271    | 653    |
| R106 E  |  | 256                                                                                                     | 0      | 6      | 262    |
| R809 S  |  | 446                                                                                                     | 7      | 0      | 453    |
| TOTALS  |  | 702                                                                                                     | 389    | 277    | 1368   |

| 2043      |  | PM Peak |        | WITHOUT SUBJECT DEVELOPMENT<br>(surveyed flows + TII growth factor + committed development) |        |  |
|-----------|--|---------|--------|---------------------------------------------------------------------------------------------|--------|--|
| From \ To |  | R809 N  | R106 E | R809 S                                                                                      | TOTALS |  |
| R809 N    |  | 0       | 391    | 277                                                                                         | 668    |  |
| R106 E    |  | 256     | 0      | 6                                                                                           | 262    |  |
| R809 S    |  | 445     | 7      | 0                                                                                           | 452    |  |
| TOTALS    |  | 701     | 398    | 283                                                                                         | 1382   |  |

| 2043    |  | WITH SUBJECT DEVELOPMENT IN OPERATION<br>(surveyed + TII growth factor + committed dev. + subject dev.) |        |        |        |
|---------|--|---------------------------------------------------------------------------------------------------------|--------|--------|--------|
| PM Peak |  |                                                                                                         |        |        |        |
| To      |  | R809 N                                                                                                  | R106 E | R809 S | TOTALS |
| From    |  |                                                                                                         |        |        |        |
| R809 N  |  | 0                                                                                                       | 400    | 283    | 683    |
| R106 E  |  | 267                                                                                                     | 0      | 6      | 273    |
| R809 S  |  | 464                                                                                                     | 7      | 0      | 471    |
| TOTALS  |  | 731                                                                                                     | 407    | 289    | 1427   |

J2 Peak Hour Traffic Flow Matrices (Passenger Car Units)

| 2025        |    | AM Peak     | (08:00-09:00) | SURVEYED TRAFFIC FLOWS |        |  |  |
|-------------|----|-------------|---------------|------------------------|--------|--|--|
| From \ To   | To | Strand Road | The Mall      | R106 N                 | TOTALS |  |  |
| Strand Road |    | 0           | 239           | 160                    | 399    |  |  |
| The Mall    |    | 66          | 0             | 2                      | 68     |  |  |
| R106 N      |    | 430         | 0             | 0                      | 430    |  |  |
| TOTALS      |    | 496         | 239           | 162                    | 897    |  |  |

| 2026        |    | AM Peak     |          | BASELINE TRAFFIC FLOWS<br>(surveyed flows + TII growth factor) |        |  |
|-------------|----|-------------|----------|----------------------------------------------------------------|--------|--|
| From \ To   | To | Strand Road | The Mall | R106 N                                                         | TOTALS |  |
| Strand Road |    | 0           | 243      | 163                                                            | 406    |  |
| The Mall    |    | 67          | 0        | 2                                                              | 69     |  |
| R106 N      |    | 437         | 0        | 0                                                              | 437    |  |
| TOTALS      |    | 504         | 243      | 165                                                            | 912    |  |

| 2027        |    | AM Peak     | Other committed development flows |        |        |  |
|-------------|----|-------------|-----------------------------------|--------|--------|--|
| From \ To   | To | Strand Road | The Mall                          | R106 N | TOTALS |  |
| Strand Road |    | 0           | 10                                | 11     | 22     |  |
| The Mall    |    | 5           | 0                                 | 0      | 5      |  |
| R106 N      |    | 39          | 0                                 | 0      | 39     |  |
| TOTALS      |    | 43          | 10                                | 12     | 65     |  |

| 2027        |    | AM Peak     |          | WITHOUT SUBJECT DEVELOPMENT<br>(surveyed flows + TII growth factor + committed development) |        |  |
|-------------|----|-------------|----------|---------------------------------------------------------------------------------------------|--------|--|
| From \ To   | To | Strand Road | The Mall | R106 N                                                                                      | TOTALS |  |
| Strand Road |    | 0           | 257      | 177                                                                                         | 434    |  |
| The Mall    |    | 73          | 0        | 2                                                                                           | 75     |  |
| R106 N      |    | 483         | 0        | 0                                                                                           | 483    |  |
| TOTALS      |    | 556         | 257      | 179                                                                                         | 992    |  |

| 2027        |  | AM Peak     |          | SUBJECT DEVELOPMENT FLOWS - CONSTRUCTION PEAK |        |  |  |
|-------------|--|-------------|----------|-----------------------------------------------|--------|--|--|
| From \ To   |  | Strand Road | The Mall | R106 N                                        | TOTALS |  |  |
| Strand Road |  |             |          |                                               | 0      |  |  |
| The Mall    |  |             |          |                                               | 0      |  |  |
| R106 N      |  |             |          |                                               | 0      |  |  |
| TOTALS      |  | 0           | 0        | 0                                             | 0      |  |  |

| 2027        |             | WITH SUBJECT DEVELOPMENT UNDER CONSTRUCTION<br>(surveyed + TII growth factor + committed dev. + subject dev.) |        |        |  |
|-------------|-------------|---------------------------------------------------------------------------------------------------------------|--------|--------|--|
| AM Peak     |             |                                                                                                               |        |        |  |
| To          |             |                                                                                                               |        |        |  |
| From        | Strand Road | The Mall                                                                                                      | R106 N | TOTALS |  |
| Strand Road | 0           | 257                                                                                                           | 177    | 434    |  |
| The Mall    | 73          | 0                                                                                                             | 2      | 75     |  |
| R106 N      | 483         | 0                                                                                                             | 0      | 483    |  |
| TOTALS      | 556         | 257                                                                                                           | 179    | 992    |  |

| 2028        |    | AM Peak     |          | WITHOUT SUBJECT DEVELOPMENT<br>(surveyed flows + TII growth factor + committed development) |        |  |
|-------------|----|-------------|----------|---------------------------------------------------------------------------------------------|--------|--|
| From \ To   | To | Strand Road | The Mall | R106 N                                                                                      | TOTALS |  |
| Strand Road |    | 0           | 261      | 179                                                                                         | 440    |  |
| The Mall    |    | 74          | 0        | 2                                                                                           | 76     |  |
| R106 N      |    | 490         | 0        | 0                                                                                           | 490    |  |
| TOTALS      |    | 564         | 261      | 181                                                                                         | 1006   |  |

| 2028        |    | AM Peak     |          | SUBJECT DEVELOPMENT FLOWS - OPERATIONAL PHASE |        |  |
|-------------|----|-------------|----------|-----------------------------------------------|--------|--|
| From \ To   | To | Strand Road | The Mall | R106 N                                        | TOTALS |  |
| Strand Road |    | 0           | 4        | 4                                             | 8      |  |
| The Mall    |    | 2           | 0        | 0                                             | 2      |  |
| R106 N      |    | 16          | 0        | 0                                             | 16     |  |
| TOTALS      |    | 18          | 4        | 4                                             | 26     |  |

| 2028        |    | WITH SUBJECT DEVELOPMENT IN OPERATION<br>(surveyed + TII growth factor + committed dev. + subject dev.) |          |        |        |  |
|-------------|----|---------------------------------------------------------------------------------------------------------|----------|--------|--------|--|
|             |    | AM Peak                                                                                                 |          |        |        |  |
| From \ To   | To | Strand Road                                                                                             | The Mall | R106 N | TOTALS |  |
| Strand Road |    | 0                                                                                                       | 265      | 183    | 448    |  |
| The Mall    |    | 76                                                                                                      | 0        | 2      | 78     |  |
| R106 N      |    | 506                                                                                                     | 0        | 0      | 506    |  |
| TOTALS      |    | 582                                                                                                     | 265      | 185    | 1032   |  |

| 2033        |    | AM Peak     |          | WITHOUT SUBJECT DEVELOPMENT<br>(surveyed flows + TII growth factor + committed development) |        |  |
|-------------|----|-------------|----------|---------------------------------------------------------------------------------------------|--------|--|
| From \ To   | To | Strand Road | The Mall | R106 N                                                                                      | TOTALS |  |
| Strand Road |    | 0           | 273      | 187                                                                                         | 460    |  |
| The Mall    |    | 77          | 0        | 2                                                                                           | 79     |  |
| R106 N      |    | 512         | 0        | 0                                                                                           | 512    |  |
| TOTALS      |    | 589         | 273      | 189                                                                                         | 1051   |  |

| 2033        |    | WITH SUBJECT DEVELOPMENT IN OPERATION<br>(surveyed + TII growth factor + committed dev. + subject dev.) |          |        |        |
|-------------|----|---------------------------------------------------------------------------------------------------------|----------|--------|--------|
| AM Peak     |    |                                                                                                         |          |        |        |
| From \ To   | To | Strand Road                                                                                             | The Mall | R106 N | TOTALS |
| Strand Road |    | 0                                                                                                       | 277      | 191    | 468    |
| The Mall    |    | 79                                                                                                      | 0        | 2      | 81     |
| R106 N      |    | 528                                                                                                     | 0        | 0      | 528    |
| TOTALS      |    | 607                                                                                                     | 277      | 193    | 1077   |

| 2043        |    | AM Peak     |          | WITHOUT SUBJECT DEVELOPMENT<br>(surveyed flows + TII growth factor + committed development) |        |  |
|-------------|----|-------------|----------|---------------------------------------------------------------------------------------------|--------|--|
| From \ To   | To | Strand Road | The Mall | R106 N                                                                                      | TOTALS |  |
| Strand Road |    | 0           | 286      | 196                                                                                         | 482    |  |
| The Mall    |    | 81          | 0        | 3                                                                                           | 84     |  |
| R106 N      |    | 535         | 0        | 0                                                                                           | 535    |  |
| TOTALS      |    | 616         | 286      | 199                                                                                         | 1101   |  |

| 2043        |    | WITH SUBJECT DEVELOPMENT IN OPERATION<br>(surveyed + TII growth factor + committed dev. + subject dev.) |          |        |        |
|-------------|----|---------------------------------------------------------------------------------------------------------|----------|--------|--------|
| AM Peak     |    |                                                                                                         |          |        |        |
| From \ To   | To | Strand Road                                                                                             | The Mall | R106 N | TOTALS |
| Strand Road |    | 0                                                                                                       | 290      | 200    | 490    |
| The Mall    |    | 83                                                                                                      | 0        | 3      | 86     |
| R106 N      |    | 551                                                                                                     | 0        | 0      | 551    |
| TOTALS      |    | 634                                                                                                     | 290      | 203    | 1127   |

| 2025        |    | PM Peak     | (16:15-17:15) | SURVEYED TRAFFIC FLOWS |        |  |  |
|-------------|----|-------------|---------------|------------------------|--------|--|--|
| From \ To   | To | Strand Road | The Mall      | R106 N                 | TOTALS |  |  |
| Strand Road |    | 0           | 199           | 187                    | 386    |  |  |
| The Mall    |    | 76          | 0             | 2                      | 78     |  |  |
| R106 N      |    | 318         | 5             | 0                      | 323    |  |  |
| TOTALS      |    | 394         | 204           | 189                    | 787    |  |  |

| 2026        |    | PM Peak     |          | BASELINE TRAFFIC FLOWS<br>(surveyed flows + TII growth factor) |        |  |
|-------------|----|-------------|----------|----------------------------------------------------------------|--------|--|
| From \ To   | To | Strand Road | The Mall | R106 N                                                         | TOTALS |  |
| Strand Road |    | 0           | 202      | 190                                                            | 392    |  |
| The Mall    |    | 77          | 0        | 2                                                              | 79     |  |
| R106 N      |    | 323         | 5        | 0                                                              | 328    |  |
| TOTALS      |    | 400         | 207      | 192                                                            | 799    |  |

| 2027        |    | PM Peak     | Other committed development flows |        |        |
|-------------|----|-------------|-----------------------------------|--------|--------|
| From \ To   | To | Strand Road | The Mall                          | R106 N | TOTALS |
| Strand Road |    | 0           | 22                                | 31     | 53     |
| The Mall    |    | 5           | 0                                 | 0      | 6      |
| R106 N      |    | 27          | 1                                 | 0      | 28     |
| TOTALS      |    | 33          | 23                                | 31     | 87     |

| 2027        |    | PM Peak     |          | WITHOUT SUBJECT DEVELOPMENT<br>(surveyed flows + TII growth factor + committed development) |        |  |
|-------------|----|-------------|----------|---------------------------------------------------------------------------------------------|--------|--|
| From \ To   | To | Strand Road | The Mall | R106 N                                                                                      | TOTALS |  |
| Strand Road |    | 0           | 228      | 224                                                                                         | 452    |  |
| The Mall    |    | 84          | 0        | 3                                                                                           | 87     |  |
| R106 N      |    | 356         | 6        | 0                                                                                           | 362    |  |
| TOTALS      |    | 440         | 234      | 227                                                                                         | 901    |  |

| 2027        |  | PM Peak     |          | SUBJECT DEVELOPMENT FLOWS - CONSTRUCTION PEAK |        |   |  |
|-------------|--|-------------|----------|-----------------------------------------------|--------|---|--|
| To          |  | Strand Road | The Mall | R106 N                                        | TOTALS |   |  |
| From        |  |             |          |                                               |        |   |  |
| Strand Road |  |             |          |                                               |        | 0 |  |
| The Mall    |  |             |          |                                               |        | 0 |  |
| R106 N      |  |             |          |                                               |        | 0 |  |
| TOTALS      |  | 0           | 0        | 0                                             |        | 0 |  |

| 2027        |    | WITH SUBJECT DEVELOPMENT UNDER CONSTRUCTION<br>(surveyed + TII growth factor + committed dev. + subject dev.) |          |        |        |
|-------------|----|---------------------------------------------------------------------------------------------------------------|----------|--------|--------|
| PM Peak     |    |                                                                                                               |          |        |        |
| From \ To   | To | Strand Road                                                                                                   | The Mall | R106 N | TOTALS |
| Strand Road |    | 0                                                                                                             | 228      | 224    | 452    |
| The Mall    |    | 84                                                                                                            | 0        | 3      | 87     |
| R106 N      |    | 356                                                                                                           | 6        | 0      | 362    |
| TOTALS      |    | 440                                                                                                           | 234      | 227    | 901    |

| 2028        |    | PM Peak     |          | WITHOUT SUBJECT DEVELOPMENT<br>(surveyed flows + TII growth factor + committed development) |        |  |
|-------------|----|-------------|----------|---------------------------------------------------------------------------------------------|--------|--|
| From \ To   | To | Strand Road | The Mall | R106 N                                                                                      | TOTALS |  |
| Strand Road |    | 0           | 231      | 227                                                                                         | 458    |  |
| The Mall    |    | 85          | 0        | 3                                                                                           | 88     |  |
| R106 N      |    | 361         | 6        | 0                                                                                           | 367    |  |
| TOTALS      |    | 446         | 237      | 230                                                                                         | 913    |  |

| 2028        |    | PM Peak     |          | SUBJECT DEVELOPMENT FLOWS - OPERATIONAL PHASE |        |  |
|-------------|----|-------------|----------|-----------------------------------------------|--------|--|
| From \ To   | To | Strand Road | The Mall | R106 N                                        | TOTALS |  |
| Strand Road |    | 0           | 8        | 11                                            | 19     |  |
| The Mall    |    | 2           | 0        | 0                                             | 2      |  |
| R106 N      |    | 9           | 0        | 0                                             | 9      |  |
| TOTALS      |    | 10          | 8        | 11                                            | 30     |  |

| 2028        |    | PM Peak     | WITH SUBJECT DEVELOPMENT IN OPERATION<br>(surveyed + TII growth factor + committed dev. + subject dev.) |        |        |  |
|-------------|----|-------------|---------------------------------------------------------------------------------------------------------|--------|--------|--|
| From \ To   | To | Strand Road | The Mall                                                                                                | R106 N | TOTALS |  |
| Strand Road |    | 0           | 239                                                                                                     | 238    | 477    |  |
| The Mall    |    | 87          | 0                                                                                                       | 3      | 90     |  |
| R106 N      |    | 370         | 6                                                                                                       | 0      | 376    |  |
| TOTALS      |    | 456         | 245                                                                                                     | 241    | 943    |  |

| 2033        |    | PM Peak     | WITHOUT SUBJECT DEVELOPMENT<br>(surveyed flows + TII growth factor + committed development) |        |        |  |
|-------------|----|-------------|---------------------------------------------------------------------------------------------|--------|--------|--|
| From \ To   | To | Strand Road | The Mall                                                                                    | R106 N | TOTALS |  |
| Strand Road |    | 0           | 241                                                                                         | 236    | 477    |  |
| The Mall    |    | 89          | 0                                                                                           | 3      | 92     |  |
| R106 N      |    | 377         | 6                                                                                           | 0      | 383    |  |
| TOTALS      |    | 466         | 247                                                                                         | 239    | 952    |  |

| 2033        |    | WITH SUBJECT DEVELOPMENT IN OPERATION<br>(surveyed + TII growth factor + committed dev. + subject dev.) |          |        |        |
|-------------|----|---------------------------------------------------------------------------------------------------------|----------|--------|--------|
| PM Peak     |    |                                                                                                         |          |        |        |
| From \ To   | To | Strand Road                                                                                             | The Mall | R106 N | TOTALS |
| Strand Road |    | 0                                                                                                       | 249      | 247    | 496    |
| The Mall    |    | 91                                                                                                      | 0        | 3      | 94     |
| R106 N      |    | 386                                                                                                     | 6        | 0      | 392    |
| TOTALS      |    | 476                                                                                                     | 255      | 250    | 982    |

| 2043        |    | PM Peak     | WITHOUT SUBJECT DEVELOPMENT<br>(surveyed flows + TII growth factor + committed development) |        |        |  |
|-------------|----|-------------|---------------------------------------------------------------------------------------------|--------|--------|--|
| From \ To   | To | Strand Road | The Mall                                                                                    | R106 N | TOTALS |  |
| Strand Road |    | 0           | 252                                                                                         | 247    | 499    |  |
| The Mall    |    | 93          | 0                                                                                           | 3      | 96     |  |
| R106 N      |    | 395         | 7                                                                                           | 0      | 402    |  |
| TOTALS      |    | 488         | 259                                                                                         | 250    | 997    |  |

| 2043        |             | WITH SUBJECT DEVELOPMENT IN OPERATION<br>(surveyed + TII growth factor + committed dev. + subject dev.) |        |        |  |
|-------------|-------------|---------------------------------------------------------------------------------------------------------|--------|--------|--|
| PM Peak     |             |                                                                                                         |        |        |  |
| To          |             |                                                                                                         |        |        |  |
| From        | Strand Road | The Mall                                                                                                | R106 N | TOTALS |  |
| Strand Road | 0           | 260                                                                                                     | 258    | 518    |  |
| The Mall    | 95          | 0                                                                                                       | 3      | 98     |  |
| R106 N      | 404         | 7                                                                                                       | 0      | 411    |  |
| TOTALS      | 498         | 267                                                                                                     | 261    | 1027   |  |

J1 Peak Hour Traffic Flow Matrices (Passenger Car Units)

| 2025 AM Peak (08:00-09:00)                                                                                 |        |          |                  |              |        |  | 2025 PM Peak (16:15-17:15)                                                                                 |        |          |                  |              |        |  |
|------------------------------------------------------------------------------------------------------------|--------|----------|------------------|--------------|--------|--|------------------------------------------------------------------------------------------------------------|--------|----------|------------------|--------------|--------|--|
| SURVEYED TRAFFIC FLOWS                                                                                     |        |          |                  |              |        |  | SURVEYED TRAFFIC FLOWS                                                                                     |        |          |                  |              |        |  |
| From \ To                                                                                                  | R809 N | The Mall | Warrenhouse Road | Dulin Street | TOTALS |  | From \ To                                                                                                  | R809 N | The Mall | Warrenhouse Road | Dulin Street | TOTALS |  |
| R809 N                                                                                                     | 0      | 12       | 290              | 21           | 323    |  | R809 N                                                                                                     | 0      | 8        | 204              | 19           | 231    |  |
| The Mall                                                                                                   | 100    | 0        | 6                | 136          | 242    |  | The Mall                                                                                                   | 80     | 0        | 6                | 126          | 212    |  |
| Warrenhouse Road                                                                                           | 187    | 11       | 0                | 147          | 345    |  | Warrenhouse Road                                                                                           | 251    | 8        | 0                | 130          | 389    |  |
| Dulin Street                                                                                               | 24     | 46       | 124              | 0            | 194    |  | Dulin Street                                                                                               | 17     | 65       | 108              | 0            | 190    |  |
| TOTALS                                                                                                     | 311    | 69       | 420              | 304          | 1104   |  | TOTALS                                                                                                     | 348    | 81       | 318              | 275          | 1022   |  |
| 2026 AM Peak                                                                                               |        |          |                  |              |        |  | 2026 PM Peak                                                                                               |        |          |                  |              |        |  |
| BASELINE TRAFFIC FLOWS (surveyed flows + TII growth factor)                                                |        |          |                  |              |        |  | BASELINE TRAFFIC FLOWS (surveyed flows + TII growth factor)                                                |        |          |                  |              |        |  |
| From \ To                                                                                                  | R809 N | The Mall | Warrenhouse Road | Dulin Street | TOTALS |  | From \ To                                                                                                  | R809 N | The Mall | Warrenhouse Road | Dulin Street | TOTALS |  |
| R809 N                                                                                                     | 0      | 12       | 295              | 21           | 328    |  | R809 N                                                                                                     | 0      | 8        | 207              | 19           | 234    |  |
| The Mall                                                                                                   | 102    | 0        | 6                | 138          | 246    |  | The Mall                                                                                                   | 81     | 0        | 6                | 128          | 215    |  |
| Warrenhouse Road                                                                                           | 190    | 11       | 0                | 149          | 350    |  | Warrenhouse Road                                                                                           | 255    | 8        | 0                | 132          | 395    |  |
| Dulin Street                                                                                               | 24     | 47       | 126              | 0            | 197    |  | Dulin Street                                                                                               | 17     | 66       | 110              | 0            | 193    |  |
| TOTALS                                                                                                     | 316    | 70       | 427              | 308          | 1121   |  | TOTALS                                                                                                     | 353    | 82       | 323              | 279          | 1037   |  |
| 2027 AM Peak                                                                                               |        |          |                  |              |        |  | 2027 PM Peak                                                                                               |        |          |                  |              |        |  |
| Other committed development flows                                                                          |        |          |                  |              |        |  | Other committed development flows                                                                          |        |          |                  |              |        |  |
| From \ To                                                                                                  | R809 N | The Mall | Warrenhouse Road | Dulin Street | TOTALS |  | From \ To                                                                                                  | R809 N | The Mall | Warrenhouse Road | Dulin Street | TOTALS |  |
| R809 N                                                                                                     | 0      | 1        | 30               | 3            | 34     |  | R809 N                                                                                                     | 0      | 1        | 18               | 3            | 21     |  |
| The Mall                                                                                                   | 7      | 0        | 0                | 3            | 10     |  | The Mall                                                                                                   | 12     | 0        | 0                | 10           | 23     |  |
| Warrenhouse Road                                                                                           | 13     | 0        | 0                | 4            | 16     |  | Warrenhouse Road                                                                                           | 39     | 0        | 0                | 11           | 50     |  |
| Dulin Street                                                                                               | 3      | 4        | 9                | 0            | 16     |  | Dulin Street                                                                                               | 4      | 5        | 8                | 0            | 16     |  |
| TOTALS                                                                                                     | 23     | 5        | 39               | 10           | 77     |  | TOTALS                                                                                                     | 55     | 5        | 25               | 24           | 110    |  |
| 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                                                                                                  | R809 N | The Mall | Warrenhouse Road | Dulin Street | TOTALS |  | From \ To                                                                                                  | R809 N | The Mall | Warrenhouse Road | Dulin Street | TOTALS |  |
| R809 N                                                                                                     | 0      | 14       | 329              | 24           | 367    |  | R809 N                                                                                                     | 0      | 9        | 228              | 23           | 260    |  |
| The Mall                                                                                                   | 110    | 0        | 6                | 144          | 260    |  | The Mall                                                                                                   | 95     | 0        | 6                | 141          | 242    |  |
| Warrenhouse Road                                                                                           | 206    | 11       | 0                | 155          | 372    |  | Warrenhouse Road                                                                                           | 298    | 8        | 0                | 145          | 451    |  |
| Dulin Street                                                                                               | 28     | 51       | 138              | 0            | 217    |  | Dulin Street                                                                                               | 21     | 72       | 119              | 0            | 212    |  |
| TOTALS                                                                                                     | 344    | 76       | 473              | 323          | 1216   |  | TOTALS                                                                                                     | 414    | 89       | 353              | 309          | 1165   |  |
| 2027 AM Peak                                                                                               |        |          |                  |              |        |  | 2027 PM Peak                                                                                               |        |          |                  |              |        |  |
| SUBJECT DEVELOPMENT FLOWS - CONSTRUCTION PEAK                                                              |        |          |                  |              |        |  | SUBJECT DEVELOPMENT FLOWS - CONSTRUCTION PEAK                                                              |        |          |                  |              |        |  |
| From \ To                                                                                                  | R809 N | The Mall | Warrenhouse Road | Dulin Street | TOTALS |  | From \ To                                                                                                  | R809 N | The Mall | Warrenhouse Road | Dulin Street | TOTALS |  |
| R809 N                                                                                                     |        |          |                  |              | 0      |  | R809 N                                                                                                     |        |          |                  |              | 0      |  |
| The Mall                                                                                                   |        |          |                  |              | 0      |  | The Mall                                                                                                   |        |          |                  |              | 0      |  |
| Warrenhouse Road                                                                                           |        |          |                  |              | 0      |  | Warrenhouse Road                                                                                           |        |          |                  |              | 0      |  |
| Dulin Street                                                                                               |        |          |                  |              | 0      |  | Dulin Street                                                                                               |        |          |                  |              | 0      |  |
| TOTALS                                                                                                     | 0      | 0        | 0                | 0            | 0      |  | TOTALS                                                                                                     | 0      | 0        | 0                | 0            | 0      |  |
| 2027 AM Peak                                                                                               |        |          |                  |              |        |  | 2027 PM Peak                                                                                               |        |          |                  |              |        |  |
| WITH SUBJECT DEVELOPMENT UNDER CONSTRUCTION (surveyed + TII growth factor + committed dev. + subject dev.) |        |          |                  |              |        |  | WITH SUBJECT DEVELOPMENT UNDER CONSTRUCTION (surveyed + TII growth factor + committed dev. + subject dev.) |        |          |                  |              |        |  |
| From \ To                                                                                                  | R809 N | The Mall | Warrenhouse Road | Dulin Street | TOTALS |  | From \ To                                                                                                  | R809 N | The Mall | Warrenhouse Road | Dulin Street | TOTALS |  |
| R809 N                                                                                                     | 0      | 14       | 329              | 24           | 367    |  | R809 N                                                                                                     | 0      | 9        | 228              | 23           | 260    |  |
| The Mall                                                                                                   | 110    | 0        | 6                | 144          | 260    |  | The Mall                                                                                                   | 95     | 0        | 6                | 141          | 242    |  |
| Warrenhouse Road                                                                                           | 206    | 11       | 0                | 155          | 372    |  | Warrenhouse Road                                                                                           | 298    | 8        | 0                | 145          | 451    |  |
| Dulin Street                                                                                               | 28     | 51       | 138              | 0            | 217    |  | Dulin Street                                                                                               | 21     | 72       | 119              | 0            | 212    |  |
| TOTALS                                                                                                     | 344    | 76       | 473              | 323          | 1216   |  | TOTALS                                                                                                     | 414    | 89       | 353              | 309          | 1165   |  |
| 2028 AM Peak                                                                                               |        |          |                  |              |        |  | 2028 PM Peak                                                                                               |        |          |                  |              |        |  |
| WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)                   |        |          |                  |              |        |  | WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)                   |        |          |                  |              |        |  |
| From \ To                                                                                                  | R809 N | The Mall | Warrenhouse Road | Dulin Street | TOTALS |  | From \ To                                                                                                  | R809 N | The Mall | Warrenhouse Road | Dulin Street | TOTALS |  |
| R809 N                                                                                                     | 0      | 14       | 334              | 25           | 373    |  | R809 N                                                                                                     | 0      | 9        | 232              | 23           | 264    |  |
| The Mall                                                                                                   | 112    | 0        | 6                | 146          | 264    |  | The Mall                                                                                                   | 96     | 0        | 6                | 143          | 245    |  |
| Warrenhouse Road                                                                                           | 209    | 12       | 0                | 158          | 379    |  | Warrenhouse Road                                                                                           | 302    | 8        | 0                | 147          | 457    |  |
| Dulin Street                                                                                               | 29     | 52       | 140              | 0            | 221    |  | Dulin Street                                                                                               | 22     | 73       | 121              | 0            | 216    |  |
| TOTALS                                                                                                     | 350    | 78       | 480              | 329          | 1237   |  | TOTALS                                                                                                     | 420    | 90       | 359              | 313          | 1182   |  |
| 2028 AM Peak                                                                                               |        |          |                  |              |        |  | 2028 PM Peak                                                                                               |        |          |                  |              |        |  |
| SUBJECT DEVELOPMENT FLOWS - OPERATIONAL PHASE                                                              |        |          |                  |              |        |  | SUBJECT DEVELOPMENT FLOWS - OPERATIONAL PHASE                                                              |        |          |                  |              |        |  |
| From \ To                                                                                                  | R809 N | The Mall | Warrenhouse Road | Dulin Street | TOTALS |  | From \ To                                                                                                  | R809 N | The Mall | Warrenhouse Road | Dulin Street | TOTALS |  |
| R809 N                                                                                                     | 0      | 1        | 12               | 1            | 14     |  | R809 N                                                                                                     | 0      | 0        | 6                | 1            | 7      |  |
| The Mall                                                                                                   | 3      | 0        | 0                | 1            | 4      |  | The Mall                                                                                                   | 4      | 0        | 0                | 4            | 8      |  |
| Warrenhouse Road                                                                                           | 5      | 0        | 0                | 1            | 6      |  | Warrenhouse Road                                                                                           | 14     | 0        | 0                | 4            | 18     |  |
| Dulin Street                                                                                               | 1      | 1        | 4                | 0            | 7      |  | Dulin Street                                                                                               | 1      | 1        | 2                | 0            | 5      |  |
| TOTALS                                                                                                     | 9      | 2        | 16               | 4            | 30     |  | TOTALS                                                                                                     | 19     | 2        | 8                | 9            | 38     |  |
| 2028 AM Peak                                                                                               |        |          |                  |              |        |  | 2028 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                                                                                                  | R809 N | The Mall | Warrenhouse Road | Dulin Street | TOTALS |  | From \ To                                                                                                  | R809 N | The Mall | Warrenhouse Road | Dulin Street | TOTALS |  |
| R809 N                                                                                                     | 0      | 15       | 346              | 26           | 387    |  | R809 N                                                                                                     | 0      | 9        | 238              | 24           | 271    |  |
| The Mall                                                                                                   | 115    | 0        | 6                | 147          | 268    |  | The Mall                                                                                                   | 100    | 0        | 6                | 147          | 253    |  |
| Warrenhouse Road                                                                                           | 214    | 12       | 0                | 159          | 385    |  | Warrenhouse Road                                                                                           | 316    | 8        | 0                | 151          | 475    |  |
| Dulin Street                                                                                               | 30     | 53       | 144              | 0            | 227    |  | Dulin Street                                                                                               | 23     | 74       | 123              | 0            | 221    |  |
| TOTALS                                                                                                     | 359    | 80       | 496              | 333          | 1228   |  | TOTALS                                                                                                     | 439    | 92       | 367              | 322          | 1220   |  |
| 2033 AM Peak                                                                                               |        |          |                  |              |        |  | 2033 PM Peak                                                                                               |        |          |                  |              |        |  |
| WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)                   |        |          |                  |              |        |  | WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)                   |        |          |                  |              |        |  |
| From \ To                                                                                                  | R809 N | The Mall | Warrenhouse Road | Dulin Street | TOTALS |  | From \ To                                                                                                  | R809 N | The Mall | Warrenhouse Road | Dulin Street | TOTALS |  |
| R809 N                                                                                                     | 0      | 14       | 349              | 26           | 389    |  | R809 N                                                                                                     | 0      | 9        | 242              | 24           | 275    |  |
| The Mall                                                                                                   | 117    | 0        | 7                | 153          | 277    |  | The Mall                                                                                                   | 100    | 0        | 7                | 149          | 256    |  |
| Warrenhouse Road                                                                                           | 219    | 12       | 0                | 165          | 396    |  | Warrenhouse Road                                                                                           | 315    | 9        | 0                | 154          | 478    |  |
| Dulin Street                                                                                               | 30     | 54       | 146              | 0            | 230    |  | Dulin Street                                                                                               | 23     | 76       | 127              | 0            | 226    |  |
| TOTALS                                                                                                     | 366    | 80       | 502              | 344          | 1292   |  | TOTALS                                                                                                     | 438    | 94       | 376              | 327          | 1235   |  |
| 2033 AM Peak                                                                                               |        |          |                  |              |        |  | 2033 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                                                                                                  | R809 N | The Mall | Warrenhouse Road | Dulin Street | TOTALS |  | From \ To                                                                                                  | R809 N | The Mall | Warrenhouse Road | Dulin Street | TOTALS |  |
| R809 N                                                                                                     | 0      | 15       | 361              | 27           | 403    |  | R809 N                                                                                                     | 0      | 9        | 248              | 25           | 282    |  |
| The Mall                                                                                                   | 120    | 0        | 7                | 154          | 281    |  | The Mall                                                                                                   | 104    | 0        | 7                | 153          | 264    |  |
| Warrenhouse Road                                                                                           | 224    | 12       | 0                | 166          | 402    |  | Warrenhouse Road                                                                                           | 329    | 9        | 0                | 158          | 496    |  |
| Dulin Street                                                                                               | 31     | 55       | 150              | 0            | 237    |  | Dulin Street                                                                                               | 24     | 77       | 129              | 0            | 231    |  |
| TOTALS                                                                                                     | 375    | 82       | 518              | 348          | 1322   |  | TOTALS                                                                                                     | 457    | 96       | 384              | 336          | 1273   |  |
| 2043 AM Peak                                                                                               |        |          |                  |              |        |  | 2043 PM Peak                                                                                               |        |          |                  |              |        |  |
| WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)                   |        |          |                  |              |        |  | WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)                   |        |          |                  |              |        |  |
| From \ To                                                                                                  | R809 N | The Mall | Warrenhouse Road | Dulin Street | TOTALS |  | From \ To                                                                                                  | R809 N | The Mall | Warrenhouse Road | Dulin Street | TOTALS |  |
| R809 N                                                                                                     | 0      | 15       | 365              | 27           | 407    |  | R809 N                                                                                                     | 0      | 10       | 253              | 25           | 288    |  |
| The Mall                                                                                                   | 122    | 0        | 7                | 160          | 289    |  | The Mall                                                                                                   | 105    | 0        | 7                | 156          | 268    |  |
| Warrenhouse Road                                                                                           | 229    | 13       | 0                | 173          | 415    |  | Warrenhouse Road                                                                                           | 329    | 9        | 0                | 161          | 499    |  |
| Dulin Street                                                                                               | 31     | 57       | 153              | 0            | 241    |  | Dulin Street                                                                                               | 23     | 80       | 133              | 0            | 236    |  |
| TOTALS                                                                                                     | 382    | 85       | 525              | 360          | 1352   |  | TOTALS                                                                                                     | 457    | 99       | 393              | 342          | 1291   |  |
| 2043 AM Peak                                                                                               |        |          |                  |              |        |  | 2043 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                                                                                                  | R809 N | The Mall | Warrenhouse Road | Dulin Street | TOTALS |  | From \ To                                                                                                  | R809 N | The Mall | Warrenhouse Road | Dulin Street | TOTALS |  |
| R809 N                                                                                                     | 0      | 16       | 377              | 28           | 421    |  | R809 N                                                                                                     | 0      | 10       | 259              | 26           | 295    |  |
| The Mall                                                                                                   | 125    | 0        | 7                | 161          | 293    |  | The Mall                                                                                                   | 109    | 0        | 7                | 160          | 276    |  |
| Warrenhouse Road                                                                                           | 234    | 13       | 0                | 174          | 421    |  | Warrenhouse Road                                                                                           | 343    | 9        | 0                | 165          | 517    |  |
| Dulin Street                                                                                               | 32     | 58       | 157              | 0            | 248    |  | Dulin Street                                                                                               | 24     | 81       | 135              | 0            | 241    |  |
| TOTALS                                                                                                     | 391    | 87       | 541              | 364          | 1382   |  | TOTALS                                                                                                     | 476    | 101      | 401              | 351          | 1329   |  |

J2 Peak Hour Traffic Flow Matrices (Passenger Car Units)

| 2025            |    | AM Peak | (08:00-09:00) | SURVEYED TRAFFIC FLOWS |        |  |  |
|-----------------|----|---------|---------------|------------------------|--------|--|--|
| From \ To       | To | R139 W  | R139 N        | Brookstone Road        | TOTALS |  |  |
| R139 W          |    | 0       | 174           | 232                    | 406    |  |  |
| R139 N          |    | 123     | 0             | 24                     | 147    |  |  |
| Brookstone Road |    | 376     | 12            | 0                      | 388    |  |  |
| TOTALS          |    | 499     | 186           | 256                    | 941    |  |  |

| 2026            |  | BASELINE TRAFFIC FLOWS<br>(surveyed flows + TII growth factor) |        |                 |        |
|-----------------|--|----------------------------------------------------------------|--------|-----------------|--------|
| AM Peak         |  |                                                                |        |                 |        |
|                 |  |                                                                |        |                 |        |
| To              |  | R139 W                                                         | R139 N | Brookstone Road | TOTALS |
| From            |  |                                                                |        |                 |        |
| R139 W          |  | 0                                                              | 177    | 236             | 413    |
| R139 N          |  | 125                                                            | 0      | 24              | 149    |
| Brookstone Road |  | 382                                                            | 12     | 0               | 394    |
| TOTALS          |  | 507                                                            | 189    | 260             | 956    |

| 2027            |    | AM Peak |        | Other committed development flows |        |  |
|-----------------|----|---------|--------|-----------------------------------|--------|--|
| From \ To       | To | R139 W  | R139 N | Brookstone Road                   | TOTALS |  |
| R139 W          |    | 0       | 11     | 15                                | 26     |  |
| R139 N          |    | 2       | 0      | 0                                 | 2      |  |
| Brookstone Road |    | 8       | 0      | 0                                 | 8      |  |
| TOTALS          |    | 10      | 11     | 15                                | 36     |  |

| 2027            |    | AM Peak |        | WITHOUT SUBJECT DEVELOPMENT<br>(surveyed flows + TII growth factor + committed development) |        |  |
|-----------------|----|---------|--------|---------------------------------------------------------------------------------------------|--------|--|
| From \ To       | To | R139 W  | R139 N | Brookstone Road                                                                             | TOTALS |  |
| R139 W          |    | 0       | 191    | 254                                                                                         | 445    |  |
| R139 N          |    | 129     | 0      | 25                                                                                          | 154    |  |
| Brookstone Road |    | 396     | 12     | 0                                                                                           | 408    |  |
| TOTALS          |    | 525     | 203    | 279                                                                                         | 1007   |  |

| 2027            |    | AM Peak |        | SUBJECT DEVELOPMENT FLOWS - CONSTRUCTION PEAK |        |  |
|-----------------|----|---------|--------|-----------------------------------------------|--------|--|
| From \ To       | To | R139 W  | R139 N | Brookstone Road                               | TOTALS |  |
| R139 W          |    |         |        |                                               | 0      |  |
| R139 N          |    |         |        |                                               | 0      |  |
| Brookstone Road |    |         |        |                                               | 0      |  |
| TOTALS          |    | 0       | 0      | 0                                             | 0      |  |

| 2027            |  | WITH SUBJECT DEVELOPMENT UNDER CONSTRUCTION<br>(surveyed + TII growth factor + committed dev. + subject dev.) |        |                 |        |
|-----------------|--|---------------------------------------------------------------------------------------------------------------|--------|-----------------|--------|
| AM Peak         |  |                                                                                                               |        |                 |        |
| To              |  | R139 W                                                                                                        | R139 N | Brookstone Road | TOTALS |
| From            |  |                                                                                                               |        |                 |        |
| R139 W          |  | 0                                                                                                             | 191    | 254             | 445    |
| R139 N          |  | 129                                                                                                           | 0      | 25              | 154    |
| Brookstone Road |  | 396                                                                                                           | 12     | 0               | 408    |
|                 |  | 525                                                                                                           | 203    | 279             | 1007   |

| 2028            |    | AM Peak |        | WITHOUT SUBJECT DEVELOPMENT<br>(surveyed flows + TII growth factor + committed development) |        |  |
|-----------------|----|---------|--------|---------------------------------------------------------------------------------------------|--------|--|
| From \ To       | To | R139 W  | R139 N | Brookstone Road                                                                             | TOTALS |  |
| R139 W          |    | 0       | 194    | 258                                                                                         | 452    |  |
| R139 N          |    | 132     | 0      | 25                                                                                          | 157    |  |
| Brookstone Road |    | 402     | 13     | 0                                                                                           | 415    |  |
| TOTALS          |    | 534     | 207    | 283                                                                                         | 1024   |  |

| 2028            |    | AM Peak |        | SUBJECT DEVELOPMENT FLOWS - OPERATIONAL PHASE |        |  |
|-----------------|----|---------|--------|-----------------------------------------------|--------|--|
| From \ To       | To | R139 W  | R139 N | Brookstone Road                               | TOTALS |  |
| R139 W          |    | 0       | 5      | 6                                             | 11     |  |
| R139 N          |    | 1       | 0      | 0                                             | 1      |  |
| Brookstone Road |    | 3       | 0      | 0                                             | 3      |  |
| TOTALS          |    | 4       | 5      | 6                                             | 14     |  |

| 2028            |    | WITH SUBJECT DEVELOPMENT IN OPERATION<br>(surveyed + TII growth factor + committed dev. + subject dev.) |        |                 |        |
|-----------------|----|---------------------------------------------------------------------------------------------------------|--------|-----------------|--------|
| AM Peak         |    |                                                                                                         |        |                 |        |
| From \ To       | To | R139 W                                                                                                  | R139 N | Brookstone Road | TOTALS |
| R139 W          |    | 0                                                                                                       | 199    | 264             | 463    |
| R139 N          |    | 133                                                                                                     | 0      | 25              | 158    |
| Brookstone Road |    | 405                                                                                                     | 13     | 0               | 418    |
| TOTALS          |    | 538                                                                                                     | 212    | 289             | 1038   |

| 2033            |    | AM Peak |        | WITHOUT SUBJECT DEVELOPMENT<br>(surveyed flows + TII growth factor + committed development) |        |  |
|-----------------|----|---------|--------|---------------------------------------------------------------------------------------------|--------|--|
| From \ To       | To | R139 W  | R139 N | Brookstone Road                                                                             | TOTALS |  |
| R139 W          |    | 0       | 203    | 270                                                                                         | 473    |  |
| R139 N          |    | 138     | 0      | 26                                                                                          | 164    |  |
| Brookstone Road |    | 421     | 13     | 0                                                                                           | 434    |  |
| TOTALS          |    | 559     | 216    | 296                                                                                         | 1071   |  |

| 2033            |  | WITH SUBJECT DEVELOPMENT IN OPERATION<br>(surveyed + TII growth factor + committed dev. + subject dev.) |        |                 |        |
|-----------------|--|---------------------------------------------------------------------------------------------------------|--------|-----------------|--------|
| AM Peak         |  |                                                                                                         |        |                 |        |
| To              |  | R139 W                                                                                                  | R139 N | Brookstone Road | TOTALS |
| From            |  |                                                                                                         |        |                 |        |
| R139 W          |  | 0                                                                                                       | 208    | 276             | 484    |
| R139 N          |  | 139                                                                                                     | 0      | 26              | 165    |
| Brookstone Road |  | 424                                                                                                     | 13     | 0               | 437    |
| TOTALS          |  | 563                                                                                                     | 221    | 302             | 1085   |

| 2043            |    | AM Peak |        | WITHOUT SUBJECT DEVELOPMENT<br>(surveyed flows + TII growth factor + committed development) |        |  |
|-----------------|----|---------|--------|---------------------------------------------------------------------------------------------|--------|--|
| From \ To       | To | R139 W  | R139 N | Brookstone Road                                                                             | TOTALS |  |
| R139 W          |    | 0       | 212    | 283                                                                                         | 495    |  |
| R139 N          |    | 145     | 0      | 28                                                                                          | 173    |  |
| Brookstone Road |    | 442     | 14     | 0                                                                                           | 456    |  |
| TOTALS          |    | 587     | 226    | 311                                                                                         | 1124   |  |

| 2043            |    | WITH SUBJECT DEVELOPMENT IN OPERATION<br>(surveyed + TII growth factor + committed dev. + subject dev.) |        |                 |        |
|-----------------|----|---------------------------------------------------------------------------------------------------------|--------|-----------------|--------|
| AM Peak         |    |                                                                                                         |        |                 |        |
| From \ To       | To | R139 W                                                                                                  | R139 N | Brookstone Road | TOTALS |
| R139 W          |    | 0                                                                                                       | 217    | 289             | 506    |
| R139 N          |    | 146                                                                                                     | 0      | 28              | 174    |
| Brookstone Road |    | 445                                                                                                     | 14     | 0               | 459    |
| TOTALS          |    | 591                                                                                                     | 231    | 317             | 1138   |

| 2025            |    | PM Peak | (16:15-17:15) | SURVEYED TRAFFIC FLOWS |        |  |  |
|-----------------|----|---------|---------------|------------------------|--------|--|--|
| From \ To       | To | R139 W  | R139 N        | Brookstone Road        | TOTALS |  |  |
| R139 W          |    | 0       | 195           | 191                    | 386    |  |  |
| R139 N          |    | 127     | 0             | 9                      | 136    |  |  |
| Brookstone Road |    | 259     | 13            | 0                      | 272    |  |  |
| TOTALS          |    | 386     | 208           | 200                    | 794    |  |  |

| 2026            |    | PM Peak |        | BASELINE TRAFFIC FLOWS<br>(surveyed flows + TII growth factor) |        |  |
|-----------------|----|---------|--------|----------------------------------------------------------------|--------|--|
| From \ To       | To | R139 W  | R139 N | Brookstone Road                                                | TOTALS |  |
| R139 W          |    | 0       | 198    | 194                                                            | 392    |  |
| R139 N          |    | 129     | 0      | 9                                                              | 138    |  |
| Brookstone Road |    | 263     | 13     | 0                                                              | 276    |  |
| TOTALS          |    | 392     | 211    | 203                                                            | 806    |  |

| 2027            |    | PM Peak | Other committed development flows |                 |        |  |
|-----------------|----|---------|-----------------------------------|-----------------|--------|--|
| From \ To       | To | R139 W  | R139 N                            | Brookstone Road | TOTALS |  |
| R139 W          |    | 0       | 14                                | 14              | 28     |  |
| R139 N          |    | 11      | 0                                 | 0               | 11     |  |
| Brookstone Road |    | 23      | 0                                 | 0               | 23     |  |
| TOTALS          |    | 34      | 14                                | 14              | 62     |  |

| 2027            |    | PM Peak |        | WITHOUT SUBJECT DEVELOPMENT<br>(surveyed flows + TII growth factor + committed development) |        |  |
|-----------------|----|---------|--------|---------------------------------------------------------------------------------------------|--------|--|
| From \ To       | To | R139 W  | R139 N | Brookstone Road                                                                             | TOTALS |  |
| R139 W          |    | 0       | 215    | 211                                                                                         | 426    |  |
| R139 N          |    | 142     | 0      | 9                                                                                           | 151    |  |
| Brookstone Road |    | 290     | 13     | 0                                                                                           | 303    |  |
| TOTALS          |    | 432     | 228    | 220                                                                                         | 880    |  |

| 2027            |    | PM Peak |        | SUBJECT DEVELOPMENT FLOWS - CONSTRUCTION PEAK |        |  |
|-----------------|----|---------|--------|-----------------------------------------------|--------|--|
| From \ To       | To | R139 W  | R139 N | Brookstone Road                               | TOTALS |  |
| R139 W          |    |         |        |                                               | 0      |  |
| R139 N          |    |         |        |                                               | 0      |  |
| Brookstone Road |    |         |        |                                               | 0      |  |
| TOTALS          |    | 0       | 0      | 0                                             | 0      |  |

| 2027            |    | WITH SUBJECT DEVELOPMENT UNDER CONSTRUCTION<br>(surveyed + TII growth factor + committed dev. + subject dev.) |        |                 |        |
|-----------------|----|---------------------------------------------------------------------------------------------------------------|--------|-----------------|--------|
| PM Peak         |    |                                                                                                               |        |                 |        |
| From \ To       | To | R139 W                                                                                                        | R139 N | Brookstone Road | TOTALS |
| R139 W          |    | 0                                                                                                             | 215    | 211             | 426    |
| R139 N          |    | 142                                                                                                           | 0      | 9               | 151    |
| Brookstone Road |    | 290                                                                                                           | 13     | 0               | 303    |
| TOTALS          |    | 432                                                                                                           | 228    | 220             | 880    |

| 2028            |    | PM Peak |        | WITHOUT SUBJECT DEVELOPMENT<br>(surveyed flows + TII growth factor + committed development) |        |  |
|-----------------|----|---------|--------|---------------------------------------------------------------------------------------------|--------|--|
| From \ To       | To | R139 W  | R139 N | Brookstone Road                                                                             | TOTALS |  |
| R139 W          |    | 0       | 219    | 214                                                                                         | 433    |  |
| R139 N          |    | 144     | 0      | 9                                                                                           | 153    |  |
| Brookstone Road |    | 295     | 14     | 0                                                                                           | 309    |  |
| TOTALS          |    | 439     | 233    | 223                                                                                         | 895    |  |

| 2028            |    | PM Peak |        | SUBJECT DEVELOPMENT FLOWS - OPERATIONAL PHASE |        |  |
|-----------------|----|---------|--------|-----------------------------------------------|--------|--|
| From \ To       | To | R139 W  | R139 N | Brookstone Road                               | TOTALS |  |
| R139 W          |    | 0       | 4      | 4                                             | 9      |  |
| R139 N          |    | 4       | 0      | 0                                             | 4      |  |
| Brookstone Road |    | 8       | 0      | 0                                             | 8      |  |
| TOTALS          |    | 12      | 4      | 4                                             | 21     |  |

| 2028            |    | WITH SUBJECT DEVELOPMENT IN OPERATION<br>(surveyed + TII growth factor + committed dev. + subject dev.) |        |                 |        |
|-----------------|----|---------------------------------------------------------------------------------------------------------|--------|-----------------|--------|
| PM Peak         |    |                                                                                                         |        |                 |        |
| From \ To       | To | R139 W                                                                                                  | R139 N | Brookstone Road | TOTALS |
| R139 W          |    | 0                                                                                                       | 223    | 218             | 442    |
| R139 N          |    | 148                                                                                                     | 0      | 9               | 157    |
| Brookstone Road |    | 303                                                                                                     | 14     | 0               | 317    |
| TOTALS          |    | 451                                                                                                     | 237    | 227             | 916    |

| 2033            |    | PM Peak |        | WITHOUT SUBJECT DEVELOPMENT<br>(surveyed flows + TII growth factor + committed development) |        |  |
|-----------------|----|---------|--------|---------------------------------------------------------------------------------------------|--------|--|
| From \ To       | To | R139 W  | R139 N | Brookstone Road                                                                             | TOTALS |  |
| R139 W          |    | 0       | 229    | 224                                                                                         | 453    |  |
| R139 N          |    | 151     | 0      | 10                                                                                          | 161    |  |
| Brookstone Road |    | 308     | 14     | 0                                                                                           | 322    |  |
| TOTALS          |    | 459     | 243    | 234                                                                                         | 936    |  |

| 2033            |    | WITH SUBJECT DEVELOPMENT IN OPERATION                          |        |                 |        |
|-----------------|----|----------------------------------------------------------------|--------|-----------------|--------|
| PM Peak         |    | (surveyed + TII growth factor + committed dev. + subject dev.) |        |                 |        |
| From \ To       | To | R139 W                                                         | R139 N | Brookstone Road | TOTALS |
| R139 W          |    | 0                                                              | 233    | 228             | 462    |
| R139 N          |    | 155                                                            | 0      | 10              | 165    |
| Brookstone Road |    | 316                                                            | 14     | 0               | 330    |
| TOTALS          |    | 471                                                            | 247    | 238             | 957    |

| 2043            |    | PM Peak |        | WITHOUT SUBJECT DEVELOPMENT<br>(surveyed flows + TII growth factor + committed development) |        |  |
|-----------------|----|---------|--------|---------------------------------------------------------------------------------------------|--------|--|
| From \ To       | To | R139 W  | R139 N | Brookstone Road                                                                             | TOTALS |  |
| R139 W          |    | 0       | 239    | 234                                                                                         | 473    |  |
| R139 N          |    | 158     | 0      | 10                                                                                          | 168    |  |
| Brookstone Road |    | 322     | 15     | 0                                                                                           | 337    |  |
| TOTALS          |    | 480     | 254    | 244                                                                                         | 978    |  |

| 2043            |    | WITH SUBJECT DEVELOPMENT IN OPERATION                          |        |                 |        |
|-----------------|----|----------------------------------------------------------------|--------|-----------------|--------|
| PM Peak         |    | (surveyed + TII growth factor + committed dev. + subject dev.) |        |                 |        |
| From \ To       | To | R139 W                                                         | R139 N | Brookstone Road | TOTALS |
| R139 W          |    | 0                                                              | 243    | 238             | 482    |
| R139 N          |    | 162                                                            | 0      | 10              | 172    |
| Brookstone Road |    | 330                                                            | 15     | 0               | 345    |
| TOTALS          |    | 492                                                            | 258    | 248             | 999    |

J1 Peak Hour Traffic Flow Matrices (Passenger Car Units)

| 2025 AM Peak (08:00-09:00)                                                                                    |             |               |            |               |        | 2025 PM Peak (16:15-17:15)                                                                                    |             |               |            |               |        |
|---------------------------------------------------------------------------------------------------------------|-------------|---------------|------------|---------------|--------|---------------------------------------------------------------------------------------------------------------|-------------|---------------|------------|---------------|--------|
| SURVEYED TRAFFIC FLOWS                                                                                        |             |               |            |               |        | SURVEYED TRAFFIC FLOWS                                                                                        |             |               |            |               |        |
| From \ To                                                                                                     | Grange Park | Grange Road E | Abbey Park | Grange Road W | TOTALS | From \ To                                                                                                     | Grange Park | Grange Road E | Abbey Park | Grange Road W | TOTALS |
| Grange Park                                                                                                   | 0           | 51            | 7          | 57            | 115    | Grange Park                                                                                                   | 0           | 30            | 1          | 39            | 70     |
| Grange Road E                                                                                                 | 22          | 0             | 2          | 400           | 424    | Grange Road E                                                                                                 | 39          | 0             | 4          | 334           | 377    |
| Abbey Park                                                                                                    | 3           | 5             | 0          | 46            | 54     | Abbey Park                                                                                                    | 7           | 15            | 0          | 30            | 52     |
| Grange Road W                                                                                                 | 26          | 334           | 11         | 0             | 371    | Grange Road W                                                                                                 | 53          | 401           | 37         | 0             | 491    |
| TOTALS                                                                                                        | 51          | 390           | 20         | 503           | 964    | TOTALS                                                                                                        | 99          | 446           | 42         | 403           | 990    |
| 2026 AM Peak                                                                                                  |             |               |            |               |        | 2026 PM Peak                                                                                                  |             |               |            |               |        |
| BASELINE TRAFFIC FLOWS<br>(surveyed flows + TII growth factor)                                                |             |               |            |               |        | BASELINE TRAFFIC FLOWS<br>(surveyed flows + TII growth factor)                                                |             |               |            |               |        |
| From \ To                                                                                                     | Grange Park | Grange Road E | Abbey Park | Grange Road W | TOTALS | From \ To                                                                                                     | Grange Park | Grange Road E | Abbey Park | Grange Road W | TOTALS |
| Grange Park                                                                                                   | 0           | 52            | 7          | 58            | 117    | Grange Park                                                                                                   | 0           | 30            | 1          | 40            | 71     |
| Grange Road E                                                                                                 | 22          | 0             | 2          | 406           | 430    | Grange Road E                                                                                                 | 40          | 0             | 4          | 339           | 383    |
| Abbey Park                                                                                                    | 3           | 5             | 0          | 47            | 55     | Abbey Park                                                                                                    | 7           | 15            | 0          | 30            | 52     |
| Grange Road W                                                                                                 | 26          | 339           | 11         | 0             | 376    | Grange Road W                                                                                                 | 54          | 407           | 38         | 0             | 499    |
| TOTALS                                                                                                        | 51          | 396           | 20         | 511           | 978    | TOTALS                                                                                                        | 101         | 452           | 43         | 409           | 1005   |
| 2027 AM Peak                                                                                                  |             |               |            |               |        | 2027 PM Peak                                                                                                  |             |               |            |               |        |
| Other committed development flows                                                                             |             |               |            |               |        | Other committed development flows                                                                             |             |               |            |               |        |
| From \ To                                                                                                     | Grange Park | Grange Road E | Abbey Park | Grange Road W | TOTALS | From \ To                                                                                                     | Grange Park | Grange Road E | Abbey Park | Grange Road W | TOTALS |
| Grange Park                                                                                                   | 0           | 0             | 0          | 1             | 1      | Grange Park                                                                                                   | 0           | 0             | 0          | 4             | 4      |
| Grange Road E                                                                                                 | 0           | 0             | 0          | 10            | 10     | Grange Road E                                                                                                 | 0           | 0             | 0          | 34            | 34     |
| Abbey Park                                                                                                    | 0           | 0             | 0          | 1             | 1      | Abbey Park                                                                                                    | 0           | 0             | 0          | 3             | 3      |
| Grange Road W                                                                                                 | 2           | 26            | 1          | 0             | 29     | Grange Road W                                                                                                 | 4           | 28            | 3          | 0             | 34     |
| TOTALS                                                                                                        | 2           | 26            | 1          | 13            | 41     | TOTALS                                                                                                        | 4           | 28            | 3          | 41            | 75     |
| 2027 AM Peak                                                                                                  |             |               |            |               |        | 2027 PM Peak                                                                                                  |             |               |            |               |        |
| WITHOUT SUBJECT DEVELOPMENT<br>(surveyed flows + TII growth factor + committed development)                   |             |               |            |               |        | WITHOUT SUBJECT DEVELOPMENT<br>(surveyed flows + TII growth factor + committed development)                   |             |               |            |               |        |
| From \ To                                                                                                     | Grange Park | Grange Road E | Abbey Park | Grange Road W | TOTALS | From \ To                                                                                                     | Grange Park | Grange Road E | Abbey Park | Grange Road W | TOTALS |
| Grange Park                                                                                                   | 0           | 53            | 7          | 60            | 120    | Grange Park                                                                                                   | 0           | 31            | 1          | 44            | 76     |
| Grange Road E                                                                                                 | 23          | 0             | 2          | 423           | 448    | Grange Road E                                                                                                 | 40          | 0             | 4          | 379           | 423    |
| Abbey Park                                                                                                    | 3           | 5             | 0          | 49            | 57     | Abbey Park                                                                                                    | 7           | 15            | 0          | 34            | 56     |
| Grange Road W                                                                                                 | 29          | 371           | 12         | 0             | 412    | Grange Road W                                                                                                 | 58          | 442           | 41         | 0             | 541    |
| TOTALS                                                                                                        | 55          | 429           | 21         | 532           | 1037   | TOTALS                                                                                                        | 105         | 488           | 46         | 457           | 1096   |
| 2027 AM Peak                                                                                                  |             |               |            |               |        | 2027 PM Peak                                                                                                  |             |               |            |               |        |
| SUBJECT DEVELOPMENT FLOWS - CONSTRUCTION PEAK                                                                 |             |               |            |               |        | SUBJECT DEVELOPMENT FLOWS - CONSTRUCTION PEAK                                                                 |             |               |            |               |        |
| From \ To                                                                                                     | Grange Park | Grange Road E | Abbey Park | Grange Road W | TOTALS | From \ To                                                                                                     | Grange Park | Grange Road E | Abbey Park | Grange Road W | TOTALS |
| Grange Park                                                                                                   |             |               |            |               | 0      | Grange Park                                                                                                   |             |               |            |               | 0      |
| Grange Road E                                                                                                 |             |               |            |               | 0      | Grange Road E                                                                                                 |             |               |            |               | 0      |
| Abbey Park                                                                                                    |             |               |            |               | 0      | Abbey Park                                                                                                    |             |               |            |               | 0      |
| Grange Road W                                                                                                 |             |               |            |               | 0      | Grange Road W                                                                                                 |             |               |            |               | 0      |
| TOTALS                                                                                                        | 0           | 0             | 0          | 0             | 0      | TOTALS                                                                                                        | 0           | 0             | 0          | 0             | 0      |
| 2027 AM Peak                                                                                                  |             |               |            |               |        | 2027 PM Peak                                                                                                  |             |               |            |               |        |
| WITH SUBJECT DEVELOPMENT UNDER CONSTRUCTION<br>(surveyed + TII growth factor + committed dev. + subject dev.) |             |               |            |               |        | WITH SUBJECT DEVELOPMENT UNDER CONSTRUCTION<br>(surveyed + TII growth factor + committed dev. + subject dev.) |             |               |            |               |        |
| From \ To                                                                                                     | Grange Park | Grange Road E | Abbey Park | Grange Road W | TOTALS | From \ To                                                                                                     | Grange Park | Grange Road E | Abbey Park | Grange Road W | TOTALS |
| Grange Park                                                                                                   | 0           | 53            | 7          | 60            | 120    | Grange Park                                                                                                   | 0           | 31            | 1          | 44            | 76     |
| Grange Road E                                                                                                 | 23          | 0             | 2          | 423           | 448    | Grange Road E                                                                                                 | 40          | 0             | 4          | 379           | 423    |
| Abbey Park                                                                                                    | 3           | 5             | 0          | 49            | 57     | Abbey Park                                                                                                    | 7           | 15            | 0          | 34            | 56     |
| Grange Road W                                                                                                 | 29          | 371           | 12         | 0             | 412    | Grange Road W                                                                                                 | 58          | 442           | 41         | 0             | 541    |
| TOTALS                                                                                                        | 55          | 429           | 21         | 532           | 1037   | TOTALS                                                                                                        | 105         | 488           | 46         | 457           | 1096   |
| 2028 AM Peak                                                                                                  |             |               |            |               |        | 2028 PM Peak                                                                                                  |             |               |            |               |        |
| WITHOUT SUBJECT DEVELOPMENT<br>(surveyed flows + TII growth factor + committed development)                   |             |               |            |               |        | WITHOUT SUBJECT DEVELOPMENT<br>(surveyed flows + TII growth factor + committed development)                   |             |               |            |               |        |
| From \ To                                                                                                     | Grange Park | Grange Road E | Abbey Park | Grange Road W | TOTALS | From \ To                                                                                                     | Grange Park | Grange Road E | Abbey Park | Grange Road W | TOTALS |
| Grange Park                                                                                                   | 0           | 54            | 7          | 61            | 122    | Grange Park                                                                                                   | 0           | 31            | 1          | 45            | 77     |
| Grange Road E                                                                                                 | 23          | 0             | 2          | 430           | 455    | Grange Road E                                                                                                 | 41          | 0             | 4          | 385           | 430    |
| Abbey Park                                                                                                    | 3           | 5             | 0          | 49            | 57     | Abbey Park                                                                                                    | 7           | 16            | 0          | 34            | 57     |
| Grange Road W                                                                                                 | 29          | 376           | 12         | 0             | 417    | Grange Road W                                                                                                 | 59          | 449           | 41         | 0             | 549    |
| TOTALS                                                                                                        | 55          | 435           | 21         | 540           | 1051   | TOTALS                                                                                                        | 107         | 496           | 46         | 464           | 1113   |
| 2028 AM Peak                                                                                                  |             |               |            |               |        | 2028 PM Peak                                                                                                  |             |               |            |               |        |
| SUBJECT DEVELOPMENT FLOWS - OPERATIONAL PHASE                                                                 |             |               |            |               |        | SUBJECT DEVELOPMENT FLOWS - OPERATIONAL PHASE                                                                 |             |               |            |               |        |
| From \ To                                                                                                     | Grange Park | Grange Road E | Abbey Park | Grange Road W | TOTALS | From \ To                                                                                                     | Grange Park | Grange Road E | Abbey Park | Grange Road W | TOTALS |
| Grange Park                                                                                                   | 0           | 0             | 0          | 1             | 1      | Grange Park                                                                                                   | 0           | 0             | 0          | 1             | 1      |
| Grange Road E                                                                                                 | 0           | 0             | 0          | 4             | 4      | Grange Road E                                                                                                 | 0           | 0             | 0          | 12            | 12     |
| Abbey Park                                                                                                    | 0           | 0             | 0          | 0             | 0      | Abbey Park                                                                                                    | 0           | 0             | 0          | 1             | 1      |
| Grange Road W                                                                                                 | 1           | 11            | 0          | 0             | 12     | Grange Road W                                                                                                 | 1           | 9             | 1          | 0             | 11     |
| TOTALS                                                                                                        | 1           | 11            | 0          | 5             | 16     | TOTALS                                                                                                        | 1           | 9             | 1          | 15            | 25     |
| 2028 AM Peak                                                                                                  |             |               |            |               |        | 2028 PM Peak                                                                                                  |             |               |            |               |        |
| WITH SUBJECT DEVELOPMENT IN OPERATION<br>(surveyed + TII growth factor + committed dev. + subject dev.)       |             |               |            |               |        | WITH SUBJECT DEVELOPMENT IN OPERATION<br>(surveyed + TII growth factor + committed dev. + subject dev.)       |             |               |            |               |        |
| From \ To                                                                                                     | Grange Park | Grange Road E | Abbey Park | Grange Road W | TOTALS | From \ To                                                                                                     | Grange Park | Grange Road E | Abbey Park | Grange Road W | TOTALS |
| Grange Park                                                                                                   | 0           | 54            | 7          | 62            | 123    | Grange Park                                                                                                   | 0           | 31            | 1          | 46            | 78     |
| Grange Road E                                                                                                 | 23          | 0             | 2          | 434           | 459    | Grange Road E                                                                                                 | 41          | 0             | 4          | 397           | 442    |
| Abbey Park                                                                                                    | 3           | 5             | 0          | 49            | 57     | Abbey Park                                                                                                    | 7           | 16            | 0          | 35            | 58     |
| Grange Road W                                                                                                 | 30          | 387           | 12         | 0             | 429    | Grange Road W                                                                                                 | 60          | 458           | 42         | 0             | 560    |
| TOTALS                                                                                                        | 56          | 446           | 21         | 545           | 1067   | TOTALS                                                                                                        | 108         | 505           | 47         | 479           | 1138   |
| 2033 AM Peak                                                                                                  |             |               |            |               |        | 2033 PM Peak                                                                                                  |             |               |            |               |        |
| WITHOUT SUBJECT DEVELOPMENT<br>(surveyed flows + TII growth factor + committed development)                   |             |               |            |               |        | WITHOUT SUBJECT DEVELOPMENT<br>(surveyed flows + TII growth factor + committed development)                   |             |               |            |               |        |
| From \ To                                                                                                     | Grange Park | Grange Road E | Abbey Park | Grange Road W | TOTALS | From \ To                                                                                                     | Grange Park | Grange Road E | Abbey Park | Grange Road W | TOTALS |
| Grange Park                                                                                                   | 0           | 56            | 8          | 64            | 128    | Grange Park                                                                                                   | 0           | 33            | 1          | 47            | 81     |
| Grange Road E                                                                                                 | 24          | 0             | 2          | 450           | 476    | Grange Road E                                                                                                 | 43          | 0             | 4          | 402           | 449    |
| Abbey Park                                                                                                    | 3           | 6             | 0          | 52            | 61     | Abbey Park                                                                                                    | 8           | 17            | 0          | 36            | 61     |
| Grange Road W                                                                                                 | 31          | 393           | 13         | 0             | 437    | Grange Road W                                                                                                 | 62          | 469           | 43         | 0             | 574    |
| TOTALS                                                                                                        | 58          | 455           | 23         | 566           | 1102   | TOTALS                                                                                                        | 113         | 519           | 48         | 485           | 1165   |
| 2033 AM Peak                                                                                                  |             |               |            |               |        | 2033 PM Peak                                                                                                  |             |               |            |               |        |
| WITH SUBJECT DEVELOPMENT IN OPERATION<br>(surveyed + TII growth factor + committed dev. + subject dev.)       |             |               |            |               |        | WITH SUBJECT DEVELOPMENT IN OPERATION<br>(surveyed + TII growth factor + committed dev. + subject dev.)       |             |               |            |               |        |
| From \ To                                                                                                     | Grange Park | Grange Road E | Abbey Park | Grange Road W | TOTALS | From \ To                                                                                                     | Grange Park | Grange Road E | Abbey Park | Grange Road W | TOTALS |
| Grange Park                                                                                                   | 0           | 56            | 8          | 65            | 129    | Grange Park                                                                                                   | 0           | 33            | 1          | 48            | 82     |
| Grange Road E                                                                                                 | 24          | 0             | 2          | 454           | 480    | Grange Road E                                                                                                 | 43          | 0             | 4          | 414           | 461    |
| Abbey Park                                                                                                    | 3           | 6             | 0          | 52            | 61     | Abbey Park                                                                                                    | 8           | 17            | 0          | 37            | 62     |
| Grange Road W                                                                                                 | 32          | 404           | 13         | 0             | 449    | Grange Road W                                                                                                 | 63          | 478           | 44         | 0             | 585    |
| TOTALS                                                                                                        | 59          | 466           | 23         | 571           | 1118   | TOTALS                                                                                                        | 114         | 528           | 49         | 500           | 1190   |
| 2043 AM Peak                                                                                                  |             |               |            |               |        | 2043 PM Peak                                                                                                  |             |               |            |               |        |
| WITHOUT SUBJECT DEVELOPMENT<br>(surveyed flows + TII growth factor + committed development)                   |             |               |            |               |        | WITHOUT SUBJECT DEVELOPMENT<br>(surveyed flows + TII growth factor + committed development)                   |             |               |            |               |        |
| From \ To                                                                                                     | Grange Park | Grange Road E | Abbey Park | Grange Road W | TOTALS | From \ To                                                                                                     | Grange Park | Grange Road E | Abbey Park | Grange Road W | TOTALS |
| Grange Park                                                                                                   | 0           | 59            | 8          | 67            | 134    | Grange Park                                                                                                   | 0           | 35            | 1          | 49            | 85     |
| Grange Road E                                                                                                 | 25          | 0             | 2          | 472           | 499    | Grange Road E                                                                                                 | 45          | 0             | 5          | 420           | 470    |
| Abbey Park                                                                                                    | 3           | 6             | 0          | 54            | 63     | Abbey Park                                                                                                    | 8           | 17            | 0          | 38            | 63     |
| Grange Road W                                                                                                 | 32          | 412           | 14         | 0             | 458    | Grange Road W                                                                                                 | 65          | 491           | 45         | 0             | 601    |
| TOTALS                                                                                                        | 60          | 477           | 24         | 593           | 1154   | TOTALS                                                                                                        | 118         | 543           | 51         | 507           | 1219   |
| 2043 AM Peak                                                                                                  |             |               |            |               |        | 2043 PM Peak                                                                                                  |             |               |            |               |        |
| WITH SUBJECT DEVELOPMENT IN OPERATION<br>(surveyed + TII growth factor + committed dev. + subject dev.)       |             |               |            |               |        | WITH SUBJECT DEVELOPMENT IN OPERATION<br>(surveyed + TII growth factor + committed dev. + subject dev.)       |             |               |            |               |        |
| From \ To                                                                                                     | Grange Park | Grange Road E | Abbey Park | Grange Road W | TOTALS | From \ To                                                                                                     | Grange Park | Grange Road E | Abbey Park | Grange Road W | TOTALS |
| Grange Park                                                                                                   | 0           | 59            | 8          | 68            | 135    | Grange Park                                                                                                   | 0           | 35            | 1          | 50            | 86     |
| Grange Road E                                                                                                 | 25          | 0             | 2          | 476           | 503    | Grange Road E                                                                                                 | 45          | 0             | 5          | 432           | 482    |
| Abbey Park                                                                                                    | 3           | 6             | 0          | 54            | 63     | Abbey Park                                                                                                    | 8           | 17            | 0          | 39            | 64     |
| Grange Road W                                                                                                 | 33          | 423           | 14         | 0             | 470    | Grange Road W                                                                                                 | 66          | 500           | 46         | 0             | 612    |
| TOTALS                                                                                                        | 61          | 488           | 24         | 598           | 1170   | TOTALS                                                                                                        | 119         | 552           | 52         | 522           | 1244   |

J1 Peak Hour Traffic Flow Matrices (Passenger Car Units)

| 2025 AM Peak (08:00-09:00) |    |                       |               |        |        |        | 2025 PM Peak (16:15-17:15) |    |                       |               |        |        |        |
|----------------------------|----|-----------------------|---------------|--------|--------|--------|----------------------------|----|-----------------------|---------------|--------|--------|--------|
| SURVEYED TRAFFIC FLOWS     |    |                       |               |        |        |        | SURVEYED TRAFFIC FLOWS     |    |                       |               |        |        |        |
| From                       | To | Hole in the Wall Road | Grange Road E | R809 S | R139 W | TOTALS | From                       | To | Hole in the Wall Road | Grange Road E | R809 S | R139 W | TOTALS |
| Hole in the Wall Road      |    | 23                    | 149           | 361    | 97     | 630    | Hole in the Wall Road      |    | 15                    | 127           | 314    | 137    | 593    |
| Grange Road E              |    | 82                    | 0             | 205    | 338    | 625    | Grange Road E              |    | 105                   | 1             | 203    | 449    | 758    |
| R809 S                     |    | 287                   | 200           | 0      | 317    | 804    | R809 S                     |    | 354                   | 190           | 1      | 291    | 836    |
| R139 W                     |    | 116                   | 450           | 290    | 1      | 857    | R139 W                     |    | 118                   | 321           | 295    | 0      | 734    |
| TOTALS                     |    | 508                   | 799           | 856    | 753    | 2916   | TOTALS                     |    | 592                   | 639           | 813    | 877    | 2921   |

| 2026 AM Peak                                                |    |                       |               |        |        |        | 2026 PM Peak                                                |    |                       |               |        |        |        |
|-------------------------------------------------------------|----|-----------------------|---------------|--------|--------|--------|-------------------------------------------------------------|----|-----------------------|---------------|--------|--------|--------|
| BASELINE TRAFFIC FLOWS (surveyed flows + TII growth factor) |    |                       |               |        |        |        | BASELINE TRAFFIC FLOWS (surveyed flows + TII growth factor) |    |                       |               |        |        |        |
| From                                                        | To | Hole in the Wall Road | Grange Road E | R809 S | R139 W | TOTALS | From                                                        | To | Hole in the Wall Road | Grange Road E | R809 S | R139 W | TOTALS |
| Hole in the Wall Road                                       |    | 23                    | 151           | 367    | 99     | 640    | Hole in the Wall Road                                       |    | 15                    | 129           | 319    | 139    | 602    |
| Grange Road E                                               |    | 83                    | 0             | 208    | 343    | 634    | Grange Road E                                               |    | 107                   | 1             | 206    | 456    | 770    |
| R809 S                                                      |    | 292                   | 203           | 0      | 322    | 817    | R809 S                                                      |    | 360                   | 193           | 1      | 296    | 850    |
| R139 W                                                      |    | 118                   | 457           | 295    | 1      | 871    | R139 W                                                      |    | 120                   | 326           | 300    | 0      | 746    |
| TOTALS                                                      |    | 516                   | 811           | 870    | 765    | 2962   | TOTALS                                                      |    | 602                   | 649           | 826    | 891    | 2968   |

| 2027 AM Peak                      |    |                       |               |        |        |        | 2027 PM Peak                      |    |                       |               |        |        |        |
|-----------------------------------|----|-----------------------|---------------|--------|--------|--------|-----------------------------------|----|-----------------------|---------------|--------|--------|--------|
| Other committed development flows |    |                       |               |        |        |        | Other committed development flows |    |                       |               |        |        |        |
| From                              | To | Hole in the Wall Road | Grange Road E | R809 S | R139 W | TOTALS | From                              | To | Hole in the Wall Road | Grange Road E | R809 S | R139 W | TOTALS |
| Hole in the Wall Road             |    | 0                     | 9             | 0      | 0      | 9      | Hole in the Wall Road             |    | 0                     | 20            | 0      | 0      | 20     |
| Grange Road E                     |    | 10                    | 0             | 26     | 43     | 79     | Grange Road E                     |    | 8                     | 0             | 15     | 33     | 56     |
| R809 S                            |    | 0                     | 12            | 0      | 0      | 12     | R809 S                            |    | 0                     | 30            | 0      | 0      | 30     |
| R139 W                            |    | 0                     | 26            | 0      | 0      | 26     | R139 W                            |    | 0                     | 50            | 0      | 0      | 50     |
| TOTALS                            |    | 10                    | 46            | 26     | 43     | 126    | TOTALS                            |    | 8                     | 100           | 15     | 33     | 155    |

| 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 | Hole in the Wall Road | Grange Road E | R809 S | R139 W | TOTALS | From                                                                                     | To | Hole in the Wall Road | Grange Road E | R809 S | R139 W | TOTALS |
| Hole in the Wall Road                                                                    |    | 24                    | 162           | 373    | 100    | 659    | Hole in the Wall Road                                                                    |    | 15                    | 151           | 324    | 141    | 631    |
| Grange Road E                                                                            |    | 95                    | 0             | 238    | 392    | 725    | Grange Road E                                                                            |    | 116                   | 1             | 224    | 497    | 838    |
| R809 S                                                                                   |    | 296                   | 218           | 0      | 327    | 841    | R809 S                                                                                   |    | 366                   | 226           | 1      | 301    | 894    |
| R139 W                                                                                   |    | 120                   | 491           | 299    | 1      | 911    | R139 W                                                                                   |    | 122                   | 382           | 305    | 0      | 809    |
| TOTALS                                                                                   |    | 535                   | 871           | 910    | 820    | 3136   | TOTALS                                                                                   |    | 619                   | 760           | 854    | 939    | 3172   |

| 2027 AM Peak                                  |    |                       |               |        |        |        | 2027 PM Peak                                  |    |                       |               |        |        |        |
|-----------------------------------------------|----|-----------------------|---------------|--------|--------|--------|-----------------------------------------------|----|-----------------------|---------------|--------|--------|--------|
| SUBJECT DEVELOPMENT FLOWS - CONSTRUCTION PEAK |    |                       |               |        |        |        | SUBJECT DEVELOPMENT FLOWS - CONSTRUCTION PEAK |    |                       |               |        |        |        |
| From                                          | To | Hole in the Wall Road | Grange Road E | R809 S | R139 W | TOTALS | From                                          | To | Hole in the Wall Road | Grange Road E | R809 S | R139 W | TOTALS |
| Hole in the Wall Road                         |    |                       |               |        |        | 0      | Hole in the Wall Road                         |    |                       |               |        |        | 0      |
| Grange Road E                                 |    |                       |               |        |        | 0      | Grange Road E                                 |    |                       |               |        |        | 0      |
| R809 S                                        |    |                       |               |        |        | 0      | R809 S                                        |    |                       |               |        |        | 0      |
| R139 W                                        |    |                       |               |        |        | 0      | R139 W                                        |    |                       |               |        |        | 0      |
| TOTALS                                        |    | 0                     | 0             | 0      | 0      | 0      | TOTALS                                        |    | 0                     | 0             | 0      | 0      | 0      |

| 2027 AM Peak                                                                                               |    |                       |               |        |        |        | 2027 PM Peak                                                                                               |    |                       |               |        |        |        |
|------------------------------------------------------------------------------------------------------------|----|-----------------------|---------------|--------|--------|--------|------------------------------------------------------------------------------------------------------------|----|-----------------------|---------------|--------|--------|--------|
| WITH SUBJECT DEVELOPMENT UNDER CONSTRUCTION (surveyed + TII growth factor + committed dev. + subject dev.) |    |                       |               |        |        |        | WITH SUBJECT DEVELOPMENT UNDER CONSTRUCTION (surveyed + TII growth factor + committed dev. + subject dev.) |    |                       |               |        |        |        |
| From                                                                                                       | To | Hole in the Wall Road | Grange Road E | R809 S | R139 W | TOTALS | From                                                                                                       | To | Hole in the Wall Road | Grange Road E | R809 S | R139 W | TOTALS |
| Hole in the Wall Road                                                                                      |    | 24                    | 162           | 373    | 100    | 659    | Hole in the Wall Road                                                                                      |    | 15                    | 151           | 324    | 141    | 631    |
| Grange Road E                                                                                              |    | 95                    | 0             | 238    | 392    | 725    | Grange Road E                                                                                              |    | 116                   | 1             | 224    | 497    | 838    |
| R809 S                                                                                                     |    | 296                   | 218           | 0      | 327    | 841    | R809 S                                                                                                     |    | 366                   | 226           | 1      | 301    | 894    |
| R139 W                                                                                                     |    | 120                   | 491           | 299    | 1      | 911    | R139 W                                                                                                     |    | 122                   | 382           | 305    | 0      | 809    |
| TOTALS                                                                                                     |    | 535                   | 871           | 910    | 820    | 3136   | TOTALS                                                                                                     |    | 619                   | 760           | 854    | 939    | 3172   |

| 2028 AM Peak                                                                             |    |                       |               |        |        |        | 2028 PM Peak                                                                             |    |                       |               |        |        |        |
|------------------------------------------------------------------------------------------|----|-----------------------|---------------|--------|--------|--------|------------------------------------------------------------------------------------------|----|-----------------------|---------------|--------|--------|--------|
| WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development) |    |                       |               |        |        |        | WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development) |    |                       |               |        |        |        |
| From                                                                                     | To | Hole in the Wall Road | Grange Road E | R809 S | R139 W | TOTALS | From                                                                                     | To | Hole in the Wall Road | Grange Road E | R809 S | R139 W | TOTALS |
| Hole in the Wall Road                                                                    |    | 24                    | 165           | 379    | 102    | 670    | Hole in the Wall Road                                                                    |    | 16                    | 153           | 330    | 144    | 643    |
| Grange Road E                                                                            |    | 96                    | 0             | 241    | 398    | 735    | Grange Road E                                                                            |    | 118                   | 1             | 228    | 504    | 851    |
| R809 S                                                                                   |    | 301                   | 221           | 0      | 333    | 855    | R809 S                                                                                   |    | 371                   | 229           | 1      | 305    | 906    |
| R139 W                                                                                   |    | 122                   | 498           | 304    | 1      | 925    | R139 W                                                                                   |    | 124                   | 387           | 310    | 0      | 821    |
| TOTALS                                                                                   |    | 543                   | 884           | 924    | 834    | 3185   | TOTALS                                                                                   |    | 629                   | 770           | 869    | 953    | 3221   |

| 2028 AM Peak                                  |    |                       |               |        |        |        | 2028 PM Peak                                  |    |                       |               |        |        |        |
|-----------------------------------------------|----|-----------------------|---------------|--------|--------|--------|-----------------------------------------------|----|-----------------------|---------------|--------|--------|--------|
| SUBJECT DEVELOPMENT FLOWS - OPERATIONAL PHASE |    |                       |               |        |        |        | SUBJECT DEVELOPMENT FLOWS - OPERATIONAL PHASE |    |                       |               |        |        |        |
| From                                          | To | Hole in the Wall Road | Grange Road E | R809 S | R139 W | TOTALS | From                                          | To | Hole in the Wall Road | Grange Road E | R809 S | R139 W | TOTALS |
| Hole in the Wall Road                         |    | 0                     | 3             | 0      | 0      | 3      | Hole in the Wall Road                         |    | 0                     | 7             | 0      | 0      | 7      |
| Grange Road E                                 |    | 4                     | 0             | 11     | 18     | 33     | Grange Road E                                 |    | 2                     | 0             | 5      | 10     | 17     |
| R809 S                                        |    | 0                     | 4             | 0      | 0      | 4      | R809 S                                        |    | 0                     | 11            | 0      | 0      | 11     |
| R139 W                                        |    | 0                     | 10            | 0      | 0      | 10     | R139 W                                        |    | 0                     | 18            | 0      | 0      | 18     |
| TOTALS                                        |    | 4                     | 17            | 11     | 18     | 50     | TOTALS                                        |    | 2                     | 36            | 5      | 10     | 53     |

| 2028 AM Peak                                                                                         |    |                       |               |        |        |        | 2028 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 | Hole in the Wall Road | Grange Road E | R809 S | R139 W | TOTALS | From                                                                                                 | To | Hole in the Wall Road | Grange Road E | R809 S | R139 W | TOTALS |
| Hole in the Wall Road                                                                                |    | 24                    | 168           | 379    | 102    | 673    | Hole in the Wall Road                                                                                |    | 16                    | 160           | 330    | 144    | 650    |
| Grange Road E                                                                                        |    | 100                   | 0             | 252    | 416    | 768    | Grange Road E                                                                                        |    | 120                   | 1             | 233    | 514    | 868    |
| R809 S                                                                                               |    | 301                   | 225           | 0      | 333    | 859    | R809 S                                                                                               |    | 371                   | 240           | 1      | 305    | 917    |
| R139 W                                                                                               |    | 122                   | 508           | 304    | 1      | 935    | R139 W                                                                                               |    | 124                   | 405           | 310    | 0      | 839    |
| TOTALS                                                                                               |    | 547                   | 901           | 935    | 852    | 3235   | TOTALS                                                                                               |    | 631                   | 806           | 874    | 963    | 3274   |

| 2033 AM Peak                                                                             |    |                       |               |        |        |        | 2033 PM Peak                                                                             |    |                       |               |        |        |        |
|------------------------------------------------------------------------------------------|----|-----------------------|---------------|--------|--------|--------|------------------------------------------------------------------------------------------|----|-----------------------|---------------|--------|--------|--------|
| WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development) |    |                       |               |        |        |        | WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development) |    |                       |               |        |        |        |
| From                                                                                     | To | Hole in the Wall Road | Grange Road E | R809 S | R139 W | TOTALS | From                                                                                     | To | Hole in the Wall Road | Grange Road E | R809 S | R139 W | TOTALS |
| Hole in the Wall Road                                                                    |    | 25                    | 173           | 397    | 107    | 702    | Hole in the Wall Road                                                                    |    | 17                    | 160           | 346    | 151    | 674    |
| Grange Road E                                                                            |    | 101                   | 0             | 252    | 415    | 768    | Grange Road E                                                                            |    | 123                   | 1             | 238    | 527    | 889    |
| R809 S                                                                                   |    | 316                   | 232           | 0      | 349    | 897    | R809 S                                                                                   |    | 390                   | 239           | 1      | 320    | 950    |
| R139 W                                                                                   |    | 128                   | 521           | 319    | 1      | 969    | R139 W                                                                                   |    | 130                   | 403           | 325    | 0      | 858    |
| TOTALS                                                                                   |    | 570                   | 926           | 968    | 872    | 3336   | TOTALS                                                                                   |    | 660                   | 803           | 910    | 998    | 3371   |

| 2033 AM Peak                                                                                         |    |                       |               |        |        |        | 2033 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 | Hole in the Wall Road | Grange Road E | R809 S | R139 W | TOTALS | From                                                                                                 | To | Hole in the Wall Road | Grange Road E | R809 S | R139 W | TOTALS |
| Hole in the Wall Road                                                                                |    | 25                    | 176           | 397    | 107    | 705    | Hole in the Wall Road                                                                                |    | 17                    | 167           | 346    | 151    | 681    |
| Grange Road E                                                                                        |    | 105                   | 0             | 263    | 433    | 801    | Grange Road E                                                                                        |    | 125                   | 1             | 243    | 537    | 906    |
| R809 S                                                                                               |    | 316                   | 236           | 0      | 349    | 901    | R809 S                                                                                               |    | 390                   | 250           | 1      | 320    | 961    |
| R139 W                                                                                               |    | 128                   | 531           | 319    | 1      | 979    | R139 W                                                                                               |    | 130                   | 421           | 325    | 0      | 876    |
| TOTALS                                                                                               |    | 574                   | 943           | 979    | 890    | 3386   | TOTALS                                                                                               |    | 662                   | 839           | 915    | 1008   | 3424   |

| 2043 AM Peak                                                                             |    |                       |               |        |        |        | 2043 PM Peak                                                                             |    |                       |               |        |        |        |
|------------------------------------------------------------------------------------------|----|-----------------------|---------------|--------|--------|--------|------------------------------------------------------------------------------------------|----|-----------------------|---------------|--------|--------|--------|
| WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development) |    |                       |               |        |        |        | WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development) |    |                       |               |        |        |        |
| From                                                                                     | To | Hole in the Wall Road | Grange Road E | R809 S | R139 W | TOTALS | From                                                                                     | To | Hole in the Wall Road | Grange Road E | R809 S | R139 W | TOTALS |
| Hole in the Wall Road                                                                    |    | 27                    | 181           | 417    | 112    | 737    | Hole in the Wall Road                                                                    |    | 17                    | 167           | 363    | 158    | 705    |
| Grange Road E                                                                            |    | 105                   | 0             | 263    | 433    | 801    | Grange Road E                                                                            |    | 129                   | 1             | 249    | 552    | 931    |
| R809 S                                                                                   |    | 332                   | 243           | 0      | 366    | 941    | R809 S                                                                                   |    | 409                   | 249           | 1      | 336    | 995    |
| R139 W                                                                                   |    | 134                   | 546           | 335    | 1      | 1016   | R139 W                                                                                   |    | 136                   | 421           | 341    | 0      | 898    |
| TOTALS                                                                                   |    | 598                   | 970           | 1015   | 912    | 3495   | TOTALS                                                                                   |    | 691                   | 838           | 954    | 1046   | 3529   |

| 2043 AM Peak                                                                                         |    |                       |               |        |        |        | 2043 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 | Hole in the Wall Road | Grange Road E | R809 S | R139 W | TOTALS | From                                                                                                 | To | Hole in the Wall Road | Grange Road E | R809 S | R139 W | TOTALS |
| Hole in the Wall Road                                                                                |    | 27                    | 184           | 417    | 112    | 740    | Hole in the Wall Road                                                                                |    | 17                    | 174           | 363    | 158    | 712    |
| Grange Road E                                                                                        |    | 109                   | 0             | 274    | 451    | 834    | Grange Road E                                                                                        |    | 131                   | 1             | 254    | 562    | 948    |
| R809 S                                                                                               |    | 332                   | 247           | 0      | 366    | 945    | R809 S                                                                                               |    | 409                   | 260           | 1      | 336    | 1006   |
| R139 W                                                                                               |    | 134                   | 556           | 335    | 1      | 1026   | R139 W                                                                                               |    | 136                   | 439           | 341    | 0      | 916    |
| TOTALS                                                                                               |    | 602                   | 987           | 1026   | 930    | 3545   | TOTALS                                                                                               |    | 693                   | 874           | 959    | 1056   | 3582   |