Proposed LRD at Taylors Lane, Ballyboden, Dublin 16

Traffic and Transport Assessment

190068-X-X-XXX-X-RP-DBFL-CE-0003

TRANSPORTATION



March 2023

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1 INTRODUCTION

1.1 BACKGROUND

DBFL Consulting Engineers (DBFL) have been commissioned to prepare a Traffic and Transport Assessment (TTA) for a proposed Large Residential Development at a site located on Taylor's Lane in Ballyboden, Dublin 16 on a site of net area c. 3.5ha comprising the following:

- Demolition of existing former Institutional buildings and associated outbuildings (c.5,231 sq.m);
- Construction of 402 residential units within 3 apartment/duplex blocks ranging in height from 2-5 storeys and comprising of 39 no. 1-Beds; 302 no. 2-Beds; and 61 no. 3-Beds all with associated private balconies/terraces to the north/south/east/west elevations;
    - Provision of one crèche and two retail units.
    - Provision of 290 no. car parking spaces
    - Provision of 1054 no. cycle parking spaces
    - Vehicular access to the site via Edmondstown Road to the west.
    - Pedestrian Access to the site via Edmondstown Road to the west and Taylor's Lane to the north.
- The development proposal also includes the creation of a new vehicular and pedestrian access from the existing 3 arm signalised junction (Scholarstown Road / Ballyboden Road / Edmondstown Road) which will result in the upgrade of the junction to a four-arm signalised junction.

The report has been produced to address any potential concerns that the local planning authority may have pertaining to the level of influence of the proposed development upon the local transportation system.

During the development of this report, traffic turning count surveys have been commissioned specifically for this assessment, with the objective of providing background information relating to existing traffic movement patterns across the local road network. This information has been supplemented with data obtained from site audits of the local road network, subsequently

enabling the identification of existing local travel characteristics and an appreciation of the local receiving environment from a transportation perspective.

1.2 SCOPE

The purpose of this TTA is to quantify the existing transport environment and to detail the results of the assessment work undertaken to identify the potential level of transport impact generated as a result of the proposed residential development.

The scope of the assessment covers transport and sustainability issues including access, pedestrian, cyclist and public transport connections. Recommendations contained within this report are based on existing and proposed road layout plans, site visits, site traffic observations and junction survey data.

This TTA has been prepared in reference to the requirements of the Transport Infrastructure Ireland "Traffic and Transportation Assessment Guidelines". Reference has also been made to the South Dublin County Development Plan 2022-2028.

1.3 METHODOLOGY

Our approach to the study accords with policy and guidance both at a national and local level. Accordingly, the adopted methodology responds to best practices, current and emerging guidance, exemplified by a series of publications, all of which advocate this method of analysis. Key publications consulted include;

- *'Traffic and Transport Assessment Guidelines'* (May 2014) National Road Authority (TII);
- *'Traffic Management Guidelines'* Dublin Transportation Office & Department of the Environment and Local Government (May 2003);
- '*Guidelines for Traffic Impact Assessments'* The Institution of Highways and Transportation; and
- *South Dublin County Council Development Plan 2022-2028*.

Our methodology incorporated a number of key inter-related stages, including;

- **Background Review:** This important exercise incorporated three parallel tasks which included (a) an examination of the local regulatory and development management documentation; (b) an analysis of previous 'transport' related, strategic and site specific studies of development and transport infrastructure proposals across the Rathfarnham area, and (c) a review of planning applications to establish the legal status of various third party development schemes that were either considered within the strategic 'transport' studies or which have emerged and received full planning permission since.
- **Site Audit:** A site audit was undertaken to quantify existing road network issues and identify local infrastructure characteristics, in addition to establishing the level of accessibility to the site in terms of walking, cycling and public transport. An inventory of the local road network was also developed during this stage of the assessment.
- **Traffic Counts:** Junction traffic counts in addition to vehicle queue length surveys were undertaken and analysed with the objective of establishing local traffic characteristics in the immediate area of the proposed commercial development.
- **Trip Generation:** A trip generation exercise has been carried out to establish the potential level of vehicle trips generated by the proposed commercial development.
- **Trip Distribution:** Based upon both the existing and future network characteristics, a distribution exercise has been undertaken to assign site generated vehicle trips across the local road network.
- **Network Analysis:** Further to quantifying the predicted impact of vehicle movements across the local road network for the adopted site access strategy more detailed computer simulations have been undertaken to assess the operational performance of key junctions in the post development 2025, 2030 and 2040 development scenarios.

1.4 REPORT STRUCTURE

Section 2 of this report describes the existing conditions at the proposed development location and immediate surrounding area including public transport capacity, whilst the relevant transport policies that influence the design and appraisal of the subject residential development proposals are highlighted within **Section 3**.

A summary of the principal characteristics of the proposed residential development is provided in **Section 4.**

Section 5 outlines the trip generation exercise carried out and the adopted methodology for applying growth factors to establish design year network traffic flows.

The potential traffic impact of the proposals as assessed for the adopted 2025 Opening Year and the Horizon Year of 2030 and 2040 are summarised within **Section 6.**

Analysis of the impact on the proposed signalised junction, as well as the mitigation measures for this impact is completed in **Section 7**

The Construction Phase is described in **Section 8** of this report.

The main conclusions and recommendations derived from the analysis are summarised in **Section 9.**

1.5 PRE-APPLICATION CONSULTATION

As part of the Large-scale Residential Development (LRD) process a pre-application S247 consultation was undertaken (date: 4th March 2022). A subsequent Stage 2 LRD meeting was then held (date: 11th November 2022) following which, South Dublin County Council (SDCC) prepared a written Opinion on the Stage 2 submission for the Proposed LRD at Taylors Lane (SDCC LRD Ref. No: LRDOP003/22).

The SDCC Opinion included a number of points from the SDCC Transportation Planning Division, as well as the Roads Division, which identified a number of transport items to be addressed in the final submission. The following summarises the key traffic and transportation items raised within the SDCC Opinion (in orange text) and how these have been addressed within the final planning application:

1.5.1 Response to 'Sustainable Movement'

1. *The data used to generate traffic assessments (TRICS), and its UK, rather than Irish, focus*

TRICS calculations were carried out for both the residential units, the retail unit, and the creche. TRICS data is primarily UK-based, although a number of Irish sites are included. The use of the TRICS database is an industry accepted practice in Ireland for trip generation.

Notwithstanding the above, internal research undertaken by TRICS has shown that there is no direct evidence of trip rate variation by country or region. The use of English, Scottish or Welsh

data can be equally applicable to Ireland if users take into account important site selection filtering factors such as levels of population, location type, local public transport provision, and development size and car ownership level, amongst others.

Data supplied for inclusion in TRICS undergoes a procedure of validation testing, and there is no evidence from this procedure suggesting that data from Ireland bears any significant fundamental differences to that from the other countries included. Consequently, we consider that TRICS will provide a reasonable indication of traffic generation from the proposed development.

2. *The capacity of public transport and its ability to serve the development, and reduce car parking requirements, suggested the applicant include example(s) of where bus routes/scheduling has changed following delivery of housing.*

Following the construction of a number of residential developments in Adamstown, and as part of the BusConnects rollout, new bus services were introduced to the area. The changes including the introduction of 5 new routes, and the increasing of frequencies of the existing services. The differences can be seen below:

Previous Services: (up to 28th November 2021)

- 25B
- 25D

Newly Introduced Services (from 28th November 2021)

- C1
- C2 (Previously 25B)
- L51
- L52
- L53
- P29 (Previously 25D)
- X30

Similarly with the introduction of new BusConnects services near the proposed development, the number of bus services (during both AM and PM Peak Period) at the nearest 4 bus stops to the subject site will increase by 29%. These BusConnects routes in Ballyboden are due to become operational in 2024. Please refer to **Section 2.6.3** for further information.

3. *SDCC Roads Department wish to reduce the number of car parking spaces to 290 no. spaces. This is a spaces per unit ratio of 0.72.*

The total car parking provision for the subject development has been reduced from 320 spaces to 290 spaces as per SDCC recommendation. Please refer to **Section 4.1.6** of the TTA for further information.

4. *Bicycle parking is acceptable, with 1,144 no. spaces proposed. All outdoor bicycle parking spaces must be covered and shall be constructed in line with National Cycle Manual standards.*

The cycle parking provision has been provided in line with SDCC Cycle Parking standard set out in SDCC Development Plan 2022-2028. For further information refer to **Section 4.1.3** of the TTA or **Section 3** of the Parking Strategy. The surface cycle parking has been updated and a large proportion of the cycle parking are now covered, with the exception of certain cycle parking locations where the shelter would obscure windows and balconies. For further information on the surface level cycle parking refer to **Section 3.1** of the Parking Strategy Report.

5. *A Taking in Charge drawing will be required.*

A Taking in Charge drawing has been prepared by MCORM and has been included in the Planning Application package. Refer to MCORM Drawing No.PL700.

6. *Prior to commencement of any works in the public domain, and in order to comply with The Roads Act 1993 Section 13 Paragraph 10, a Road Opening Licence must be secured from South Dublin County Council, Roads Maintenance Department. Permission to carry out works in the public realm must be agreed with economic development section of SDCC.*

A Road Opening License will be secured prior to commencement of any works in the public domain.

7. *A Stage 1 Road Safety Audit must be provided with the full application.*

A Stage 1 Road Safety Audit has been undertaken and is provided within the planning application package.

8. Traffic and Transport Assessment

a. The baseline for Trics shall be the estimated opening date of the proposed development, and the future growth dates should be adjusted accordingly.

The use of the TRICS database is an industry accepted practice in Ireland for trip generation. The TII Project Appraisal Guidelines (PAG) have been utilized to determine the traffic growth forecast rates. The traffic growth forecast rates within the PAG ensures local and regional variations and demographic patterns are accounted for. An Opening Year of 2025 has been assumed for this assessment. In accordance with TII Guidance, Future Design years (+5 and +15 years) of 2030 and 2040 have also been adopted. For further information regarding the TRICs and Traffic Growth rates refer to **Section 5** of this report.

b. Applicant to provide additional information on bus services and in particular the capacity of these bus services at peak morning and evening times.

A public transport capacity survey was undertaken by IDASO Ltd, a specialist data collection firm, on Wednesday the 9th of February 2023. The surveys were undertaken on 9th of February 2023 at the closest bus stops to the subject site. The residual capacity of the local bus network was found to be 75% during the AM Peak Period, and 71% during the PM Peak Period. For further information on the public transport surveys please refer to **Section 2.7** within the TTA and **Appendix E** for the raw survey data.

c. In the TTA, junction 2 (the roundabout) has not been analysed in detail. This junction is of particular importance to this scheme. Therefore, further detailed traffic analysis is important.

The Institute of Highways and Transportation document 'Guidelines for Traffic Impact Assessments' states that the impact of a proposed development upon the local road network is considered material when the level of traffic it generates surpasses **10% and 5% on normal and congested networks respectively**. When such levels of impact are generated, a more detailed assessment should be undertaken to ascertain the specific impact upon the network's operational performance. These same thresholds are reproduced in the TII document entitled Traffic and Transport Assessment Guidelines (2014).

The modelling of the proposed development was found to have a percentage impact of **less than 5%** on Junction 2 and so detailed analysis was not required.

However, as requested by SDCC, additional traffic assessment of Junction 2 (Taylor's Lane Roundabout) has been undertaken. For further information refer to **Section 7** of the TTA.

9. *The applicant shall design and deliver a fully operational 4-arm junction at the proposed development access at the Edmondstown, Scholarstown road junction along with any associated cycle, pedestrian and road link improvements.*

A fully operational 4-arm junction is proposed at the development access. Drawings of the junction can be found in DBFL Drawing **190068-X-04-Z00-XXX-DR-DBFL-CE-1203**. The proposed junction includes provision of new pedestrian and cycling facilities, which will tie in with any existing facilities. Further details of the subject development including the proposed junction can be found in **Section 4** of the TTA.

10. *The applicant shall ensure this proposed development ties in with any cycle lane improvements that are proposed by SDCC.*

Consultation has been undertaken with SDCC Active Travel Department, in terms of the Tallaght to Knocklyon Active Travel scheme. The Option Assessment/Preliminary Design for the Taylor's Lane Roundabout and Edmondstown Road is currently being undertaken. According to SDCC, a preferred design is not currently available.

11. *The applicant shall submit a revised layout of not less than 1:200 scale, showing a swept path analysis drawing (i.e., Autotrack or similar) demonstrating that fire tenders and large refuse vehicles can access/egress the site.*

Swept Path Analysis has been undertaken and demonstrates that fire tenders and large refuse vehicles can access/egress the site. The swept path analysis can be seen in DBFL Drawing 190068-X-04-Z00-XXX-DR-DBFL-CE-1201.

1.5.2 Response to 'CONCLUSIONS AND RECCOMENDATIONS' of the Opinion Report

1. *Consider the proposal in relation to traffic and transport, based on more relevant Irish Trics data, and with regard to planned cycle infrastructure upgrades*

Please refer to the response to **'Sustainable Movement' Observation 1.**

2. *While it is appreciated the level of bicycle parking that is proposed, there would be concerns about the safety and useability of the bicycle storage provided in the basement. Safe and easy access should be provided to bicycle storage, to maximise uptake of sustainable transport methods. In this regard, the applicant should provide further detail on drawings regarding how constant, safe, access would be provided to bike stores, noting most storage appears to be located behind vehicular car parking spaces, and might not*

be immediately visible in passing. Routes to accessing bike storage would be useful to provide, particularly in relation to the central storage area in the basement of Block B.

The cycle parking locations have been reviewed and updated, in particular the residential cycle parking within the basement, ensuring all cycle parking spaces are easily accessible. Refer to **Section 4.1.3** of the TTA and **Figures 3.1-3.4** within the Parking Strategy.

3. *In addition, applicants are requested to consider improvements to the pedestrian experience within or contiguous to Edmondstown Road between the labelled main entrance and main avenue into the development and the HSE primary care centre to the south. This linkage is likely to experience high footfall and the Planning Authority considers scope exists as part of the prospective development for its enhancement.*

The development includes a pedestrian access point to the southwest, which will provide access to Edmondstown Road and the Primary Health Centre located adjacent to the site. It is noted that the red line boundary of the site does not include the full length of existing footpath between the Primary Health Centre and the main vehicle access to the development. This may need to be discussed with SDCC at the compliance stage.

4. *Mobility Management Plan: Revised mode share calculations and car parking provision in light of the cycle infrastructure improvements and bus connects services at this location*

Updates have been applied to the Mobility Management Plan (issued at pre-planning Stage 2) to accurately reflect the targeted modal shift from private car journeys to sustainable modes of transport, in light of the proposed cycle infrastructure improvement (aforementioned SDCC Active Travel Scheme) and Busconnects proposals. This included reducing car journeys, and increasing the modal split for walking, cycling, and using public transport. Refer to **Section 7.2** of the TTA and **Section 7** of the MMP.

5. *Traffic and Transport Assessment*
   a. *Applicant to use a revised baseline for Trics using the expected opening date of the proposed development.*

Please refer to the response **to 'Sustainable Movement' Observation 8a.**

   b. *Provide Trics data based more on local Irish estate information*

Please refer to the response to **'Sustainable Movement' Observation 1.**

   c. *Additional information on bus services and capacity*

Please refer to the response to **'Sustainable Movement' Observation 8b.**

   d. *Detailed junction analysis of Junction 2 (roundabout Taylors Lane – Edmondstown Road*

Please refer to the response to **'Sustainable Movement' Observation 8c.**

6. *Stage 1 Road Safety Audit*

Please refer to the response to **'Sustainable Movement' Observation 7.**

7. *Layout Plan to show*
    a. *Reduced car parking provision*
    b. *A fully operational 4-arm junction at the proposed development access at the Edmondstown, Scholarstown*
    c. *Integration of proposals with SDCC cycle improvements*
    d. *EV Points*
    e. *Refuse Collection Points*
    f. *Swept Path Analysis demonstrating that fire tenders and large refuse vehicles can access/egress the site.*

The Layout Plan has been updated to include the above items.

8. *Mobility Management Plan*
    a. *Revised mode share calculations and car parking provision in light of the cycle infrastructure improvements and bus connects services at this location*

Please refer to the response to **'Conclusions and Recommendations' Observation 4.**

1.5.3 Response to SDCC Roads Department Report

1. *Roads wish to reduce the number of car parking spaces to 290no. spaces. This is a spaces per unit ratio of 0.72.*

Please refer to the response to **'Sustainable Movement' Observation 3.**

2. *The applicant shall design and deliver a fully operational 4-arm junction at the proposed development access at the Edmondstown, Scholarstown road junction along with any associated cycle, pedestrian and road link improvements.*

Please refer to the response to **'Sustainable Movement' Observation 9.**

3. *The applicant shall ensure this proposed development ties in with any cycle lane improvements that are proposed by SDCC.*

Please refer to the response to **'Sustainable Movement' Observation 10.**

4. *The applicant to use a revised baseline for Trics using the expected opening date of the proposed development.*

Please refer to the response to **'Sustainable Movement' Observation 8a.**

5. *The applicant to provide Trics data based more on local Irish estate information.*

Please refer to the response to '**Sustainable Movement' Observation 1.**

6. *The applicant to provide additional information on bus services and the capacity of these bus services at peak morning an evening times.*

Please refer to the response to **'Sustainable Movement' Observation 8b.**

7. *The applicant to provide revised a Traffic and Transport Assessment with detailed Junction analysis of Junction 2 (roundabout Taylors Lane –Edmondstown Road) in light of the proposed cycle track improvements.*

Please refer to the response to **'Sustainable Movement' Observation 8c.**

8. *The applicant shall revise its Mobility Management Plan and mode share calculations within that report and car parking provision in light of the cycle infrastructure improvements and bus connects services at this location.*

Please refer to the response to **'Conclusions and Recommendations' Observation 4.**

9. *SDCC suggest lowering the proposed car parking provision to circa 290no. spaces in light of the known sustainable infrastructure improvements in the area.*

Please refer to the response to **'Sustainable Movement' Observation 3.**

10. *The Applicant shall submit a Taking in Charge drawing with the full application.*

Please refer to the response to **'Sustainable Movement' Observation 5.**

11. *The applicant shall provide a Stage 1 Road Safety Audit.*

Please refer to the response to **'Sustainable Movement' Observation 7.**

12. *All outdoor bicycle parking spaces must be covered and shall be constructed in line with National Cycle Manual standards.*

Please refer to the response to '**Sustainable Movement' Observation 4**.

2 RECEIVING ENVIRONMENT

2.1 LAND USE

The proposed development site currently is unoccupied and consists of the old Good Counsel building and associated maintenance buildings. In the north and east areas of the site there is a large area of open space, which historically was a pitch and putt course.

The subject site is predominantly surrounded by residential housing, Boden Park in the west, Moyville to the south and Moyville Lawns and Ballyboden Crescent to the north of the subject site.

The South Dublin County (SDCC) Development Plan 2022-2028 allocates this land as being zoned RES-N *'To provide for new residential communities in accordance with approved area plans.*' A map of the nearby zoning can be seen in **Figure 2.1.**



Figure 2.1: SDCC Zoning Map in vicinity of site

2.2 LOCATION

The subject site is located within the Rathfarnham suburb of South Dublin. The subject lands are situated to the south of Taylor's Lane and east of the R115 Ballyboden Road/Edmondstown Road. The M50 junction 12 interchange is approximately 1.6km southwest of the subject proposed development.

The subject site is located within the C-Ring of the M50 and is approximately 9 km southwest of Dublin City Centre. The proposed development site is close to a number of neighbourhoods such as Knocklyon to the west (approx. 1.5km), Rathfarnham to the north (approx. 2.0 km) and Nutgrove to the northeast (approx. 2.1km).

The general location of the subject site in relation to the surrounding road network is illustrated in **Figure 2.2** below, whilst **Figure 2.3** shows the indicative extent of the subject site lands.

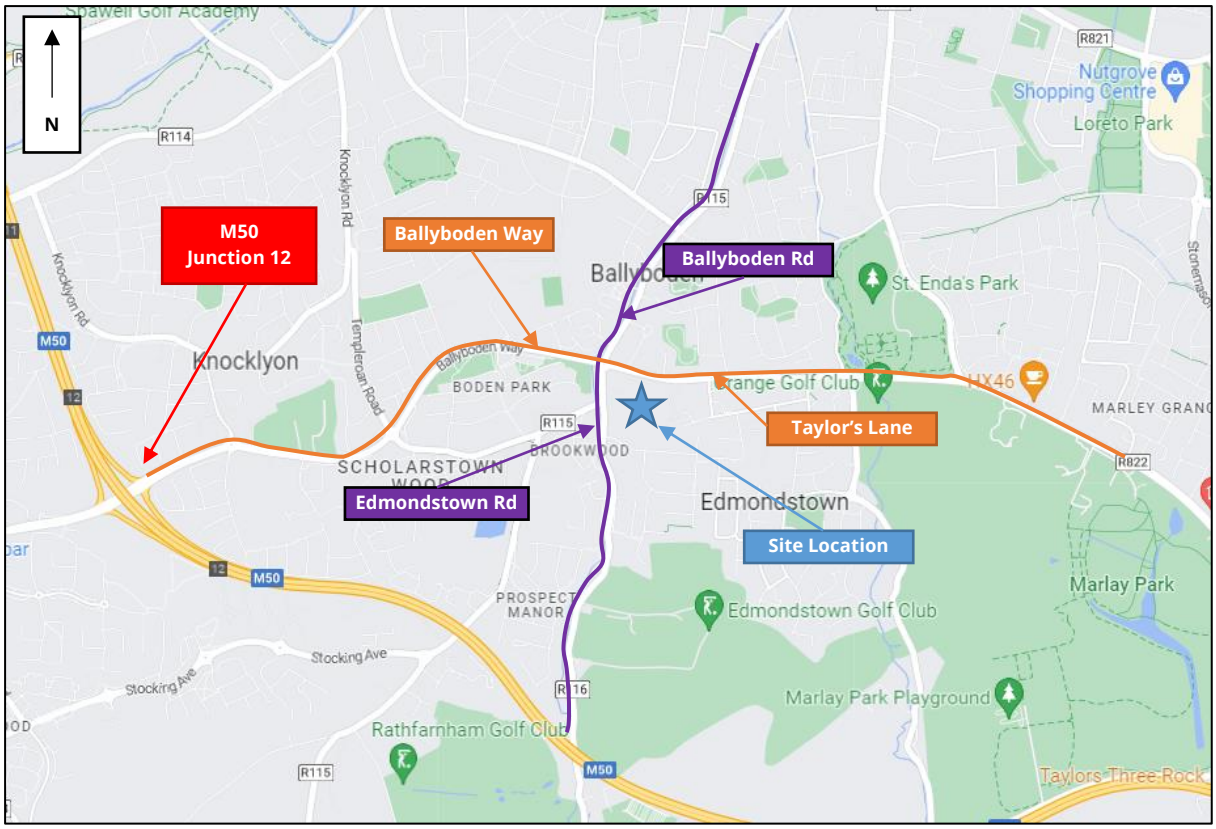


Figure 2.2: Site Location (Source : Google Maps)

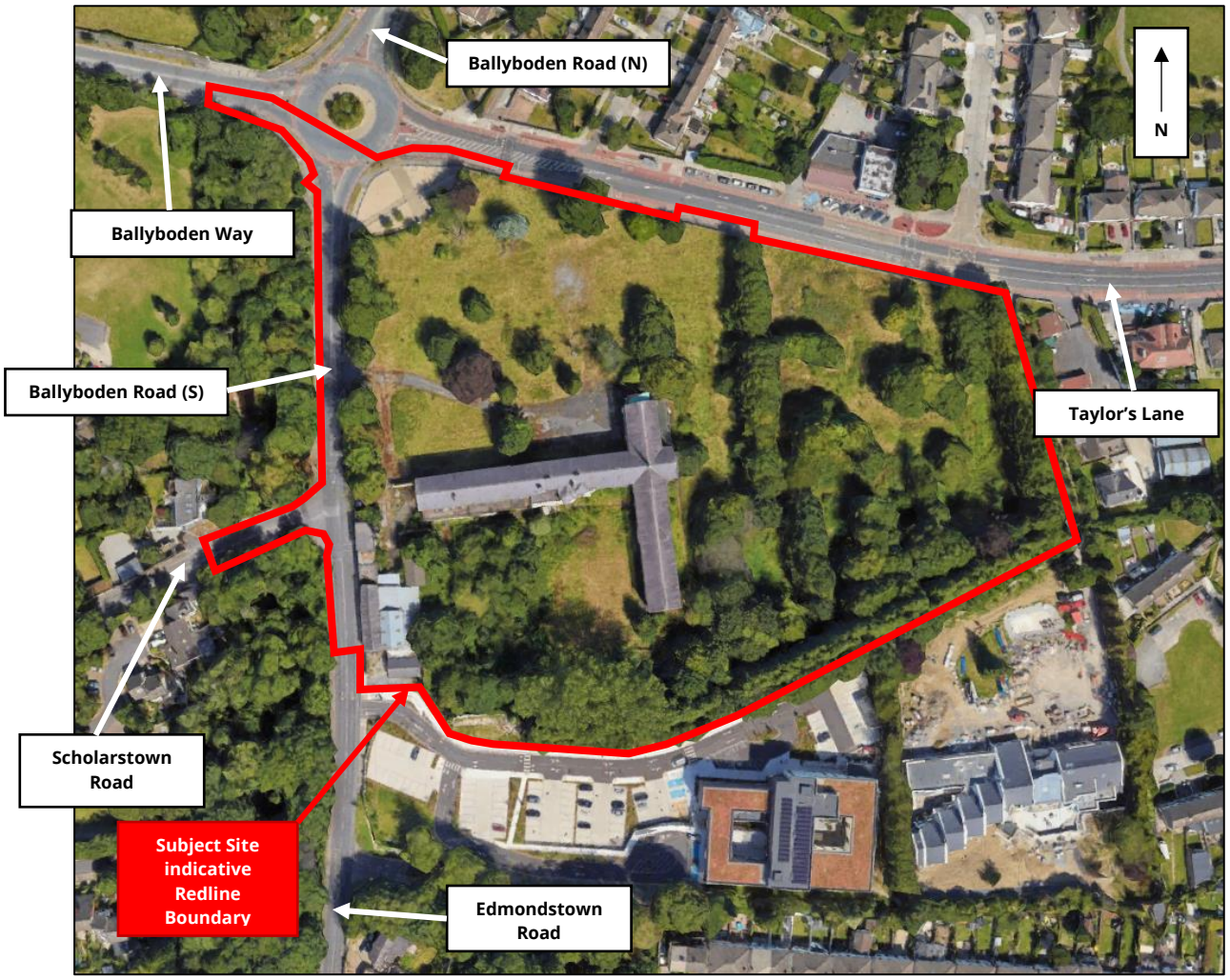


Figure 2.3: Subject Site Indicative Redline Boundary (Source: Google Maps)

2.3 EXISTING TRANSPORTATION INFRASTRUCTURE

2.3.1 Road Network

The subject development site is located immediately south of Taylor's Lane. Taylor's Lane is a wide single carriageway road with one lane in each direction which contains on road cycle lanes on both sides of the road. Travelling eastbound on Taylor's Lane leads to Sandyford and Dundrum whereas travelling westbound, Taylors Lane connects to Ballyboden Way and Scholarstown Road which provides a distributor function for the area and connects to the M50 west of the subject site. **Figure 2.4** overleaf illustrates the location of the subject site within the context of the existing road network.

- **Ballyboden Road (R115)** is regional road on the site's western boundary. Travelling northbound on the R115 leads to Rathfarnham and Dublin City Centre whereas

southbound leads to Junction 12 of M50 via Ballyboden Way and Scholarstown Road. Ballyboden Road transitions to Edmondstown Road on approach to Scholarstown Road/Edmondstown Road Junction. The speed limit along this road is 50 km/h.

- **Edmondstown Road (R116)** is also a regional road on the western boundary of the proposed development site. R116 connects the subject site to Edmondstown and Rockbrook and several other areas south of the subject site. The speed limit along this road is 50 km/h.
- **Scholarstown Road** extends from the Scholarstown Road/Edmondstown Road/Ballyboden Road three arm signalised junction which is proposed to be upgraded with the subject site access, becoming a four-arm signalised junction. Scholarstown Road connects the subject site to M50 as well as Knocklyon, Firhouse, Tallaght and several other areas. The speed limit along this road is 50 km/h.
- **The M50 junction 12** interchange is located approximately 1.6km west from the proposed site access. The subject site being in vicinity of the M50 further enhanced accessibility to the site.



Figure 2.4: Existing Road Network (Source: Google Maps)

2.3.2 Existing Pedestrian Facilities

All the immediate routes leading to and from the subject site benefit from the provision of street lighting and pedestrian footways. Taylor's Lane is a regional road with the speed limit of 50kph and incorporates dedicated footpaths on both sides of the road. It contains two signalized pedestrian crossings.

Edmondstown Road and Scholarstown Road are both regional roads with the speed limit of 50kph and pedestrian footways provided on both sides of the roads. Public lighting is provided on one side of the road. The Edmondstown Road/Scholarstown Road signalised junction which is in the immediate vicinity of the proposed site access contains pedestrian crossings on all arms. **Figure 2.5** to **Figure 2.8** illustrates pedestrian facilities along the roads surrounding the subject site.



Figure 2.5: Pedestrian Crossing Facilities in Vicinity of the Subject Site



Figure 2.6: Pedestrian Facilities along Taylors Lane (Facing West)

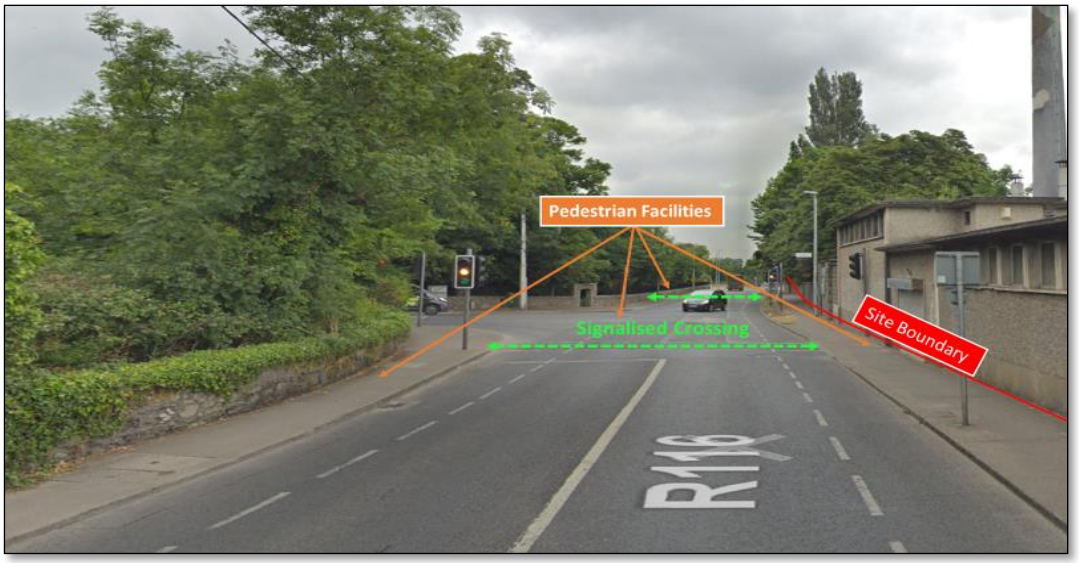


Figure 2.7: Pedestrian Facilities along Edmondstown Road (Facing North)

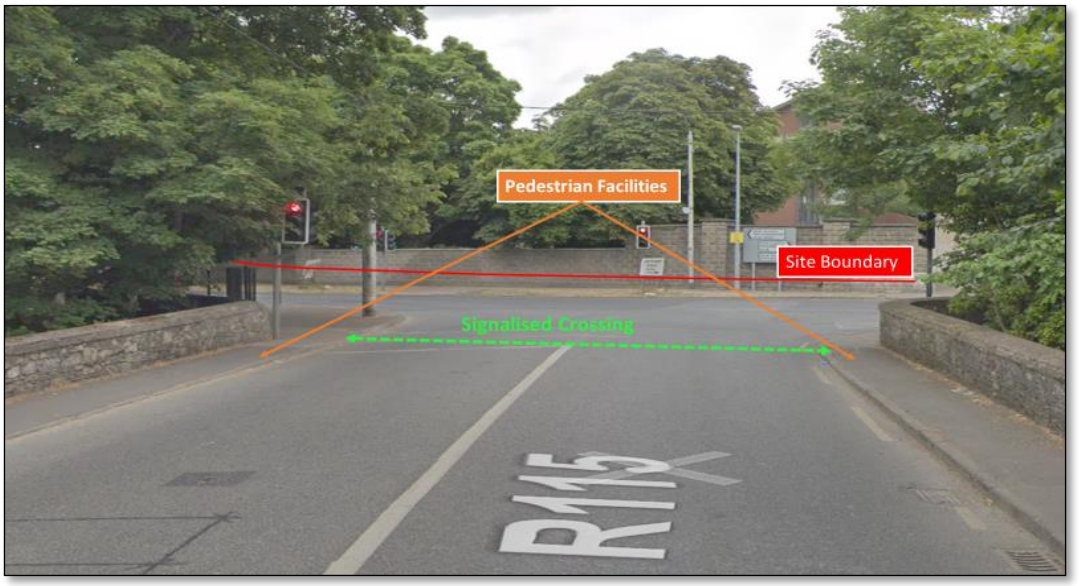


Figure 2.8: Pedestrian Facilities along Scholarstown Road (Facing East)

Existing walking time isochrones from the development site are shown in **Figure 2.9.** This illustrates the high levels of accessibility for pedestrians walking to/from the site. The walking time isochrones illustrates that a number of schools, retails and health centre are within a 15 minute walking distance from the subject site.

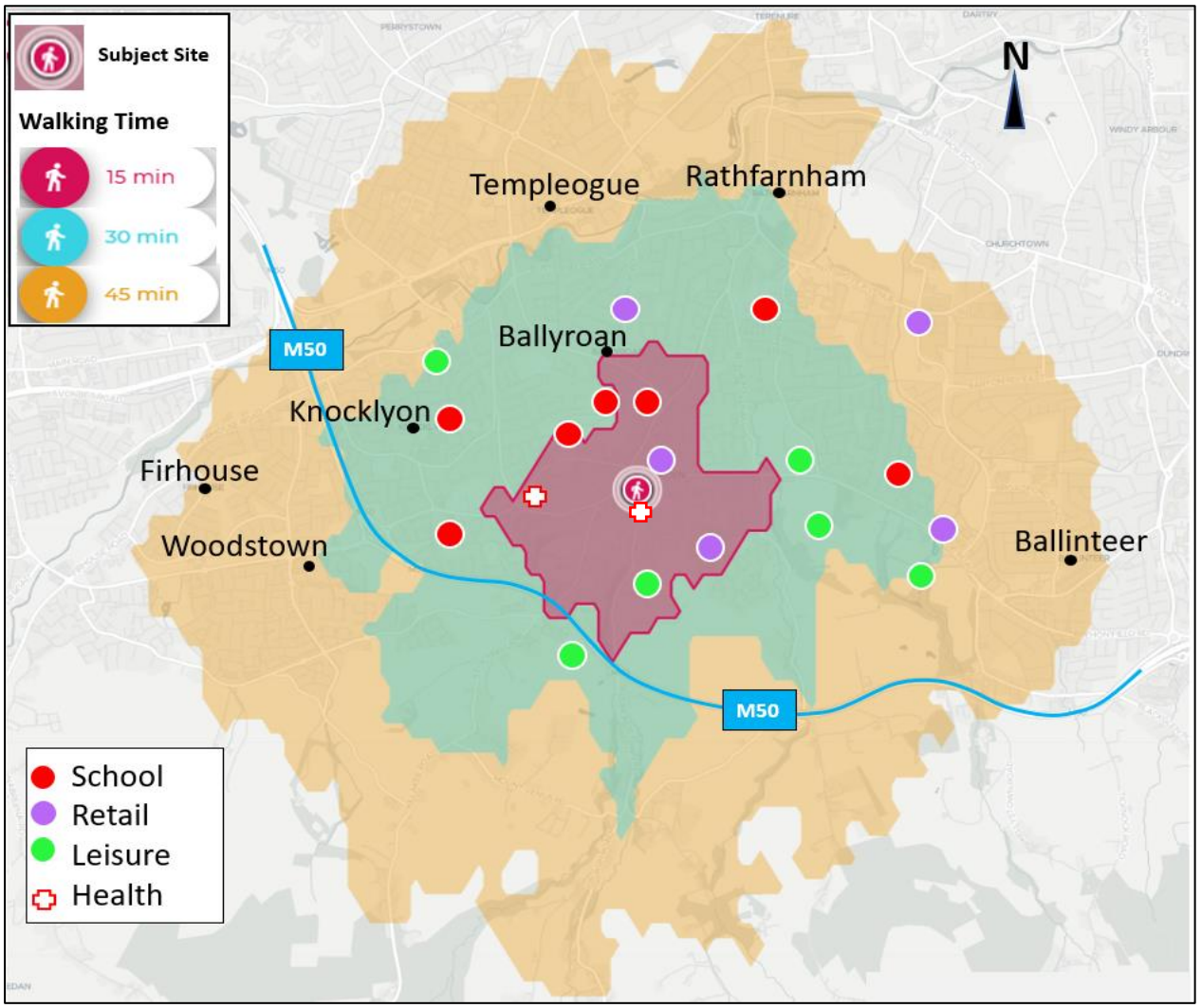


Figure 2.9: Walking Isochrones from the Subject Development Site

2.3.3 Existing Cycling Facilities

In the immediate vicinity of the subject site, cyclists benefit from existing cycle facilities along Taylor's Lane which contains mandatory cycle lanes on both sides. The cycle lanes continue through the roundabout on Ballyboden Way where they transition to a segregated cycle track heading westbound.

Edmondstown Road and Ballyboden Road provide advisory cycle lanes on both sides of the road carriageway.

These facilities are illustrated in **Figure 2.10** to **Figure 2.12** overleaf.

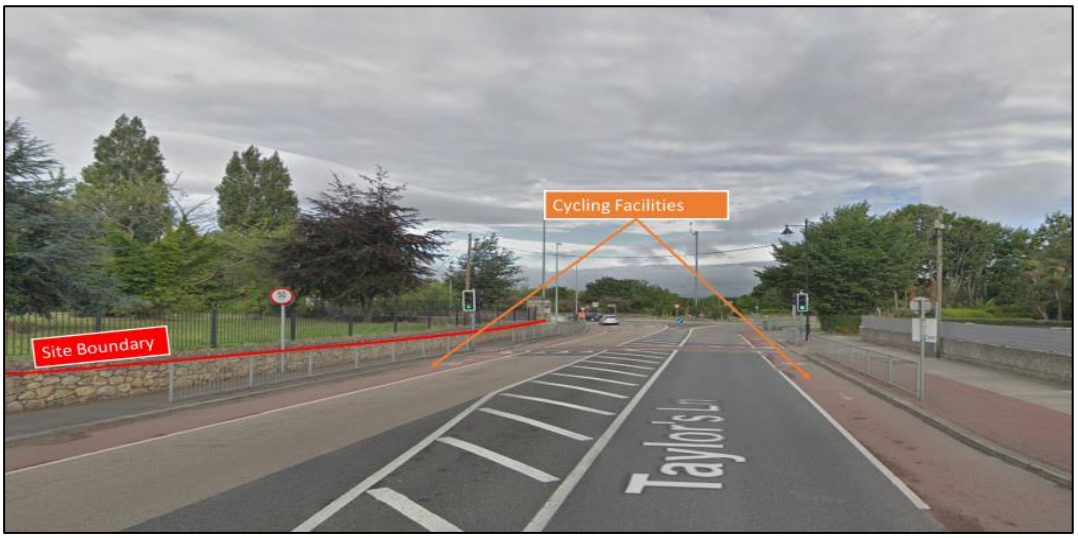


Figure 2.10: Cycling facilities along Taylor's Lane (Facing West)



Figure 2.11: Cycling facilities along Edmondstown Rd/Ballyboden Rd (Facing North)

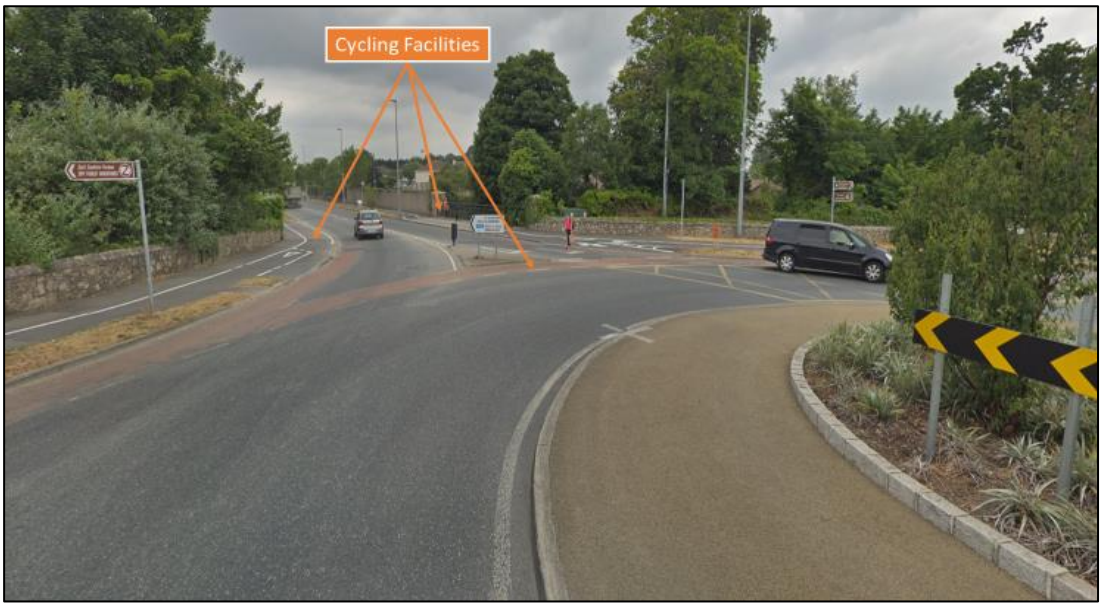


Figure 2.12: Cycling facilities along Ballyboden Way and the Roundabout (Facing West)

In addition to the cycle facilities outlined above, there are also a variety of other cycling facilities available on the routes leading to the subject site which are illustrated in **Figure 2.13.**

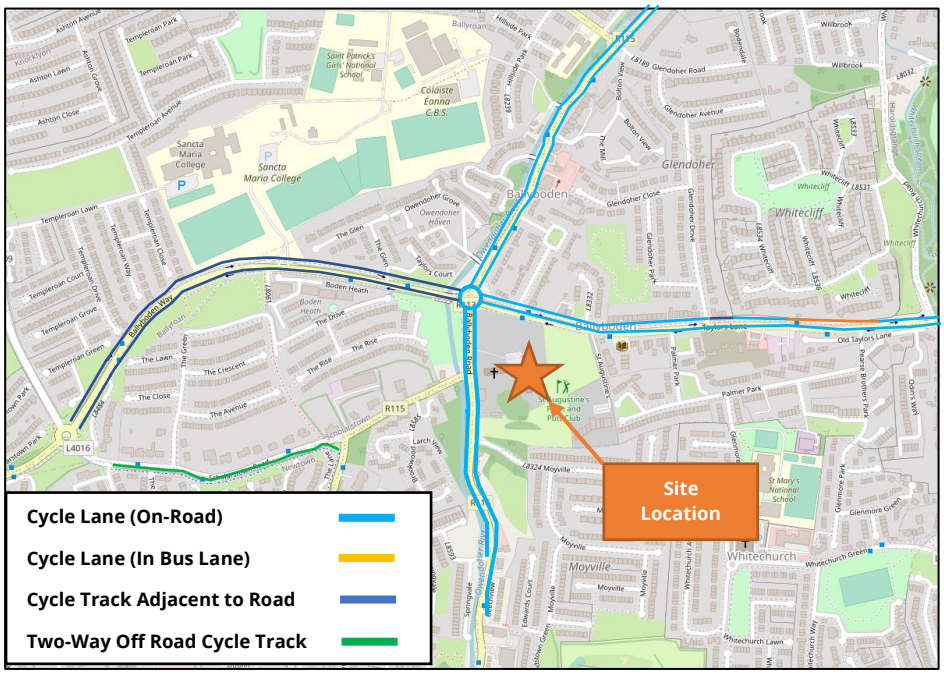


Figure 2.13: Existing Cycle Network

The cycling time isochrones from the development site were created and are shown in **Figure 2.14** overleaf. This figure illustrates that Firhouse, Templeogue and Ballinteer are within a 15 minute cycling distance from the subject site, whereas, Tallaght, Kimmage, Milltown and Sandyford are within 30 minute and Dublin City Centre, Cabra, Clondalkin, Rathcoole and Dún Laoghaire are within a 45 minute of cycling distance from the proposed development site entrance.

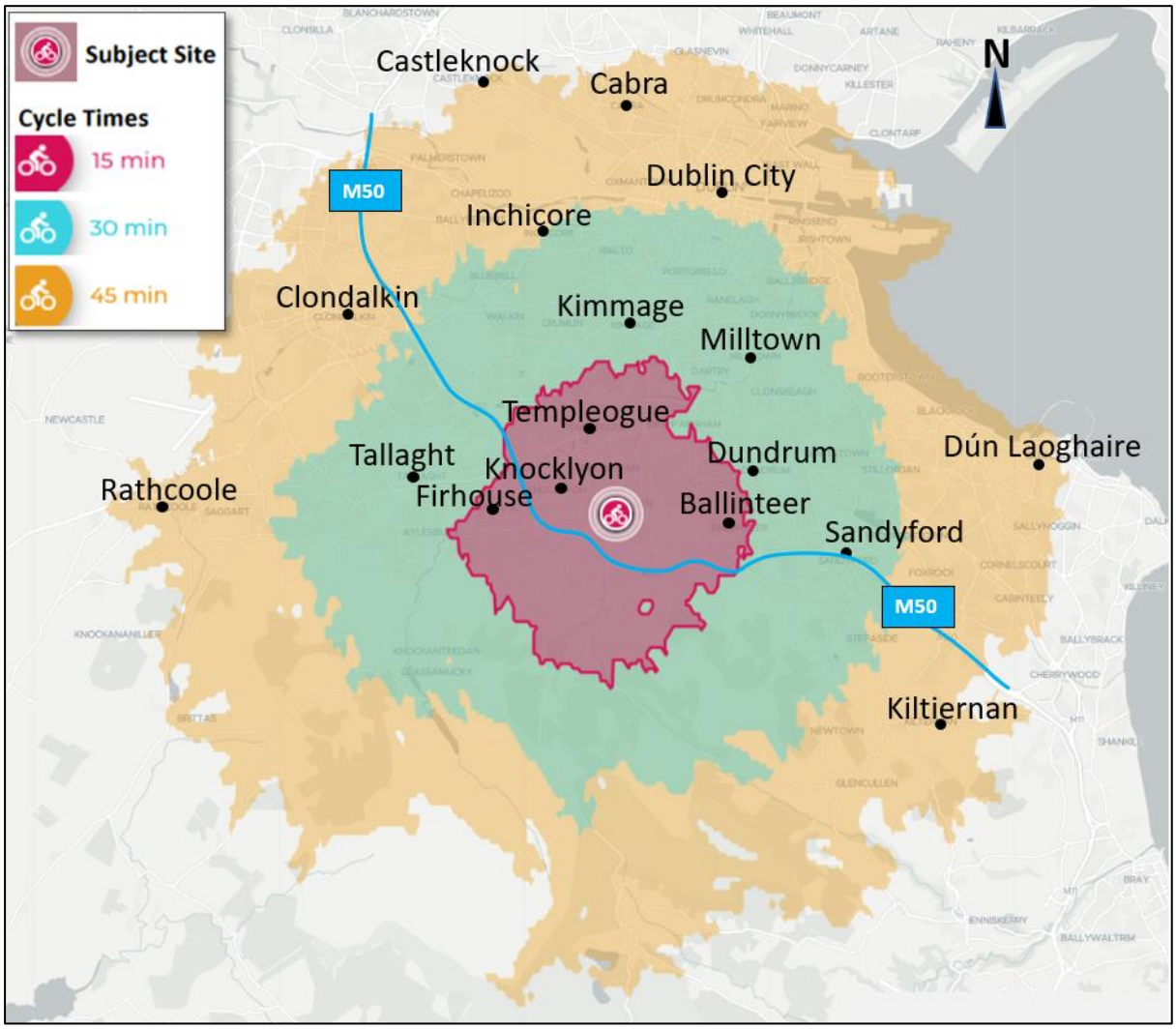


Figure 2.14: Cycling Isochrones from the Subject Development Site

2.3.4 Public Transport – Bus

The Subject site is ideally located to avail of a multitude of existing bus services. Bus routes including the 15B, 15D, 61, 161 and 175 serve bus stops adjacent to the northern boundary of the subject site along the Taylor's Lane.

Figure 2.15 below illustrates location/proximity of the bus stops to the subject site.

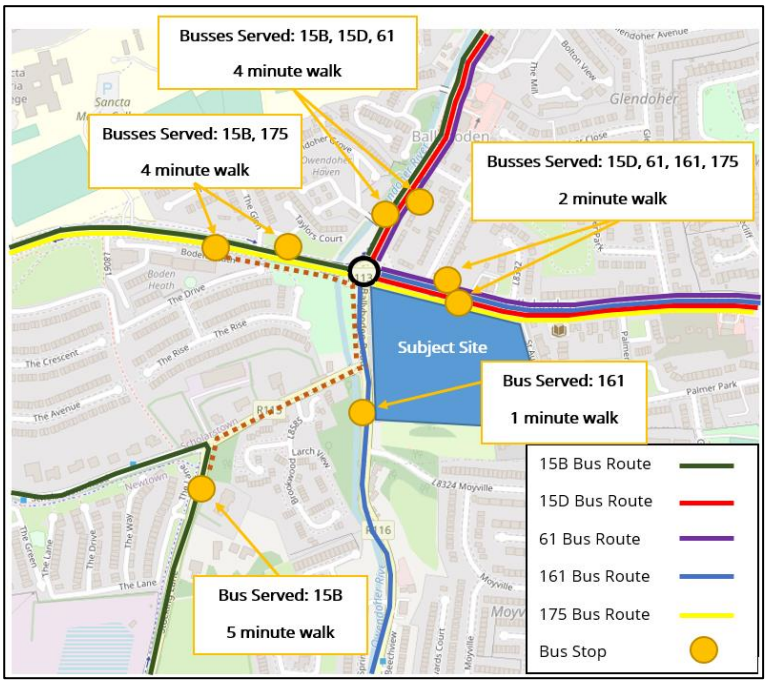


Figure 2.15: Existing Dublin Bus and Go-Ahead Stops

Bus Route 161 also serves a bus stop within approximately 50m of the subject site's proposed access on the western boundary along Edmondstown Road.

The 15B and 15D provides access to Dublin City Centre but also travels to a range of different intermediate destinations including Rathfarnham, Rathmines and Rathgar before terminating at Ringsend. Bus route 61 travels from Whitechurch /Rockbrook to Eden Quay through suburbs such as Dundrum and Milltown.

Bus route 175 travels between Citywest, Tallaght and Dundrum before terminating at UCD. Route 161 travels from Rockbrook to Dundrum and serves several points along the way such as Marlay Park and Nutgrove Shopping Centre.

It can be seen in the diagram that all bus routes can be accessed within a 5 minute walk, with the 15D, 61, 161 and 175 bus stops directly adjacent to the site and within a 2 minute walk. The pedestrian facilities to these bus stops, including footpaths and signalised crossings, allow fast and

safe transit from the subject site to the respective bus stops. For example, the provision of two signalised crossings on Taylor's Lane directly adjacent to the site allow bus users to cross the road safely.

Table 2.1 below illustrates the aforementioned bus routes with direction and frequency.

Route Operator	Route No.	Route	Frequency (No. of Services		
			Monday - Friday	Saturday	Sunday
Dublin Bus	15B	Knocklyon Dalriada to Merrion Square South	64	60	38
	15B	Merrion Square South to Knocklyon Dalriada	63	62	36
	15D	Whitechurch to Merrion Square South	2	0	0
	15D	Merrion Square South to Whitechurch	1	0	0
	61	Edmondstown Road to Eden Quay	18	16	14
	61	Eden Quay to Edmondstown Road	17	15	13
Go-Ahead	161	Rockbrook to Dundrum Luas Station	8	0	0
	161	Dundrum Luas Station to Rockbrook	8	0	0
	175	UCD to Citywest	36	16	15
	175	Citywest to UCD	35	17	16
Total			**252**	**186**	**132**
			570		

Table 2.1: Bus Service Frequency (No. of Services)
(Source: Dublin Bus and Go-Ahead Ireland)

Figure 2.16 below illustrates the aforementioned existing bus routes.

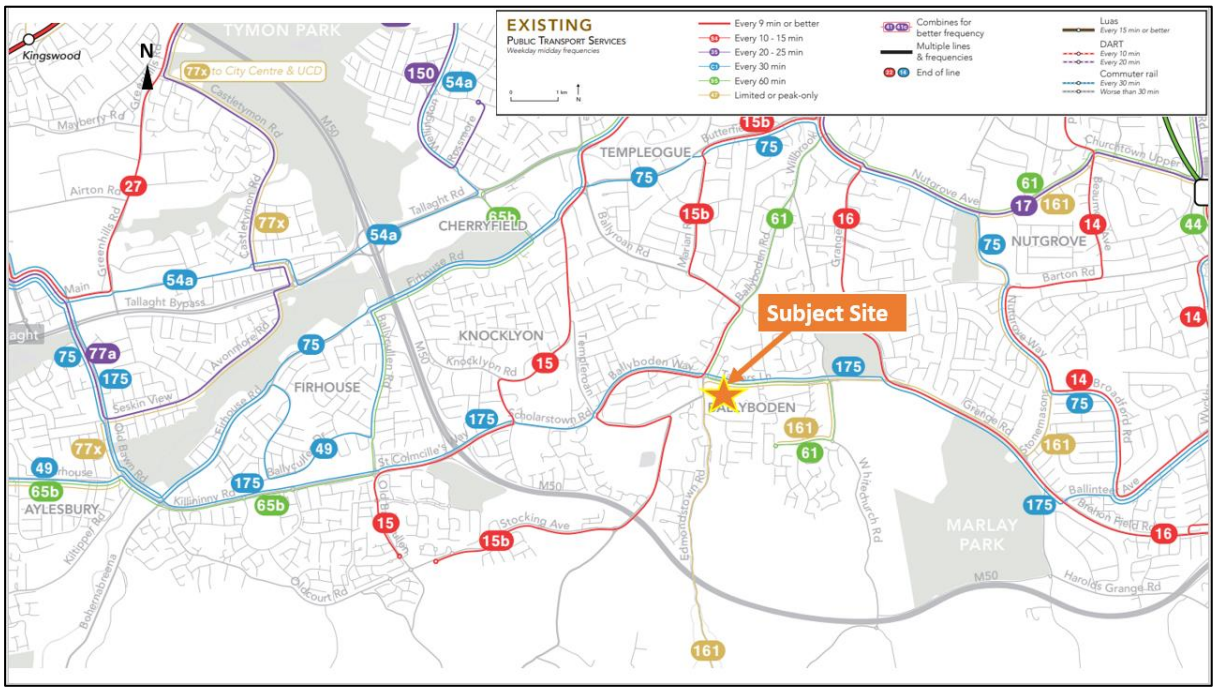


Figure 2.16: Existing Public Transport Services (weekday midday frequency)

2.4 LOCAL AMENITIES

The subject development site is well placed in terms of the availability of local amenities. There are a number of schools within walking distance of the subject site including Coláiste Éanna C.B.S., Ballyroan Boys National School, St Colmcilles Community School, Scoil Naomh Padraig, Sancta Maria College Rathfarnham, Divine Word National School, St Colmcilles Community School and St Colmcilles Junior and Senior School.

Furthermore, the subject site benefits from good access to leisure facilities such as St Endas GAA, St Enda's Park and Edmondstown Golf Club. The subject site is close to retail facilities such as Lidl, Tesco Superstore and SuperValu.

There are also a number of healthcare facilities surrounding the subject site which include Bloomfield Health Services, Rathfarnham Health Centre and Scholarstown Family Practice. Ballyboden Primary Care Facility recently opened on the site adjacent to the subject site.

Figure 2.17 illustrates the walking and cycling linkages from the subject site to the amenities within the surrounding area as well as the travel time for these modes.

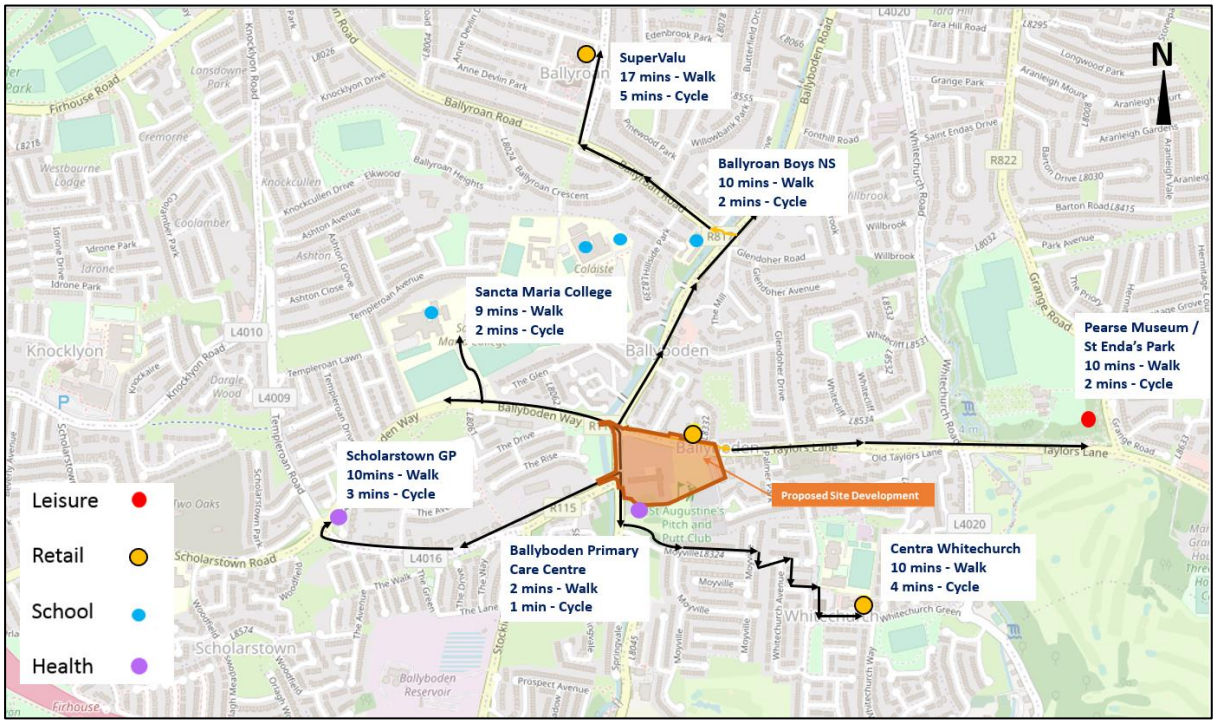


Figure 2.17: Subject Site Linkages for Pedestrians and Cyclists

2.5 ROAD SAFETY REVIEW

With the objective of ascertaining the road safety record of the immediate routes leading to/from the subject site, the collision statistics as detailed on the Road Safety Authority's (RSA) website (www.rsa.ie) have been examined. The RSA website includes basic information relating to reported collisions over the most recent ten-year period, from 2006 to 2016 inclusive.

The RSA database records details where collision events have been officially recorded such as the when the Garda being present to formally record details of the incident.

In reference to **Figure 2.18** and **Table 2.3**, incident number 9 resulted in a serious casualty involving a car and pedestrian whilst the remaining incidents resulted in minor casualties. All minor collisions involved a car except two involving bicycles and one involving Goods Vehicles.

Ref	Severity	Year	Vehicle	Circumstances	Day	Time	Casualty
1	Minor	2012	Car	Pedestrian	Saturday	2300-0300	1
2	Minor	2008	Goods Vehicle	Other	Friday	1900-2300	1
3	Minor	2012	Car	Pedestrian	Friday	2300-0300	1
4	Minor	2008	Car	Pedestrian	Tuesday	1000-1600	1
5	Minor	2013	Car	Other	Monday	0700-1000	1
6	Minor	2013	Car	Other	Saturday	1900-2300	1
7	Minor	2016	Bicycle	Other	Saturday	1000-1600	1
8	Minor	2011	Car	Single Vehicle Only	Tuesday	2300-0300	2
9	**Serious**	**2014**	**Car**	**Pedestrian**	**Monday**	**1600-1900**	**1**
10	Minor	2010	Car	Rear end, Straight	Saturday	1900-2300	1
11	Minor	2009	Car	Head-on Conflict	Friday	2300-0300	2
12	Minor	2013	Bicycle	Pedestrian	Friday	1900-2300	2
13	Minor	2007	Car	Other	Tuesday	1000-1600	2
14	Minor	2008	Car	Single Vehicle Only	Saturday	1000-1600	1

Table 2.3: Collision Records (Source www.rsa.ie)



Figure 2.18: Collision Records - (source www.rsa.ie)

The review of the RSA data available reveals that there is a concentration of collisions at the Taylor's Lane Roundabout during the most recent 11-year period (2006-2016). However, it is understood that South Dublin County Council are currently at design stage to upgrade this junction as part of the Tallaght to Knocklyon Active Travel Scheme. This upgrade should make the junction safer for all users.

2.6 PROPOSED TRANSPORT INFRASTRUCTURE

2.6.1 GDA Cycle Network Proposals (2022)

The subject site is located within the "Dublin South West Sector" as outlined within the Greater Dublin Area Cycle Network Plan (published by the NTA in 2022). As can be seen in **Figure 2.19**, there are a large variety of routes in the vicinity of the subject site, including:

- Primary Orbital Route along Ballyboden Way / Taylor's Lane
- Secondary Route along Ballyboden Road
- Feeder Route along Scholarstown Road

These proposals will significantly enhance the existing cycling facilities in the area and will encourage cycling to a much wider audience.

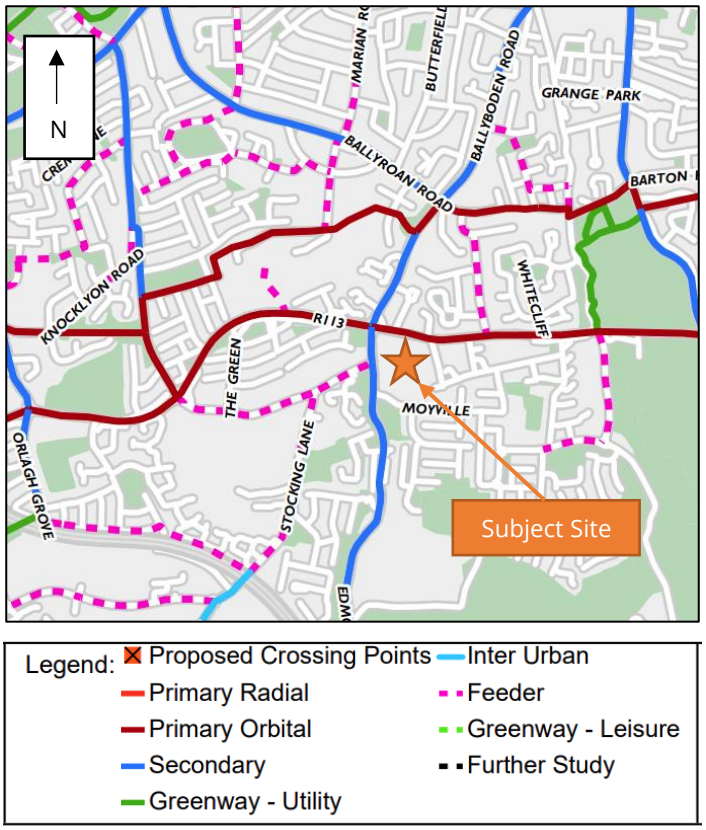


Figure 2.19 Proposed Cycle Routes (Source: 2022 GDA Cycle Network Plan)

2.6.2 South Dublin County Council Active Travel Network

In addition to the GDA Cycle Network Proposals, SDCC have released a comprehensive list of proposed Active Travel schemes throughout the county. These proposals are split into three categories:

- **NOW –** Progressed within the next 2 years.
- **SOON –** Progressed within the next 5 years.
- **LATER –** Progressed within the next 8 years.

Figure 2.20 shows the proposed Active Travel Network within 1.5km of the site.

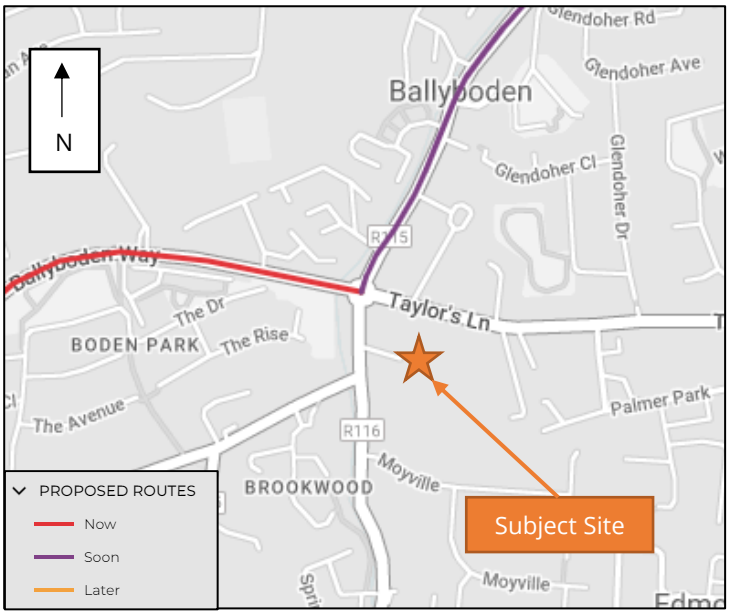


Figure 2.20: SDCC Active Travel Schemes within vicinity of the site

The projects of interest are the **Tallaght to Knocklyon** route (**NOW**), and the **Ballyboden Road** route (**SOON).** This is currently no further details available on the proposed active travel upgrades to Ballyboden Road. The Tallaght to Knocklyon scheme proposes a cycle route connecting Tallaght to Knocklyon via Old Bawn Road, Firhouse Road and M50 Knocklyon Footbridge. DBFL were also informed by SDCC that as part of this scheme, the Taylor's Lane roundabout adjacent to the subject site will be upgraded to provide a safer and greater Level of Service (LOS) for vulnerable road users (pedestrians and cyclist) in accordance with National Policy.

2.6.3 Bus Connects

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

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

- Increasing the overall amount of bus services. Providing new and frequent orbital services connecting more outer parts of the city together;

- Simplifying the bus services on the key radial into "Spines" where all buses will operate under a common letter system and buses will run very frequently and be more evenly spaced;
- Increasing the number of routes where buses will operate every 15 minutes or less all day;
- The frequent network would become a web-shaped grid, with many interchange opportunities to reach more destinations. Everywhere that two frequent routes cross, a fast interchange is possible; and
- Additional service would be provided at peak hours to limit overcrowding.

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

- **85** (10-to-15-minute frequency) will serve Tallaght – Ballyboden – Rathfarnham - Rathmines & Dublin City Centre;
- **S8** (15-to-30-minute frequency) will serve City West - Tallaght- Ballyboden – Ballinteer – Sandyford - Monkstown – Dún Laoghaire;
- **74** (30-minute frequency) will serve Dundrum - Balally - Ballinteer Rd - Whitechurch - Rathfarnham - Terenure - KCR - Armagh Rd- Cork St - City Centre (Quays) - Poolbeg Street;
- **A1** (12-to-15-minute frequency) will serve Knocklyon – City Centre – Swords Road;
- **A2** (12-to-15-minute frequency) will serve Dundrum - Grange Rd - Ballinteer - Rathfarnham - Terenure - Rathgar – Rathmines - City Centre (O'Connell St, George's St) - Drumcondra - Santry – Airport;
- **P16** (Peak Hour Only) will serve Whitechurch - Ballinteer- Sandyford Ind Est – Stillorgan – UCD;
- **P18** (Peak Hour Only) will serve Whitechurch - Terenure - Rathgar - Rathmines - St. Stephen's Green - Townsend Street;
- **L35** (Every 120-minutes) will serve Dundrum Luas - Nutgrove - Stonemason's Way - Grange Rd - Edmondstown Rd – Rockbrook

Figure 2.21 below illustrates the BusConnects proposed routes that will serve the subject site.

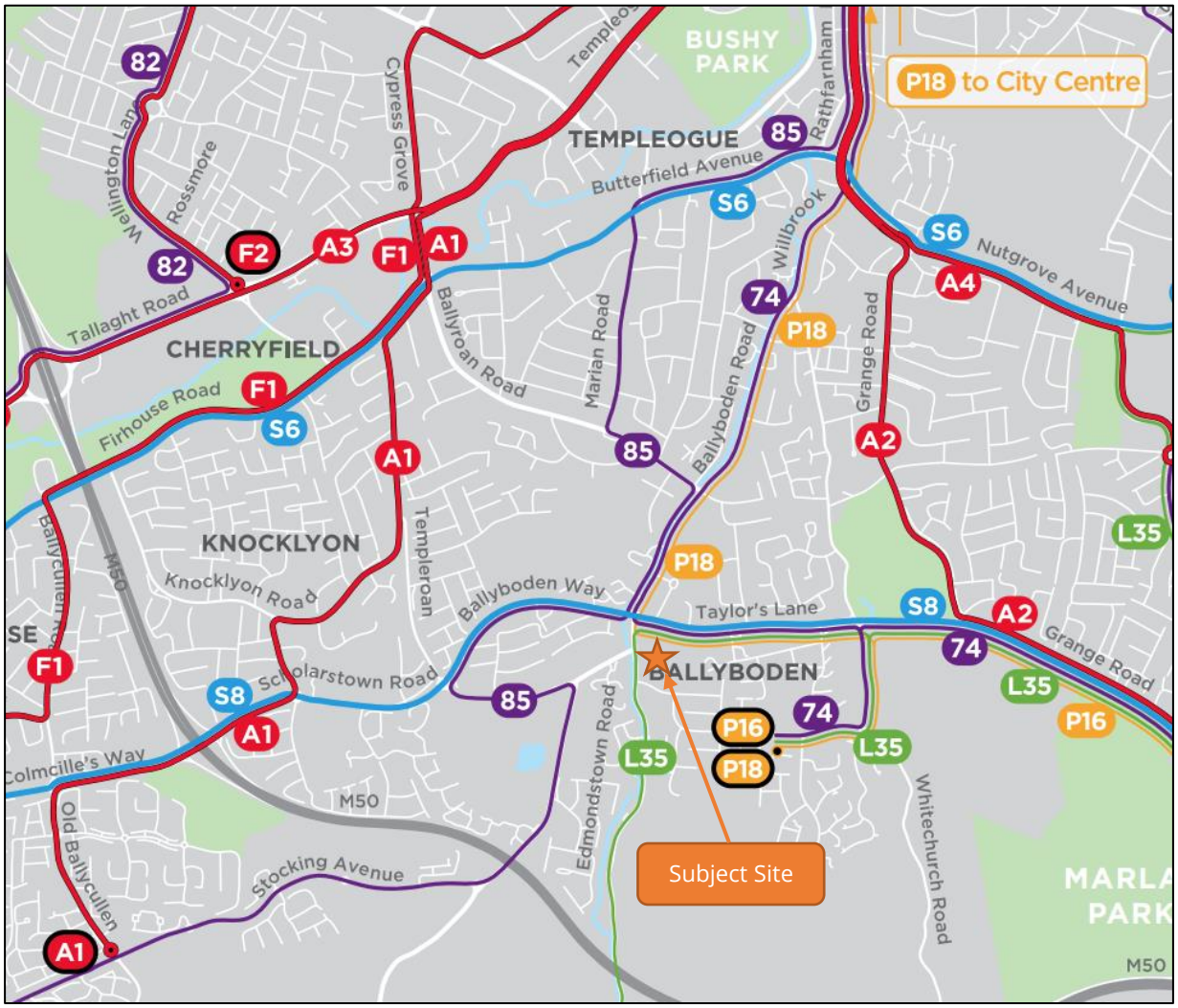


Figure 2.21: Proposed Public Transport Services

(Extract: BusConnects' Revised Bus Network 2022, Big Picture Map)

The proposed routes will allow greater connectivity between the subject site and locations around Dublin. One such example is the proposed 85 bus route, which will operate at a frequency even greater than the A Spine 'high frequency' busses.

The number **85** bus route runs from Tallaght to the City Centre via Ballyboden, Rathfarnham, Harold's Cross and on to Parnell Square. This route is proposed to operate with a frequency of 10-15 minutes along Stocking Avenue and passes within 4 minute walk of the subject development site. This new bus route will provide the subject development site with direct access to Tallaght, a proposed transport hub/key interchange between several radial and orbital services, along with the LUAS Red Line which offers an alternative means of travelling to the city centre.

BusConnects will introduce over **29%** more services to the area when fully implemented. It is unclear when these services will be implemented, however the current target is 2024. A comparison of the existing bus services in the area compared to the proposed bus services can be seen in **Table 2.2**:

Existing (Scheduled)		Frequency	
No.	Route	AM Peak Period (7-10)	PM Peak Period (4-7)
15B	Knocklyon Dalriada to Merrion Square South	14	12
	Merrion Square South to Knocklyon Dalriada	11	12
15D	Whitechurch to Merrion Square South	1	0
	Merrion Square South to Whitechurch	0	2
61	Edmondstown Road to Eden Quay	3	3
	Eden Quay to Edmondstown Road	3	4
161	Rockbrook to Dundrum Luas Station	2	2
	Dundrum Luas Station to Rockbrook	1	2
175	UCD to Citywest	7	6
	Citywest to UCD	5	6
Total		47	49
		96	

Busconnects (Proposed)		Frequency	
No.	Route	AM Peak Period (7-10)	PM Peak Period (4-7)
85	Tallaght - Parnell Square	16	16
	Parnell Square - Tallaght	16	16
74	Dundrum - City Centre	6	6
	City Centre - Dundrum	6	6
P18	Whitechurch - City Centre	2	2
	City Centre - Whitechurch	2	2
L35	Rockbrook - Dundrum	2	1
	Dundrum to Rockbrook	2	1
S8	Tallaght to Dun Laoghaire	11	11
	Dun Laoghaire to Tallaght	11	11
Total		63	61
		124	

Table 2.2: Existing vs Proposed Bus Services in vicinity of Subject Site

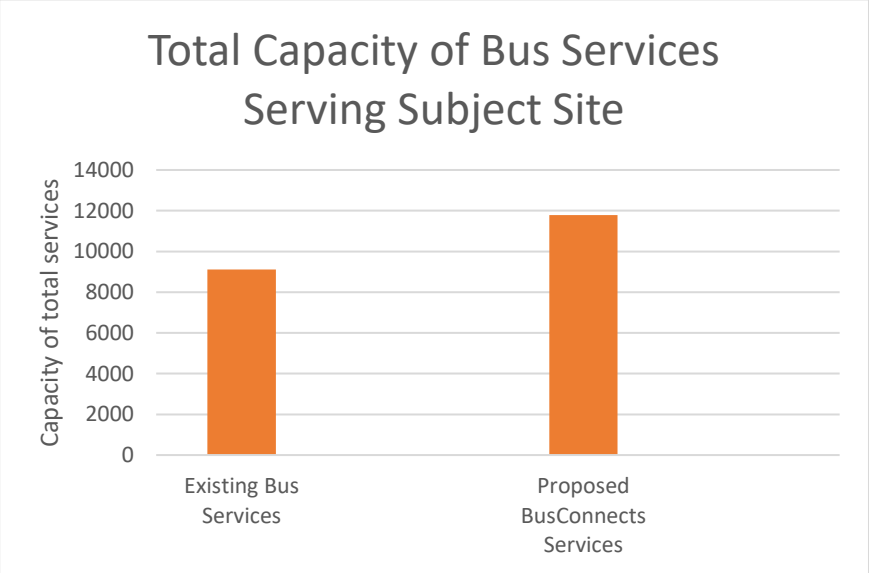


Figure 2.22: Total Capacity of Bus Services Serving Subject Site

It is important to note that as part of the Transport Strategy for the Greater Dublin Area 2022-2042, the NTA have outlined **Measure BUS5**, which states the following:

> *"It is the intention of the NTA to continually monitor the demand for bus services in the Dublin Area as part of the roll-out of the new service network and as part of the monitoring and periodic review of the Transport Strategy, and enhance or amend the service network as appropriate."*

2.6.4 Road Infrastructure Proposals

The South Dublin County Development Plan 2022 – 2028 has outlined a six-year programme for road upgrades of which their delivery is subject to funding.

Figure 2.23 illustrates the location of some of these proposals in relation to the subject site. The map highlights that there are cycle and long-term road proposals in close proximity to the development site.

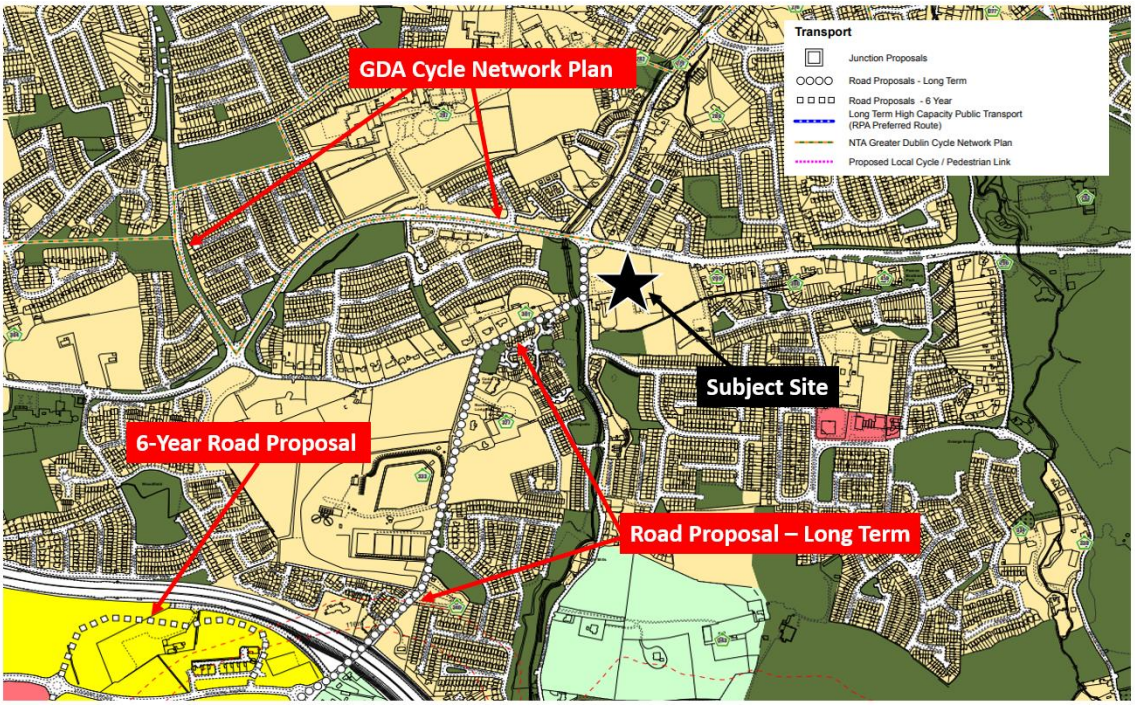


Figure 2.23: SDCC Infrastructure Objectives in vicinity of subject site (extract Map 10 SDCC Development Plan

One project of note is the long-term road proposal for Ballyboden Road / Scholarstown Road / Stocking Lane. This long-term proposal is adjacent to the subject site along Ballyboden Road.

It can also be seen that the GDA Cycle network plan includes a proposal near the subject site on Ballyboden Way, including the roundabout at the northwest of the subject site.

2.7 PUBLIC TRANSPORT CAPACITY ASSESSEMENT

2.7.1 Existing Public Transport Capacity Survey

With the objective of establishing the available capacity on the local public transport network, IDASO Ltd, a specialist data collection firm, were commissioned to undertake surveys of the local bus routes. The surveys were undertaken on 9th of February 2023 at the closest bus stops to the subject site, see **Figure 2.24** below.

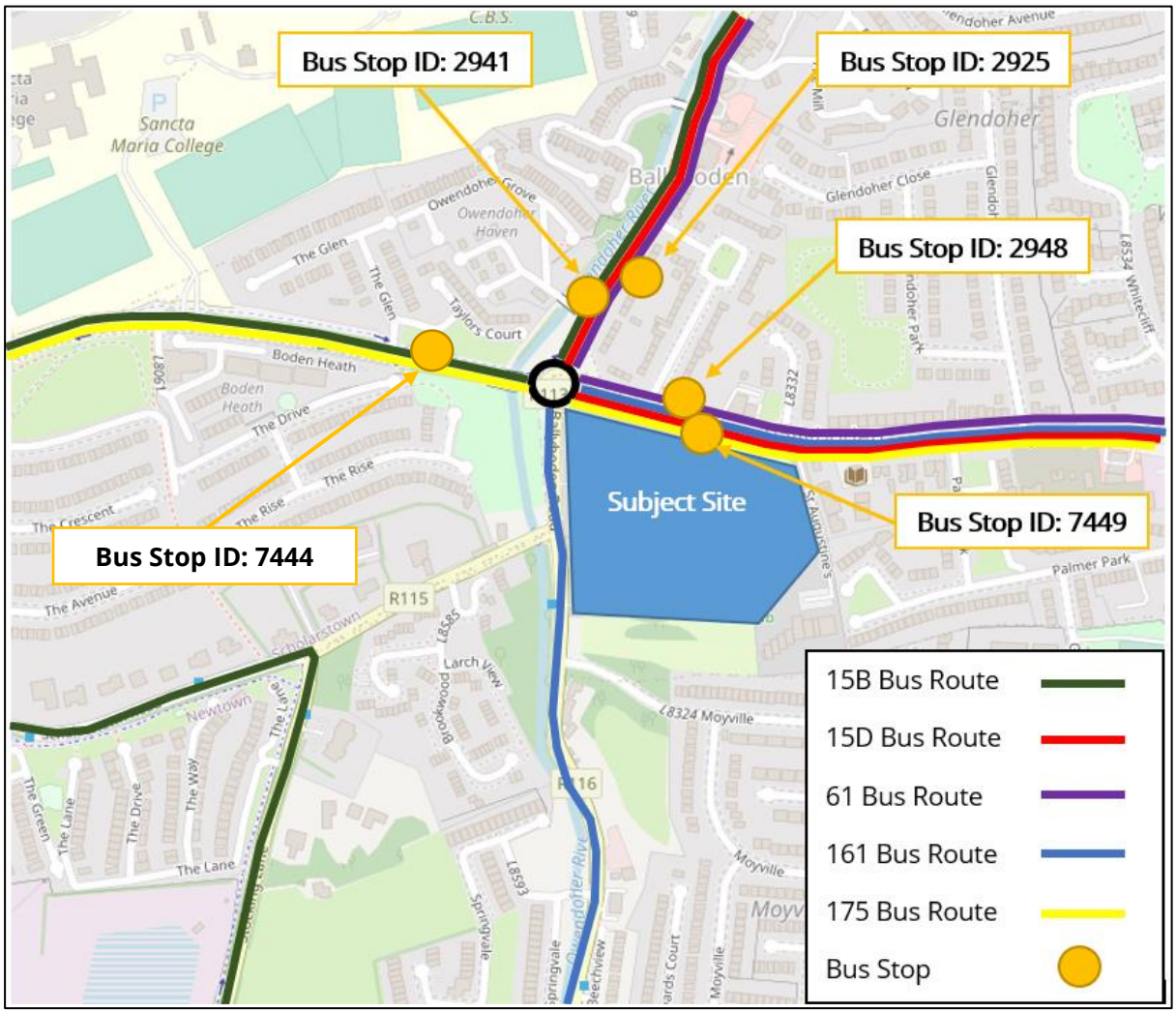


Figure 2.24 Public Transport Survey Locations

The following stops, buses and time periods were surveyed:

AM Peak Period (0700-1000)

- Ballyboden Road (Stop No. 2941) (Bus Routes 15B, 15D, and 61)
- Ballyboden Crescent (Stop No. 2948) (Bus Routes 15D, 61, 161, and 175)
- Ballyboden Crescent (Stop No. 7449) (Bus Routes 61, 161, and 175)

PM Peak Period (1600-1900)

- Ballyboden Crescent (Stop No. 2925) (Bus Routes 15B, 15D, and 61)
- Ballyboden Crescent (Stop No. 7449) (Bus Routes 61, 161, and 175)
- St Enda's GAA Club (Stop No.7444) (Bus Routes 15B and 175)

It is widely accepted in the industry that the periods of maximum demand generated upon the public transport networks on a typical weekday are focused upon the AM (0700-1000) and PM (1600-1900) periods as predominantly influenced by travel to work, school, and college at any given location. Accordingly, in reference to the baseline modal data and considering the journey times required to reach potential work, school, and college destinations (as accessed by bus services) the number of existing (February 2023) public transport services stopping at interchanges in close proximity to the proposed development site on Taylors Lane have been the focused of the public transport capacity analysis.

2.7.2 Public Transport Survey Methodology

The demand profile for public transport services, like road traffic, is quite seasonal in nature. The timing and basis for the survey undertaken was dictated by current public transport usage patterns.

- Demand for bus services, in general, is materially lower in the Summer and school holiday periods.
- Demand tends to be somewhat higher in the late Autumn and in the run up to the busy Christmas holiday. Surveying in the non-holiday weeks in the opening four or five months of the year, and early Autumn, represent a reliable indication of base-level pre-development expressed demand for transport.
- Demand also varies by day of the week, with traffic demand generally lower on Mondays and Fridays, with some exceptions. Post Covid-19 this is increasingly the case. Public transport usage on Saturdays and Sundays (in particular) are materially lower than mid-week demand.

- Demand for travel varies throughout the standard weekday but the morning peak is shorter but has patronage levels that are higher than the corresponding evening peak flows.

It follows that in determining whether spare capacity is available to meet increasing demand from any development site it is best to undertake surveys and test the midweek, morning peaks outside of the summer period when schools are open.

The survey methodology provided the following information:

- Location of Stop
- Bus Service Number
- Time of Bus Arrival
- Bus Type
- Estimated Seating Capacity
- Estimated Standing Capacity
- Bus Passing or Stopping
- Number of Passengers Boarding
- Bus Occupancy Count on Arrival
- Number of Passengers Alighting
- Bus Occupancy Count on Departure
- Number of Passengers Remaining at Stop

Refer to **Appendix E** for the Public Transport Survey data.

2.7.3 Existing Public Transport Capacity

The existing public transport services accessible from the Proposed Development are outlined in **Section 2.3.4**. For commuting, a walk distance to/from Bus Stops of up to 1km is generally considered to be acceptable. For the purposes of this assessment, we have assumed an 8-10min walk time as being appropriate, reflecting a distance of 700-1,000m depending on speed of walking. The Subject site is ideally located to avail of a multitude of existing bus services. Bus routes including the 15B, 15D, 61, 161 and 175 serve bus stops in close proximity to the subject site at Taylor's Lane.

Table 2.3 provides a summary of the bus capacity (based on the number of services) during the peak public transport patronage periods (i.e. AM 07:00-10:00 & PM 16:00-19:00 in the PM). All

buses on the subject bus routes were Wright Gemini 3 bodied Volvo B5TLs busses which have capacity of approximately 95 passengers (67 seating spaces and 28 standing spaces).

Bus Service	Route No.	Direction	AM (07:00-10:00)		PM (16:00-19:00)	
			Services	Capacity	Services	Capacity
Dublin Bus	15B	Knocklyon Dalriada to Merrion Square South	14	1330	12	1140
		Merrion Square South to Knocklyon Dalriada	11	1045	11	1045
	15D	Whitechurch to Merrion Square South	1	95	0	0
		Merrion Square South to Whitechurch	-	-	1	95
	61	Edmondstown Road to Eden Quay	3	285	3	285
		Eden Quay to Edmondstown Road	3	285	2	190
GoAhead	161	Rockbrook to Dundrum Luas Station	2	190	2	190
		Dundrum Luas Station to Rockbrook	1	95	1	95
	175	UCD to Citywest	3	285	3	285
		Citywest to UCD	5	475	3	285
Total			43	4085	38	3610

Table 2.3: Existing Bus Capacity

The outbound bus services from the city centre in the AM Peak were not surveyed due to the significantly lower demand, similar for inbound PM Peak services.

The following items are worth nothing prior to review of the results of the assessment:

- A new timetable was introduced for the 175 on the 12th of February 2023. This included an additional 3 new services to Citywest, and 2 new services to UCD during the AM period.
- The number of bus services observed during the survey was approximately **83.33%** of the scheduled bus services. One example of large discrepancies between surveyed and scheduled services was the 175 services. Approximately **58%** of the scheduled 175 services ran on the day of the surveys.

The existing bus capacity analysis reveals, during peak travel periods, the existing bus services have the capacity to accommodate up to 4085 passengers in the AM peak period (07:00-010:00) and 3610 passengers in the PM period (1600-19:00).

It is noted that this capacity analysis considers only existing bus and does not take cognisance of future bus network improvements being proposed as part of the Bus Connects proposals some / or all of which could be implemented by the proposed opening year of the subject development in 2025.

2.7.4 Predicted Public Transport Demand

The Central Statistics Office's SAPMAP (Small Areas Population Map) data has been investigated to determine the travel trends within the local vicinity of the subject residential development. SAPMAP is an interactive mapping tool that allows users to pinpoint a location on the map and access 2016 census data related to that area.

A number of residential developments close to the subject site were analysed to establish current commuter trends in the local area. This analysis will form the basis of the initial travel characteristics that could be generated by the proposed residential development.

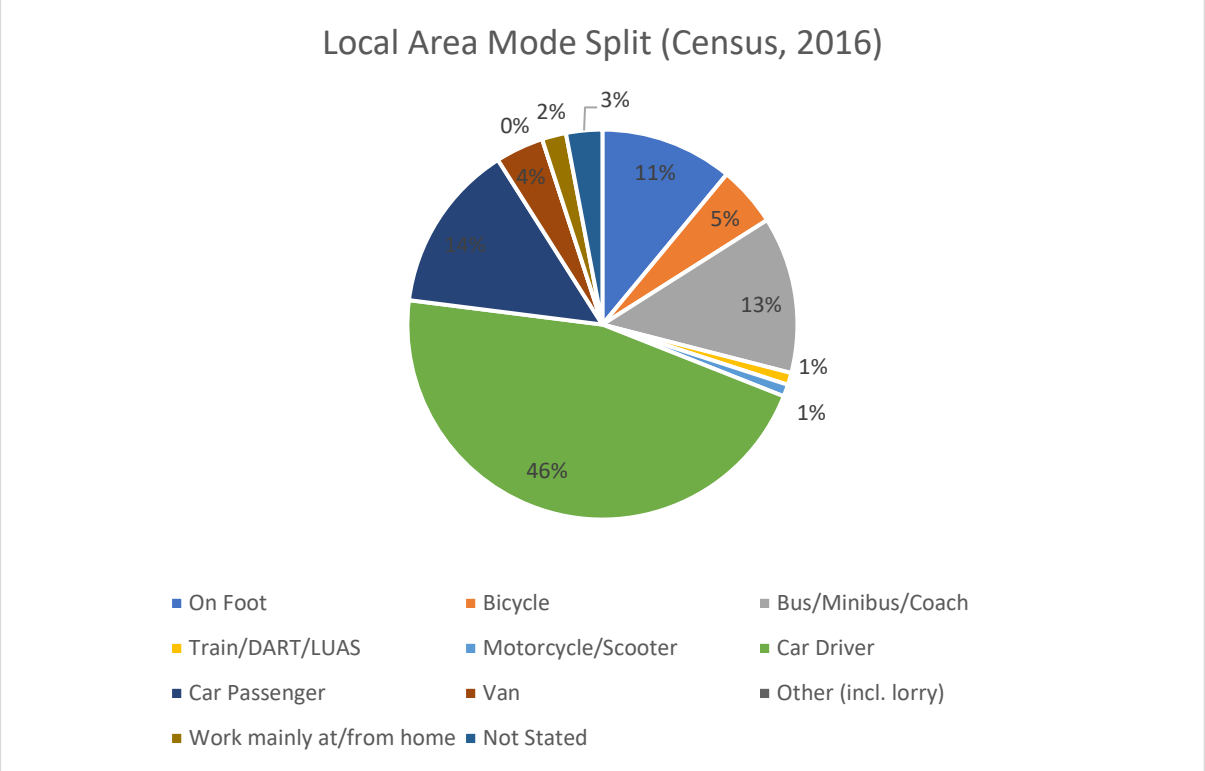


Figure 2.25: 2016 Census Mode Share

It has been assumed that the predicted vehicle trips generated by the subject residential development (see **Section 5.3**) corresponds to the proportion of vehicle trips derived within the Census mode share data. **Table 2.4** below shows the Mobility Management Plan (MMP) mode share targets for year 1 and 5, which have been outlined with a specific objective of reducing single-occupancy car travel. The existing modal split within the area surrounding the proposed development (taken from the 2016 census data) has been used as a basis for these targets in order to outline a realistic target for the development.

Mode of Travel	Census 2016	1st Year Target (2025)	MMP 5-year Target (2030)
On foot	11%	11%	12%
Bicycle	5%	7%	9%
Bus, minibus or coach	13%	14%	17%
Train, DART, LUAS, MetroLink	1%	1%	1%
Motorcycle or scooter	1%	1%	1%
Car Driver	46%	38%	34%
Van	4%	4%	4%
Car Passenger	14%	12%	13%
Other (incl. lorry)	0%	0%	0%
Work mainly at or from home	2%	9%	6%
Not stated	3%	3%	3%

Table 2.4: Current Mode Share and MMP Mode Share Targets

Table 2.5 below presents the predicted person trips generated by the subject residential development during the AM (07:00-10:00) and PM (16:00-19:00) peak periods for 2025 (100 residential units occupied), using the MMP 1st Year Target modal share (2025).

Trip Generation 2025	Modal Share	AM Peak Period 07:00-10:00			PM Peak Period 16:00-19:00			Total
		Arr	Dep	Two-Way	Arr	Dep	Two-Way	
On foot	11.0%	13	18	32	18	15	32	64
Bicycle	7.0%	8	11	20	11	9	21	41
Bus, minibus or coach	14.0%	17	23	40	23	19	41	81
Train, DART or LUAS	1.0%	1	2	3	2	1	3	6
Motorcycle or scooter	1.0%	1	2	3	2	1	3	6
Car /Van Driver	42.0%	51	69	121	68	56	123	244
Car Passenger	12.0%	15	20	35	19	16	35	70
Work from Home	9.0%	11	15	26	15	12	26	52
Not Stated	3.0%	4	5	9	5	4	9	17
	Total	**121**	**163**	**288**	**162**	**134**	**294**	**582**

Table 2.5: Trip Generation at Peak Periods– All Modes 2025

Using the target modal share outlined in the **Table 2.4** above, **Table 2.6** presents the predicted person trips generated by the subject residential development during the AM and PM peak periods for 2030 (total residential development occupied (402 units)).

Trip Generation 2030	Modal Share	AM Peak Period 07:00-10:00			PM Peak Period 16:00-19:00			Total
		Arr	Dep	Two-Way	Arr	Dep	Two-Way	
On foot	12.0%	29	54	83	53	35	89	172
Bicycle	9.0%	22	41	63	40	26	66	129
Bus, minibus or coach	17.0%	41	77	153	76	50	126	279
Train, DART or LUAS	1.0%	2	5	7	4	3	7	14
Motorcycle or scooter	1.0%	2	5	7	4	3	7	14
Car / Van driver	38.0%	120	226	348	222	147	369	717
Car Passenger	13.0%	31	59	90	58	38	96	186
WFH	6.0%	14	27	42	27	18	44	86
Not Stated	3.0%	7	14	10	13	9	11	21
	Total	**239**	**451**	**695**	**445**	**294**	**739**	**1434**

Table 2.6: Trip Generation at Peak Periods – All Modes 2030

Sustainable Travel Based Trips

In reference to the baseline modal split data presented in **Figure 2.25** (Census Data) for the local area, it has been possible to estimate the number of trips undertaken by sustainable modes of travel that the proposed development could generate in the peak travel periods i.e. (0700-1000 in the AM and 1600-1900 in the PM). The predicted AM and PM peak period trips in 2030 are presented in **Table 2.7** below.

Peak Period	PT Rail / Dart / LUAS Trips	PT Bus Trips	Cycling	Walking
AM (07:00-10:00)	7	153	63	83
PM (16:00-19:00)	7	126	66	89

Table 2.7: Potential Two-Way Development Trips by Sustainable Modes of Travel (2030)

The trip generation analysis and subsequent modal assignment exercise reveals that the proposed development has the potential to generate **153** and **126** additional bus users during the **AM period** and **PM peak** periods respectively. These additional bus user trips will be distributed and subsequently assigned across the local bus services and the residual public transport capacity has been determined in **Sections 2.7.5 & 2.7.6** below.

2.7.5 Trip Distribution & Assignment

The proposed development public transport trips have been distributed and subsequently assigned across the local road network. In order to establish the origin-destination (O-D) of future development trips to / from the subject lands, 6 no. O-D zones have been applied to the assumed

geographical catchment areas of the subject development lands. **Figure 2.26** below presents these 6 no. O-D zones relative to the subject development and surrounding lands.

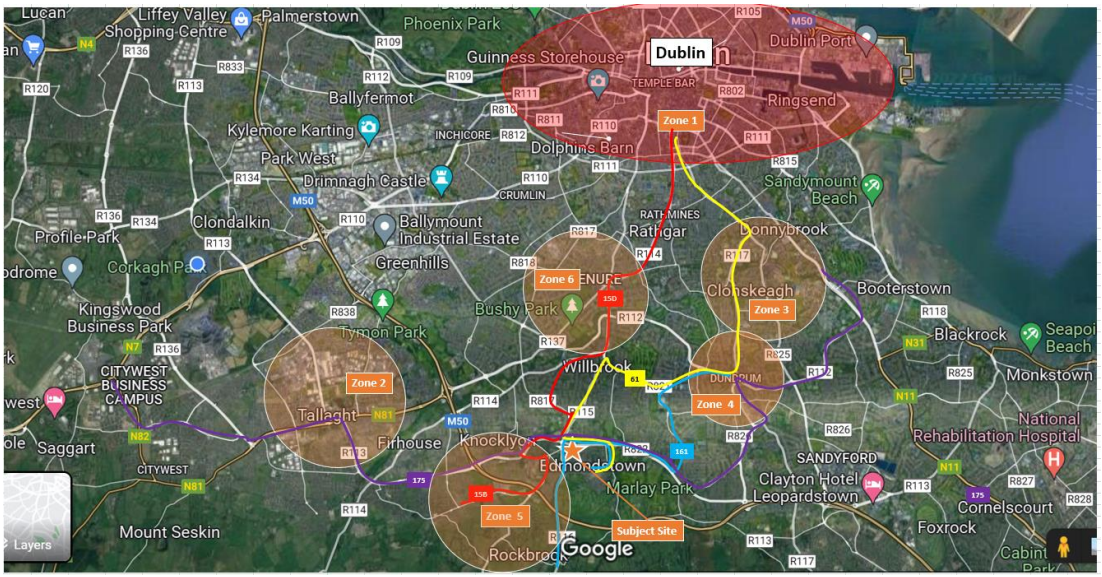


Figure 2.26: O-D Zones for Subject Site

Based on the aforementioned O-D zones, a proportion of the predicted weekday peak period development trips have been distributed to each O-D zone. These trips have been assigned to the surrounding bus routes based on the likely route between the subject site and each O-D zone. The quantum of trips assumed to be generated by each O-D zone has been estimated based on the employment and education within each zone, as leisure trips are minimal during weekday peak periods. This gravity model has been created to assess the impact the at the proposed development will have on the capacity of individual bus routes and services serving the surrounding area.

The key education attractors were identified as UCD, located in zone 3, and a range of universities and institutes such as Trinity College and TU Dublin, located in zone 1. These two zones account for the majority of education trips by bus with the remaining trips being split between the other zones. The local schools such as Ballyroan Boys National School, Scoil Naoimh Padraig, Colaiste Eanna, Santa Maria College and St. Colmcille's were considered to be located close enough to the subject site that they would not require the use of public transport.

The key employment attractors were identified to be located in zones 1, 2 and 4. These zones include the city centre, Tallaght and Dundrum and account for a large amount of the employment trips by bus.

2.7.6 Public Transport Impact

The capacity of the existing 2022 public transport network serving the Ballyboden Area has been quantified previously in **Section 2.7.3** whilst the demand that the proposed development is predicted to generate was presented in **Section 2.7.4**.

The following section establishes the scale of impact that the proposed development is predicted to generate upon the public transport networks and quantifies the capacity of the public transport network to accommodate the proposed development.

Reserve Capacity on Existing Bus Services

Table 2.8 below establishes the existing capacity of all bus services in the vicinity of the site for both AM and PM Peak Period.

Bus Service	Route No.	Direction	AM (07:00-10:00)		PM (16:00-19:00)	
			Services	Capacity	Services	Capacity
Dublin Bus	15B	Knocklyon Dalriada to Merrion Square South	14	1330	12	1140
		Merrion Square South to Knocklyon Dalriada*	11	1045	11	1045
	15D	Whitechurch to Merrion Square South	1	95	0	0
		Merrion Square South to Whitechurch*	-	-	1	95
	61	Edmondstown Road to Eden Quay	3	285	3	285
		Eden Quay to Edmondstown Road*	3	285	2	190
GoAhead	161	Rockbrook to Dundrum Luas Station	2	190	2	190
		Dundrum Luas Station to Rockbrook*	1	95	1	95
	175	UCD to Citywest	3	285	3	285
		Citywest to UCD	5	475	3	285
Total			**43**	**4085**	**38**	**3610**

*The outbound bus services from the city centre in the AM Peak were not surveyed due to the significantly lower demand, similar for inbound PM Peak services.

Table 2.8: Existing Bus Capacity

IDASO Ltd undertook surveys of the boarding, alighting and utilisation levels of the Dublin Bus (Routes 15B,15D, & 61) and GoAhead (Route 161 & 175) operated bus services that stop at the local bus interchanges near the subject site.

The recorded patronage levels (9th February 2023) for the bus services are detailed in **Table 2.9**. The analysis of the survey data reveals that the bus network benefits from an overall reserve capacity of 75% (or approx. 1,999 passenger places) in the AM Peak as of 9th February 2023.

Bus Service	Route No.	Direction	AM (07:00-10:00)				
			Services	Capacity	Surveyed Passengers Onboard	Reserve Capacity %	Reserve Capacity
Dublin Bus	15B	Knocklyon Dalriada to Merrion Square South	14	1330	402	70%	928
	15D	Whitechurch to Merrion Square South	1	95	15	84%	80
	61	Edmondstown Road to Eden Quay	3	285	70	75%	215
GoAhead	161	Rockbrook to Dundrum Luas Station	2	190	28	85%	162
	175	UCD to Citywest	3	285	67	76%	218
		Citywest to UCD	5	475	191	60%	284
Total			28	2660	773	75%	1999

Table 2.9: Bus Service Utilisation – AM Period (07:00 – 10:00)

During the evening period, bus services returning to the surrounding area of the subject site have significant spare capacity with an overall reserve capacity of 71% (or approx. 1,418 passenger places). The raw data from the public transport surveys are provided in **Appendix E**.

Bus Service	Route No.	Direction	PM (16:00-19:00)				
			Services	Capacity	Surveyed Passengers Onboard	Reserve Capacity %	Reserve Capacity
Dublin Bus	15B	Merrion Square South to Knocklyon Dalriada	11	1045	277	73%	768
	15D	Merrion Square South to Whitechurch	1	95	20	79%	75
	61	Eden Quay to Edmondstown Road	2	190	26	86%	164
GoAhead	161	Dundrum Luas Station to Rockbrook	1	95	8	92%	87
	175	UCD to Citywest	3	285	249	13%	36
		Citywest to UCD	3	285	47	84%	238
Total			21	1995	627	71%	1418

Table 2.10: Bus Service Utilisation – PM Period (16:00 – 19:00)

The trip generation analysis and subsequent modal assignment exercise, outlined in **Section 2.7.5**, reveals that the proposed development has the potential to generate **153** additional bus users during the **AM period**. When this additional passenger loading is considered, it can be established that the bus network serving the subject development will continue to benefit from an overall reserve capacity of **71%** or 1882 passenger spaces in the morning peak period, this is summarised in **Table 2.11** below.

Bus Service	Route No.	Direction	AM (07:00-10:00)						
			Services	Capacity	Surveyed Passengers Onboard	Reserve Capacity %	Reserve Capacity	Forecast Additional Passengers	Forecast Reserve Capacity
Dublin Bus	15B	Knocklyon Dalriada to Merrion Square South	14	1330	402	70%	928	40	**888**
	15D	Whitechurch to Merrion Square South	1	95	15	84%	80	4	**76**
	61	Edmondstown Road to Eden Quay	3	285	70	75%	215	11	**204**
GoAhead	161	Rockbrook to Dundrum Luas Station	2	190	28	85%	162	1	**161**
	175	UCD to Citywest	3	285	67	76%	218	14	**204**
		Citywest to UCD	5	475	191	60%	284	18	**266**
Total			**28**	**2660**	**773**	**75%**	**1999**	**117**	**1882 (71%)**

Table 2.11: Forecast Capacity of Bus Network – AM Period (06:00 – 10:00)

The trip generation analysis and subsequent modal assignment exercise reveals that the proposed development has the potential to generate **126** additional bus users during the **PM period**. When this additional passenger loading is considered, it can be established that the bus network serving the subject development will continue to benefit from an overall reserve capacity of **65%** or 1292 passenger spaces in the evening peak period, summarised in **Table 2.13** .

Bus Service	Route No.	Direction	PM (16:00-19:00)						
			Services	Capacity	Surveyed Passengers Onboard	Reserve Capacity %	Reserve Capacity	Forecast Additional Passengers	Forecast Reserve Capacity
Dublin Bus	15B	Merrion Square South to Knocklyon Dalriada	11	1045	277	73%	768	37	**731**
	15D	Merrion Square South to Whitechurch	1	95	20	79%	75	5	**70**
	61	Eden Quay to Edmondstown Road	2	190	26	86%	164	14	**150**
GoAhead	161	Dundrum Luas Station to Rockbrook	1	95	8	92%	87	2	**85**
	175	UCD to Citywest	3	285	249	13%	36	17	**19**
		Citywest to UCD	3	285	47	84%	238	16	**222**
Total			**21**	**1995**	**627**	**71%**	**1418**	**126**	**1292 (65%)**

Table 2.12: Forecast Capacity of Bus Network – PM Period (16:00 – 20:00)

The assessment of the existing local bus based public transport network reveals that sufficient capacity is available to accommodate the additional demand projected to be generated by the proposed development.

The assessment summarised in **Tables 2.11 & 2.12** assumes that the existing bus services remains unaltered with no additional bus services (i.e. increased frequency) or replacement buses (i.e. replacement of existing bus with a larger vehicle) offering any additional capacity beyond that recorded by IDASO Ltd. on 9th February 2023.

As mentioned in **Section 2.7.3**, the number of surveyed services was approximately **83%** of the **scheduled** services. Despite this, the services can easily handle all additional bus passengers.

It is also worth noting that only 3 out of the 6 scheduled 175 buses from UCD to Citywest were available in the PM Peak period during the bus survey. This indicates that the capacity of the 175 should be far higher than what is reflected in these tables.

Overall, the scale of the impact of the proposed development on the bus network within the proximity of the subject site is considered low, and we believe it can readily be accommodated within the current service provision over the entire peak period.

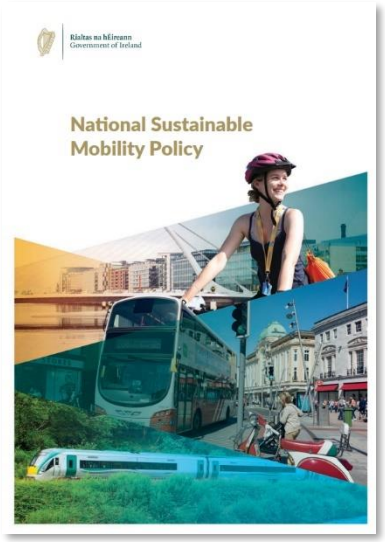
In conclusion the additional demand for bus trips as a result of the proposed development can be accommodated on the existing and future improved services in the area without any noticeable effect.

The analysis is based on the existing TRICS data, 2016 CSO travel patterns, and MMP modal share targets (**Table 2.4)** and whilst the development seeks to encourage modal shift, given the relatively small percentage impact on the bus network, any possible future changes in demand due to improve modal shift (walking, cycling, increased working from home and public transport etc) above the MMP targets, will still have negligible impact on bus capacity here.

Whilst this Report contains an assessment of current capacity, it should be noted that service providers are commercial in nature, running their businesses based on existing demand, rather than medium to longer term future demand. Bus services are provided based on real demand rather than potential demand. If there is an increased demand for services, or indeed if there is a deficit in a service provision, Operators generally react to improve facilities if it makes commercial sense to do so. This is outlined in '*Measure BUS5'* of Chapter 12 of the GDA Transport Strategy (2022-2042), which states: *"It is the intention of the NTA to continually monitor the demand for bus services in the Dublin Area as part of the roll-out of the new service network and as part of the monitoring and periodic review of the Transport Strategy, and enhance or amend the service network as appropriate."*

3 POLICY FRAMEWORK

3.1 NATIONAL SUSTAINABLE MOBILITY POLICY (2022)



This policy sets out a strategic framework to 2030 for active travel and public transport, in order to support Ireland's overall requirement to achieve a 51% reduction in carbon emissions by 2030.

The target of the policy is to *"deliver at least 500,000 additional daily active travel and public transport journeys and a 10% reduction in kilometres driven by fossil fuelled cars by 2030. These are in line with metrics for transport set out in the Climate Action Plan 2021."*

The policy will promote four main areas regarding Sustainable Mobility:

- Supporting Safe and Green Mobility
- Supporting People Focused Mobility
- Supporting Better Integrated Mobility
- Improving the Delivery of Sustainable Mobility

The policy also sets out four key areas where benefits can be seen from Sustainable Mobility:

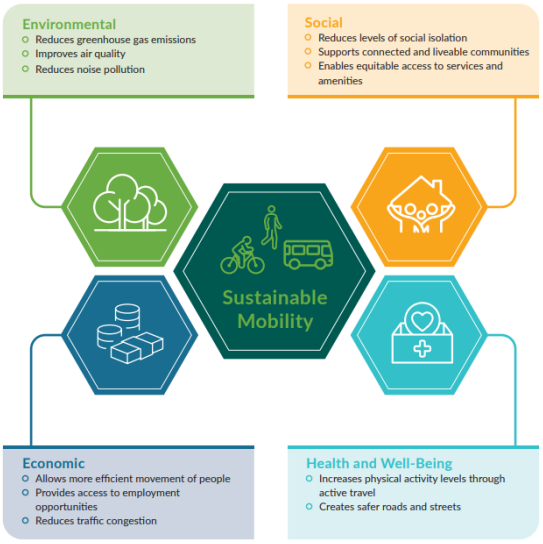
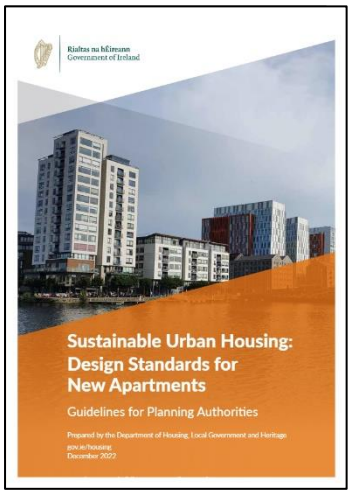


Figure 3.5: Sustainable Mobility Key Areas (Source: Department of Transport)

Goal 4 of the policy *"aims to expand the capacity and availability of sustainable mobility in a regional and rural context. This will be done through the delivery of improved active travel infrastructure, expansion of regional bus and rail services and local bus networks, and improved connectivity between different transport modes."*

Goal 4 also states: *"Pedestrian enhancement plans will also be developed for the regional growth centres and key towns identified in the NPF and the Regional Spatial and Economic Strategies. Improved walking and cycling infrastructure in towns and villages can support the Town Centre First principle through enabling access to local services by active travel."*

3.2 SUSTAINABLE URBAN HOUSING: DESIGN STANDARDS FOR NEW APARTMENTS – DECEMBER 2022



This guideline document was produced by the Department of Housing, Planning and Local Government and was updated with the latest version in December 2022. The purpose of this document is to set out standards for apartment development, mainly in response to circumstances that had arisen whereby some local authority standards were at odds with national guidance.

With the demand for housing increasing, this means that there is a need for an absolute minimum of 300,000 new homes in Ireland's cities by 2040. It is therefore critical to ensure that apartment living is an increasingly attractive and desirable housing option for a range of household types and tenures.

These Guidelines apply to all housing developments that include apartments that may be made available for sale, whether for owner occupation or for individual lease. They also apply to housing developments that include apartments that are built specifically for rental purposes, whether as 'build to rent' or as 'shared accommodation'.

Cycling provides a flexible, efficient and attractive transport option for urban living and these guidelines require that this transport mode is fully integrated into the design and operation of all new apartment development schemes.

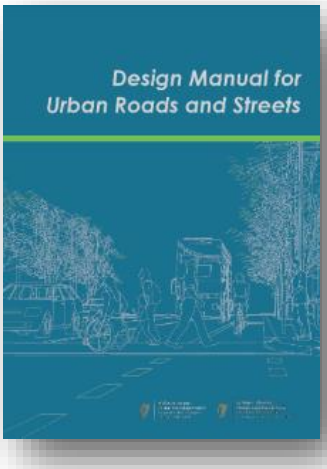
The quantum of car parking or the requirement for any such provision for apartment developments will vary, having regard to the types of location in cities and towns that may be suitable for apartment development, broadly based on proximity and accessibility criteria. There

are three types of locations set out that will determine the level of parking provided. The **Central and/or Accessible Urban Locations** comprise of apartments in more central locations that are well served by public transport. These locations have a default policy for car parking provision to be minimised, substantially reduced or wholly eliminated in certain circumstances. The **Intermediate Urban Locations** comprise of apartments in suburban/urban locations served by public transport or close to town centres or employments areas. These locations require that planning authorities must consider a reduced overall car parking standard and apply an appropriate maximum cap parking standard. The **Peripheral and/or Less Accessible Urban Locations** comprise of apartments located in relatively peripheral or less accessible urban locations, one car parking space per unit, together with an element of visitor parking should generally be required.

For all types of location, where it is sought to eliminate or reduce car parking provision, it is necessary to ensure, where possible, the provision of an appropriate number of drop off, service, visitor parking spaces and parking for the mobility impaired. Provision is also to be made for alternative mobility solutions including facilities for car sharing club vehicles and cycle parking and secure storage.

3.3 DESIGN MANUAL FOR URBAN ROADS AND STREETS (DMURS) - 2019

DMURS guidance document was produced by the Department of Transport, Tourism and Sports and the Department of Environment, Community and Local Government in March 2013 and updated in May 2019. It provides guidance relating to the design of urban roads and streets. It presents a series of principles, approaches and standards that are necessary to achieve balanced, best practice design outcomes with regard to street networks and individual streets.



The manual places a significant emphasis on car dominance in Ireland and the implications this has had regarding the pedestrian and cycle environment. The document encourages more sustainable travel patterns and safer streets by proposing a hierarchy for user priorities. This hierarchy places pedestrians at the top, indicating that walking is the most sustainable form of

transport and that by prioritizing pedestrians first, the number of short car journeys can be reduced, and public transport made more accessible.

Second in the hierarchy are cyclists with public transport third in the hierarchy and private motor vehicles at the bottom. By placing private vehicles at the bottom of the hierarchy, the document indicates that there should be a balance on street networks and cars should no longer take priority over the needs of other users.

The manual emphasizes that narrow carriageways are one of the most effective design measures that calm traffic. The Standard width of an arterial and link street is between 5.5m and 6m, however, 5.5m should be implemented where lower design speeds are being applied. Desirable footpath widths are between 2m – 4m. The 2m width should be implemented to allow for low to moderate pedestrian activity. A 3m – 4m footpath should be implemented to allow for moderate to high pedestrian activity.

The focus of the manual is to create a place – based sustainable street network that balances the pedestrian and vehicle movements. The manual references the different types of street networks, including arterial streets, link streets, local streets, and highlights the importance of movement.

3.4 TRANSPORT STRATEGY FOR THE GREATER DUBLIN AREA 2022-2042

The Transport Strategy for the Greater Dublin Area 2022-2042 is a document compiled by the National Transport Authority which sets out the Strategic Transport Plan for the Greater Dublin Area for the period up to 2042. This sets out an integrated long-term strategy for the area and includes new public transport proposals such as DART and Luas expansion, as well as a new Metro route.



This document will influence transport planning across the region until 2042 and replaces 'Transport Strategy for the Greater Dublin Area 2016-2035'. It thereby underpins all transportation strategies, traffic management schemes and development plans prepared by South Dublin County Council during this timeframe.

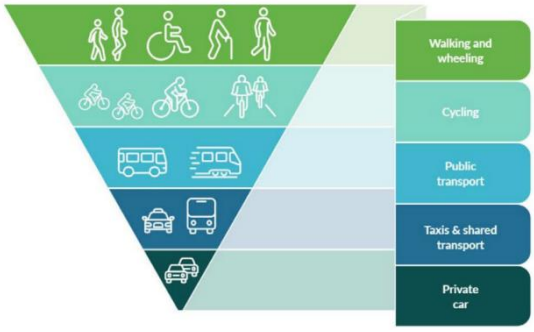
The Strategy sets out a clear hierarchy of transport users, commencing with the sustainable modes of travel such as walking, cycling and public transport users at the very top of the hierarchy. The

Strategy adopts the general principle that these users should have their safety and convenience needs considered first and that the hierarchy is applied where a large share of travel is (or could be) made by walking, cycling and public transport.

In addition to guiding the development of specific Strategy measures, the NTA sets out the road user hierarchy, which is deemed as a fundamental input into the Transport Strategy:

Measure PLAN2 – The Road User Hierarchy

'The NTA, in the decision-making process around the design, planning and funding of transport schemes in the GDA, will be guided by the priority afforded to each mode in the Road User Hierarchy as set out in the Transport Strategy.'



3.5 SOUTH DUBLIN COUNTY DEVELOPMENT PLAN 2022-2028



Transport and mobility policy in South Dublin in guided by a comprehensive and coordinated set of national and regional policy documents. National and Regional policy recognises that current transport trends, in particular levels of car use, are unsustainable and that a transition towards more sustainable modes of transport, such as walking, cycling and public transport is required. There are concerns that if current trends continue, congestion and transport emissions would increase, economic competitiveness will suffer, and quality of life will decline.

The council will seek to rebalance transport and mobility within the County by promoting ease of movement by sustainable modes (including walking, cycling and public transport) and freeing up road space for economic growth and new development.

The Council recognises that new development, both residential and commercial, permitted in line with this Plan will lead to additional trips being generated. The Council will work with the relevant agencies to seek to ensure that as high a proportion as possible would be conducted by sustainable means.

The following objectives have seen set out within the plan in order to promote transport and mobility within the County:

SM1 Objective 1: *To achieve and monitor a transition to more sustainable travel modes including walking, cycling and public transport over the lifetime of the County Development Plan, in line with the County mode share targets of 15% Walk; 10% Cycle; 20% Bus; 5% Rail; and 50% Private (Car / Van / HGV / Motorcycle).*

SM1 Objective 2: *To ensure consistency with the NTA's Transport Strategy for the Greater Dublin Area (2016-2035) as updated to 2042, as required by RPO 8.4 of the RSES.*

SM1 Objective 3: *To support the delivery of key sustainable transport projects including DART and Luas expansion programmes, BusConnects and the Greater Dublin Metropolitan Cycle Network in accordance with RPO 5.2 of the RSES / MASP.*

SM1 Objective 4: *To ensure that future development is planned and designed in a manner that facilitates sustainable travel patterns, with a particular focus on increasing the share of active modes (walking and cycling) and public transport use and creating a safe and attractive street environment for pedestrians and cyclists, in accordance with RPO 5.3 of the RSES / MASP.*

SM1 Objective 5: *To ensure that future development is planned and designed in a manner that maximises the efficiency and protects the strategic capacity of the metropolitan area transport network, both existing and planned, and to protect and maintain regional accessibility, in accordance with RPO 8.3 of the RSES.*

SM1 Objective 6: *To safeguard the County's strategic road network and to improve the local road and street network in a manner that will better utilise existing road space and encourage a transition towards more sustainable modes of transport.*

SM1 Objective 7: *To engage with relevant agencies including the National Transport Authority (NTA) and Transport Infrastructure Ireland (TII) in relation to strategic and local transportation issues including delivery of transport projects and to encourage consultation with local communities.*

SM1 Objective 8: *To prepare Integrated Transport Studies for urban areas within the County, as need arises, to provide a long-term plan for the movement of pedestrians, cyclists, public transport and private vehicles and to have regard to the European Commission's Guidelines for Developing and Implementing a Sustainable Urban Mobility Plan (2nd Edition, 2019) in the preparation of such studies.*

4 CHARACTERISTICS OF PROPOSALS

4.1 Overview

The proposed development site is located at Taylor's Lane, Ballyboden, Dublin 16. The site currently contains a vacant three storey building. The proposed development will cover a net area of approximately 3.5ha. **Figure 4.1** below illustrates the Site Plan Layout encompassing the proposed Residential Development.

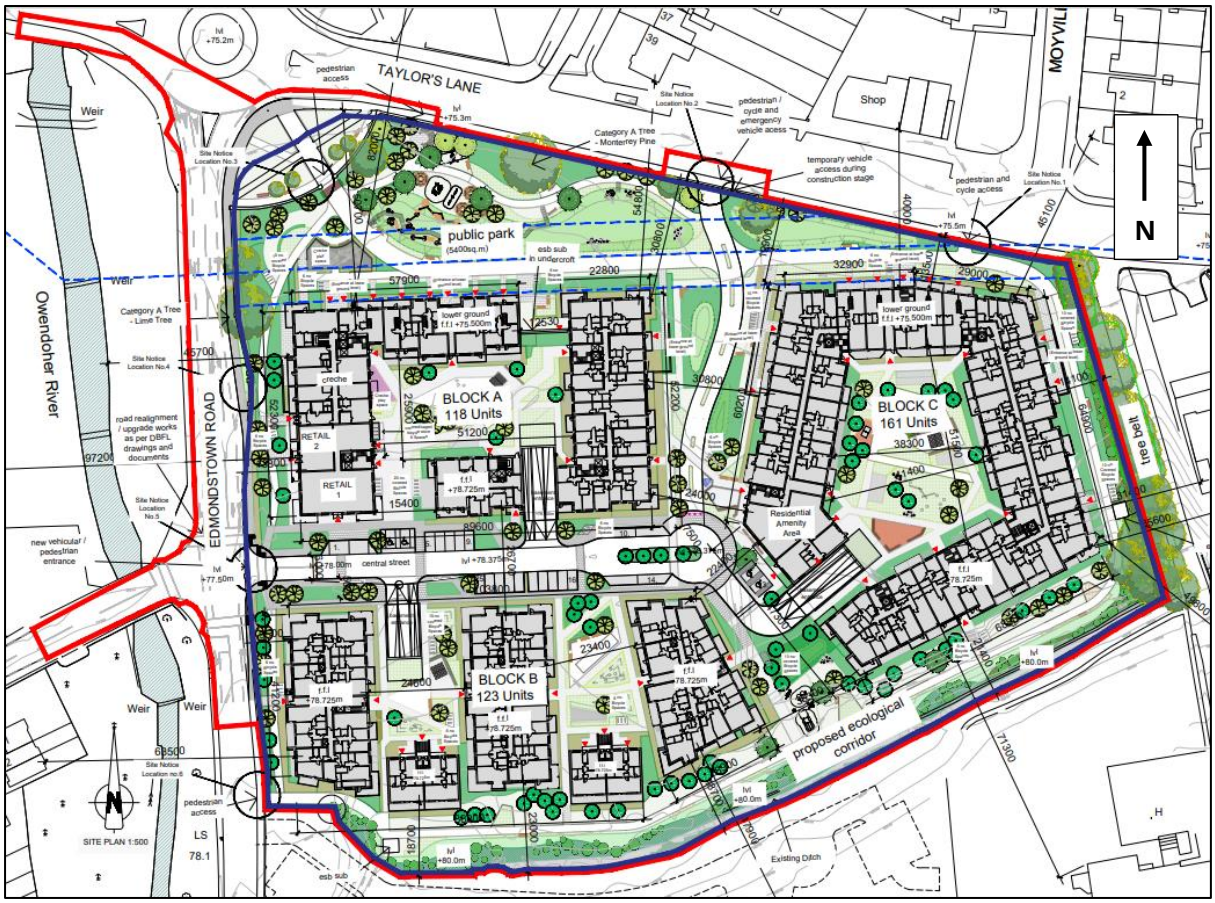


Figure 4.1: Proposed Site Plan Layout

The subject proposals seek permission for a residential development comprising of the following:

- Demolition of existing former Institutional buildings and associated outbuildings (c.5231 sq.m);
- Construction of 402 residential units within 3 apartment/duplex blocks ranging in height from 2-5 storeys and comprising of 39 no. 1-Beds; 302 no. 2-Beds; and 61 no. 3-Beds all with associated private balconies/terraces to the north/south/east/west elevations;
    - Provision of one crèche and two retail units.

- Provision of 290 no. car parking spaces
- Provision of 1054 no. cycle parking spaces
- Vehicular access to the site via Edmondstown Road to the west.
- Pedestrian Access to the site via Edmondstown Road to the west and Taylor's Lane to the north.

Please see the statutory notices for a full development description.

Further details of the development proposals, including the site layout drawing, are illustrated in the architects' scheme drawings as submitted with this pre-application consultation request.

4.1.1 Vehicular/Pedestrian/Cycle Access

Vehicular access to/from the subject development will be provided via the existing Edmondstown Road / Ballyboden Road / Scholarstown Road priority junction. As part of the development proposals, a fourth arm (subject site access) will be incorporated, and the junction will be upgraded from its existing 3 arm signalised junction arrangement to a 4-arm signalised junction.

The main site access for vehicles is illustrated in **Figure 4.2**.

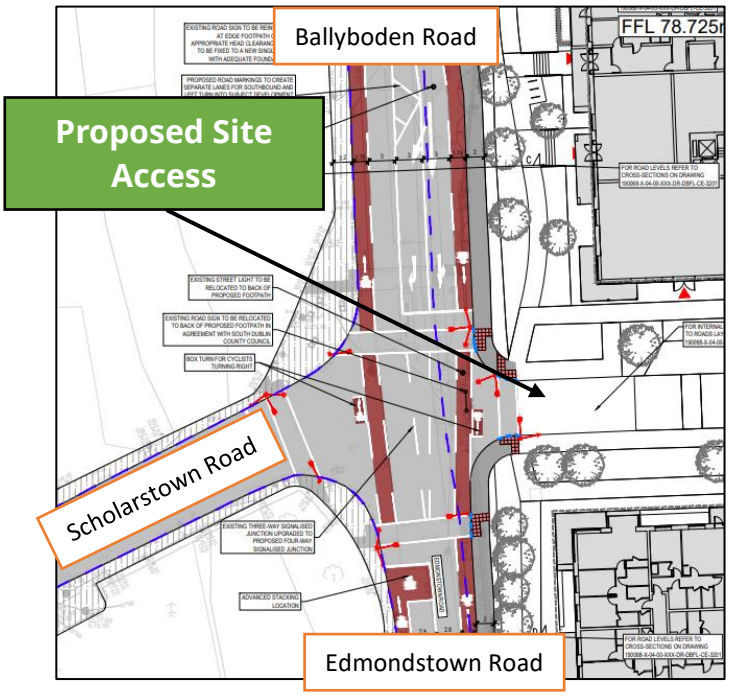


Figure 4.2: Proposed Site Access for Vehicles, Pedestrians & Cyclists

Figure 4.2 shows the main vehicular access. An emergency access is proposed to the northern side of the development. This is proposed for emergency vehicles only and will be controlled with

bollards to prohibit general vehicles using the access. Pedestrians and cyclists will also be able to use this emergency access on a regular basis.

There are also a number of additional pedestrian and cycle access points throughout the site, providing permeability and convenient access for pedestrians and cyclists. There are four separate access points onto Taylor's Lane, including a shared pedestrian and cycle entrance, and three pedestrian entrances.

Figure 4.3 shows the proposed Site Plan Layout drawing with additional pedestrian access points serving the site on Taylor's Lane.

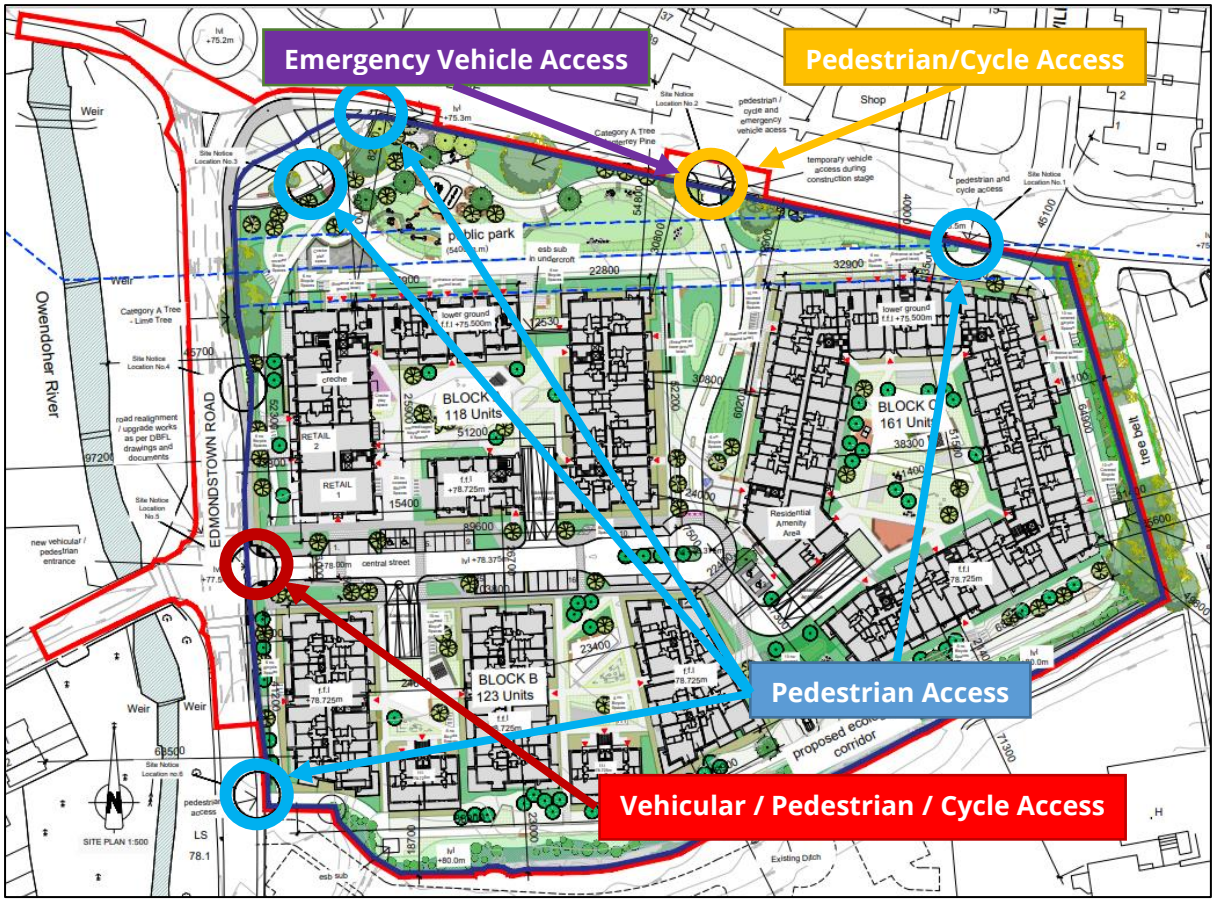


Figure 4.3: Site Plan Layout on Taylor's Lane and Proposed Access Points

4.1.2 Service Vehicles and Bin Storage / Transfer

The proposed development will generate servicing requirements and will need to be considered as part of the servicing strategy. A temporary waste collection point will need to be designated to allow easy access for refuse collection for the development. A set-down area will also be provided

which caters for general vehicles, taxis, and maintenance vehicles and set down/pick up provided within the subject site.

4.1.3 Cycle Parking Provision

In order to determine the appropriate level of cycle parking provision for the proposed development reference should also be made to both (i) the South Dublin County Council (SDCC) requirements; and (ii) the Department of Housing and Planning and Local Government (DHPLG) Government 'Sustainable Urban Housing: Design Standards for New Apartments' (SUHDS Guidance – Dec 2022).

SDCC outline the following categories for cycle parking:

- Long Term: These are to be designed for use by residents and employees. Such spaces should be located in a secure area that is not freely accessible to the general public.
- Short Stay: These are to be designed for ease of use by the general public. Such spaces should be located in highly visible areas that are easy to access.

4.1.4 SDCC Cycle Parking Requirements

With reference to the **Table 4.1** below, the development is required to provide **826** long term cycle spaces for residents and **201** short term cycle spaces for visitors. A total of **16** cycle parking spaces (long and short term) are required to be provided for the creche element of the development and a total of **9** cycle parking spaces (long and short term) are required for the retail unit. This equates to a total cycle parking provision requirement of **1052** cycle parking spaces in accordance with the SDCC Development standards.

The SDCC cycle parking standards are detailed in **Table 4.1** below:

SDCC Cycle Parking Standards			
Category	**Land Use**	**Long Term**	**Short Term**
Accommodation	Residential Apartment	1 per bed	1 per 2 apartments
Education	Creche	1 per 5 staff	1 per 10 children
Retail/Commercial	Retail Convenience	1 per 5 staff	1 per 50 sqm GFA

Table 4.1: SDCC Cycle Parking Standards

4.1.5 Department of Housing, Planning and Local Government

The Department of Housing, Planning and Local Government 'Sustainable Urban Housing: Design Standards for New Apartments' (SUHDS Guidance - Dec 2022) states the following requirements for cycle parking: -

- 1 cycle storage space per bedroom;

- 1 cycle storage space for studio units and;
- 1 cycle space per two residential units for visitor parking.

In total, there are 402 residential apartment units proposed. Of these, there is proposed to be 39 No. 1-bedroom apartments, 302 No. 2-bedroom apartments, and 61 No. 3-bedroom apartments. Therefore, the development is required to provide a total of **1027 no.** of residential cycle parking spaces based on the DHPLG guidelines.

The development proposes to provide a total of **1054** cycle parking spaces with **908** of these proposed as short / long term parking for the residents in the basement, **6** for long term parking for the creche and retail staff on the surface and an additional **140** proposed as short term stay on the surface. The increased level of cycle parking spaces is proposed to encourage positive modal shift towards a more sustainable mode of travel. Moreover, future residents of the subject site will also be able to benefit from pedestrian/cycle facilities along most of the roads to/from the proposed development.

A comparison of all standards and the proposed cycle parking can be seen in **Table 4.2** below

Cycle Parking						
Unit Type	MCC Development		DHPLG Parking		Proposed	
	Long Stay	Short Stay	Long Stay	Short Stay	Long Stay	Short Stay
Apartments	826	201	826	201	826	203
Creche	4	12	-	-	4	12
Retail	2	7	-	-	2	7
Sub Total	**832**	**220**	**826**	**201**	**832**	**222**
Total	**1052**		**1027**		**1054**	

Table 4.2: Comparison of Bicycle Parking Provision

4.1.6 Vehicle Parking Requirement

Reference has been made to Table 13.25 of the South Dublin County Council Development Plan (2022-2028) which outlines the **maximum** car parking standards for the county.

The South Dublin County Council (SDCC) Development Plan 2022-2028 aims to take a "*balanced approach to the provision of car parking with the aim of meeting the needs of businesses and communities whilst promoting a transition towards more sustainable forms of transportation*." SDCC states that the number of spaces for a proposed site must not exceed the maximum provision. It also states that the "*maximum provision should not be viewed as a target and a lower*

rate of parking may be acceptable". This depends on the environment of the proposed site and its future residents.

The SDCC Development Plan encourages that in order to decrease the number of car parks, the site would be in close proximity to public transport, that services around the residential development would fulfil occasional and day to day needs and that the journey residents would make to work would reduce significantly.

The SDCC Development Plan 2022-2028 gives standards for Car Parking for Apartments as set out below in **Table 4.3.** It outlines the maximum car parking standards for the residential element of the proposed development. The required parking is based on the number of proposed apartments on site.

It is noted that the proposed development is considered to be located within Zone 2, which is ideally located within 400m of good public transport.

SDCC Maximum Car Parking Standards				
Land Use	No. of bedrooms	No. of units	Max Parking Rate (Zone 2)	Maximum Standard
Residential Apartment	1	39	0.75 per unit	29.25
	2	302	1 per unit	302
	3	61	1.25 per unit	76.25
Total		402	Total Maximum Spaces Allowed	408

Table 4.3: SDCC Maximum Car Parking Standards (Residential)

Table 4.4 outlines the maximum car parking standards for the non-residential element of the proposed development.

SDCC Maximum Car Parking Standards			
Land Use	No. of Classrooms / Size (sqm)	Max Parking Rate (Zone 2)	Maximum Standard
Creche	10	0.5 per classroom	5
Retail Convienence	262	1 per 25 sqm	11
Pharmacy / Hair Salon	97	1 per 25 sqm	4
Total Maximum Spaces Allowed			20

Table 4.4: SDCC Development Plan Maximum Vehicle Parking Requirements (Non-Residential)

In terms of electric cars, the SDCC Development Plan also outlines that "EV charging shall be provided in all residential, mixed use and commercial development and shall comprise 15% - 20% of the total parking spaces provided, with higher provision within this range required in urban areas". The development has taken this into account, and it is proposed that **59** electric vehicle spaces will be operational on the opening day of the development, therefore, this is in accordance with this requirement.

4.1.7 Department of Housing, Planning and Local Government

The Department of Housing, Planning and Local Government (DHPLG) also mentions car parking, within the 'Intermediate Urban Locations' section of the document 'Sustainable Urban Housing: Design Standards for New Apartments'. It states that "*In suburban/urban locations served by public transport or close to town centres or employment areas and particularly for housing schemes with more than 45 dwellings per hectare net (18 per acre), planning authorities must consider a reduced overall car parking standard and apply an appropriate maximum car parking standard*."

The proposed residential development is located within the 'Intermediate Urban Location' as classified within these guidelines. The document highlights that for new developments in these locations**, 'the Planning Authority must consider a reduced overall car parking standard.'**

The residential development at Taylor's Lane would benefit from convenient bus linkages and cycle lanes to and from Dublin City Centre. This is further justified by the proposed provision by BusConnects and the GDA Transport Strategy 2022-2042.

It is an objective for this development to reduce the need for commuters to travel by car and instead to avail of more sustainable modes of travel in line with current and future travel requirements as set out in recent policy documents within Ireland.

The development proposes to provide a total **290 no.** car parking spaces, in response to the SDCC request made during the pre-planning application meeting.

A proposed Parking Strategy for the subject development site at Taylors Lane has been developed as a separate report and presents the rationale behind the identification of the quantum of vehicle parking (including mobility impaired parking) that is being proposed as part of the subject site development proposals.

It is proposed to provide a reduced number of car parking spaces for the apartments at a ratio of **0.68** spaces per unit. This equates to a total provision of **275** car parking spaces for the **402** apartment units, and a further **15** car parking spaces for the retail and creche units. It is also noted that recent planning applications under the Large Residential Development (LRD) proposals have included for reduced car parking ratios which have been accepted by SDCC and ABP.

Standard / Proposed	Apartments	Creche	Retail A & B	Total	No. of units	Ratio
SDCC Standards	408	5	15	428	402	1.01
SUHDS Standards	*"A reduced overall car parking standard"*					
Proposed	275	5	10	290	402	0.68

Table 4.5: Comparison of Maximum & Proposed Car Parking Spaces

While there is no accessible parking requirements in the current SDCC Development Plan, the previous plan outlined that 5% of total car parking provision is allocated for Mobility Impaired spaces within a development. The development proposes a total of **20** mobility impaired spaces, which equates to **7%** of the total car parking provision.

The SDCC Development Plan outlines that 20% of total car parking provision must be allocated for Electric Vehicle Charging spaces within a development in an urban area. The remaining spaces must include ducting for future installation of charging facilities. The development proposes a total of **59** electric vehicle spaces that will be operational on opening of the development, therefore, this is in accordance with this requirement. The remaining spaces will include ducting for future installation of EV Charging facilities.

A total of **4** no. spaces have been allocated as 'Car Club' parking spaces.

A breakdown of allocation for car parking is shown in **Table 4.6**. The apartment parking provision has been designed to the SUHDS standards.

Unit Type	Parking Spaces	Basement	Surface
Apartments	265*	265	10
Creche	5	-	5
Retail A and B	10	-	10
Total	**25**	**265**	**25**

* Equates to 0.68 parking spaces per unit

Table 4.6: Parking Provision based on Relevant Standards

It is an objective for this development to reduce the need for commuters to travel by car and instead to avail of more sustainable modes of travel in line with current and future travel requirements as set out in recent policy documents within Ireland.

Further details on the parking management regime proposed at the development site are provided in the Parking Strategy report prepared as part of this planning submission.

4.2 INITIATIVES FOR SUSTAINABLE TRAVEL

Policy documents in Ireland, as referenced in **Section 3** of this report, highlight the importance of travel by more sustainable means (Walking, Cycling, Public Transport) and that reduction in car use is key to the improvement of travel and mobility within the country. Promoting sustainable travel, therefore, is a vital element for this development.

It is acknowledged, however, that homeowners may require a vehicle of some sort for purposes other than commuting on an everyday basis and simply reducing car parking to **0.68** spaces per unit would not be realistic without implementing alternative measures to accommodate residents and visitors alike. Therefore, the following sustainable alternative arrangements could be proposed should car parking and car ownership be reduced within the development for the Build-to-Rent residents:

- Car Club (GoCar);
- Mobility Management Plan;
- Increased Cycle Parking (Including Initiatives such a Bleeper Bike)
- Parking Management.
- Sustainable Travel Initiatives

4.2.1 Car Club

A Car Club provides its members with quick and easy access to a vehicle for short term hire. The GoCar is a well-established and successful car club operator in Dublin. This service has been recommended in recent developments as a means for car sharing where car parking is reduced. GoCar would provide a number of permanent vehicles within close proximity to the development or within the development itself where residents would have availability to use.

A recent survey undertaken by GoCar indicated that the main uses of the service was for day trips, family trips and big shopping trips. The survey also highlighted that the average use of a car was for 1 hour a day. GoCar also offer more favourable rates for long distance travel.

It is proposed to provide **4** No. car share spaces (e.g. GoCar or similar) within the development for residents to utilise.

GoCar has given a letter of confirmation to provide its service for the proposed development site. This letter of confirmation can be found in **Appendix F.**

4.2.2 Mobility Management Plan

An outline Mobility Management Plan has been prepared as part of the planning pack, and should be read in conjunction with this document. The MMP will be developed further at operation stage by the management company who will have a more active role than a management company from a traditional apartment development.

4.2.3 Increased Cycle Parking

Increasing cycle parking is an alternative measure when reducing car parking spaces. A total of **1054** cycle spaces are proposed for this development of 402 residential units, a creche, and two retail facilities. It is noted that the provision of cycle parking proposed is above both the SDCC Development Plan requirements and Design Standards for New Apartments requirements.

4.2.4 Sustainable Travel Initiatives

Section 2 of this report outlines the initiatives for sustainable travel that are proposed within close proximity of the development site such as BusConnects routes, the GDA Cycle Network Plan (2022) routes as well as overall improvements to the walking and cycling network. These will provide additional enhancements for sustainable travel throughout the area.

4.3 PEDESTRIAN CONNECTIVITY

The Design Manual for Urban Roads and Streets (DMURS) identifies the importance of connectivity for pedestrians within residential areas. The document states 'The creation of vibrant and active places requires pedestrian activity. This in turn requires walkable street networks that can be easily navigated and are well connected.'

DMURS references that 'Sustainable neighbourhoods are areas where an efficient use of land, high quality urban design and effective integration in the provision of physical and social infrastructure such as public transport, schools, amenities and other facilities combine to create places people want to live in'.

The document highlights that these residential locations that have been constructed in accordance with the principles of segregation, and that increase walking distances for residents, have a significant influence on mode choice as a lack of connectivity is one of the key factors that discourage people from walking.

The proposed development site will have excellent connectivity for pedestrians to access the residential units, with a number of connecting paths that route through the proposed Central Open Space area. This enables pedestrians to travel easily through the site with no barriers or segregated areas to hinder movement.

The proposed access points for pedestrians and cyclists will be situated at points along the northern boundary, the roundabout north of the development, and at points along the western boundary.

5 TRIP GENERATION AND DISTRIBUTION

5.1 TRAFFIC SURVEYS

In order to establish the existing local road networks traffic characteristics and subsequently enable the identification of the potential impact of the proposed residential development, traffic surveys were conducted on Thursday the 22nd September 2022.

The aforementioned traffic surveys (weekday classified junction turning counts) were conducted by IDASO Ltd between 07:00 AM to 19:00 PM. The surveys undertaken included Junction Turning Counts (JTC) as well as Queue Length Surveys (QLS) on each approach to junctions. JTCs were carried out at two junctions within close proximity to the proposed development site. The following two locations were included within the survey (**Figure 5.1**):

- **Junction 1** – Edmondstown Road / Ballyboden Road / Scholarstown Road
- **Junction 2** – Ballyboden Road (N)/ Ballyboden Road(S)/Ballyboden Way/Taylor's Lane/ Junction.

The raw data from the Traffic Surveys conducted on Thursday the 22nd of September 2022 can be found in **Appendix G.**



Figure 5.1: Traffic Survey Locations

In order to analyse and assess the predicted traffic generation from the proposed residential development upon the local road network, an area wide traffic model incorporating these local junctions was created by DBFL. Base traffic flows and the Flow Diagrams for all scenarios are illustrated within **Appendix B.**

5.2 TRAFFIC GROWTH

An Opening Year of 2025 has been assumed for this assessment. In accordance with TII Guidance, Future Design years (+5 and +15 years) of 2030 and 2040 have also been adopted.

The TII Project Appraisal Guidelines (PAG) have been utilized to determine the traffic growth forecast rates. The traffic growth forecast rates within the PAG ensures local and regional variations and demographic patterns are accounted for.

Table 6.1 within the PAG Unit 5.3 provides Annual National Traffic Growth Factors for the different regions within Ireland. The subject site lies within 'Dublin' with the growth factors as outlined within **Table 5.1** below.

County	Low Sensitivity Growth Rates						Central Sensitivity Growth Rates						High Sensitivity Growth Rates					
	2016-2030		2030-2040		2040-2050		2016-2030		2030-2040		2040-2050		2016-2030		2030-2040		2040-2050	
	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV
Dublin	1.016	1.03	1.005	1.012	1.004	1.014	1.018	1.032	1.006	1.014	1.005	1.016	1.021	1.035	1.01	1.017	1.01	1.025

Table 5.1: National Traffic Growth Forecasts: Annual Growth Factors

(Extract from Table 6.1 TII PAG Unit 5.3)

Applying the annual factors (central growth) as outlined in **Table 5.1** above for the adopted Opening Year of 2025 and Future Horizon Years of 2030 (+5 years) and 2040 (+15 years), the following growth rates have been adopted to establish corresponding 2025, 2030 and 2040 baseline network flows: -

- 2022 to 2025 – 1.05498 (or 5.5%);
- 2022 to 2030 – 1.15341 (or 15.3%); and
- 2022 to 2040 – 1.22695 (or 22.7%).

Traffic flow diagrams for the 2025, 2030 and 2040 flows are illustrated in **Appendix B** of this report.

5.3 TRIP GENERATION

5.3.1 Subject Site

To estimate the potential level of vehicle trips that could be generated by the proposed development, reference has been made to the TRICS database. TRICS provides trip rate information for a variety of different land uses and development types, which can be applied to the subject development.

TRICS calculations were carried out for both the residential units, the retail unit, and the creche.

TRICS data is primarily UK based, although a number of Irish sites have recently been included and the number of Irish sites continues to expand. Nevertheless, we consider that TRICS will provide a reasonable indication of traffic generation from the proposed development.

Notwithstanding the above, internal research undertaken by TRICS has shown that there is no direct evidence of trip rate variation by country or region. The use of English, Scottish or Welsh

data can be equally applicable to Ireland if users take into account important site selection filtering factors such as levels of population, location type, local public transport provision, and development size and car ownership level, amongst others.

Data supplied for inclusion in TRICS undergoes a procedure of validation testing, and there is no evidence from this procedure suggesting that data from Ireland bears any significant fundamental differences to that from the other countries included. Consequently, we consider that TRICS will provide a reasonable indication of traffic generation from the proposed development.

The weekday AM and PM peak hour flows have been identified in traffic survey (2022) as occurring between 08:00-09:00 and 17:00-18:00 respectively (see **Section 5.1**).

Table 5.2 presents the predicted trip generation and the estimated traffic flows arriving and departing the proposed development during the morning and evening peak hours. The TRICs output data is provided within **Appendix A**.

Land Use	AM Peak (08:00 – 09:00)			PM Peak (17:00 – 18:00)		
	Arr	Dep	Total	Arr	Dep	Total
Residential Dwellings (per unit)	0.067	0.212	**0.279**	0.186	0.083	**0.269**
Crèche (per 100sq. m GFA)	3.559	2.947	**6.506**	2.544	3.169	**5.713**
Retail (per 100sq.m GFA)	3.104	2.671	**5.775**	4.838	5.093	**9.931**

Table 5.2: Proposed Development Vehicle Trip Rates

The two-way trips rates obtained from TRICS, used for this proposed development, were similar to trip rates used for the committed residential developments (apartment units) within the study area, such as Two Oaks Residential Development and Scholarstown Road Residential Development.

It is anticipated that 100 Residential Units, the Crèche and Retail units of the proposed residential development will be completed and occupied in 2025, therefore, this assessment includes the following scenarios.

- 2025 Opening Year = 100 Residential Units + Crèche + Retail
- 2030 – Full Development = 402 Residential Units + Crèche + Retail

Based on the above trip rates, potential peak hour traffic generation is calculated, and the predicted peak hour AM and PM traffic generated by the proposed development are presented in

Table 5.3 and **Table 5.4** below. The tables below outlines the potential peak hour vehicle trips for the horizon years, that have been calculated based on the proposed development schedule.

Land Use	Units/GFA	AM Peak (08:00 – 09:00)			PM Peak (17:00 – 18:00)		
		Arr	Dep	Total	Arr	Dep	Total
Residential Dwellings (per unit)	100	7	21	**28**	19	8	**27**
Crèche (655 sqm) *Discounted by 40% to account for internal and pass-by traffic generation	655 sq.m	14	12	**26**	10	12	**22**
Retail (262 & 97sqm) *Discounted by 40% to account for internal and pass-by traffic generation	359 sq.m	4	3	**7**	6	7	**13**
Total		**25**	**36**	**61**	**35**	**27**	**62**

Table 5.3: Proposed Development Vehicle Trip Generation (2025 Opening Year)

Land Use	Units/GFA	AM Peak (08:00 – 09:00)			PM Peak (17:00 – 18:00)		
		Arr	Dep	Total	Arr	Dep	Total
Residential Dwellings (per unit)	402	27	85	**112**	75	33	**108**
Crèche(655 sqm) *Discounted by 40% to account for internal and pass-by traffic generation	655 sq.m	14	12	**26**	10	12	**22**
Retail (262 & 97sqm) *Discounted by 40% to account for internal and pass-by traffic generation	359 sq.m	4	3	**7**	6	7	**13**
Total		**45**	**100**	**145**	**91**	**52**	**143**

Table 5.4: Proposed Residential Development Vehicle Trip Generation (2030 Interim Year & 2040 Horizon Year)

It is noted that the trips generated for the creche and the retail elements have been discounted by 40%. This is in order to account for the fact that a significant proportion of trips to and from these units will either be internal trips from the Development, immediate existing residents within the surrounding area, or pass-by trips that are already on the road network.

Therefore, it is envisaged that the retail and creche elements will not generate a significant amount of 'Primary Trips' onto the road network. In order to provide a more conservative assessment, however, it was assumed that 60% of the trips to and from these units were classed as 'Primary Trips'.

5.3.2 Committed Developments

Following a review of SDCC online planning portal, DBFL have established the extent of existing third party developments, as located within the area of influence of the subject Taylor's Lane site, which currently benefit from a planning permission but have yet been constructed/occupied.

Fully permitted developments in the nearby areas which include a car parking provision, and thereby generating vehicle trips which can contribute to the traffic flows along the road corridors modelled as part of this assessment have been considered. The committed developments taken into consideration have been chosen based upon the vehicle trips from committed vehicles which could potentially route through the local road network modelled as part of this traffic assessment.

DBFL have subsequently included the following third-party development proposals as a 'committed development' within the network assessment.

COMMITTED DEVELOPMENT 1: White Pines East REF SHD3ABP-309836-21

The White Pines East residential development was granted planning permission in July 2021 by ABP. The development consists of 241 residential units, in 5 apartment blocks, ranging in height from 4-6 storeys, and 3 three storey duplex blocks. The development will provide 93 x1-Bed and 148 x2-bed units on a site situated to the south of the subject site, on the northern side of Stocking Avenue. Construction has not begun at the site, and so at the time of the traffic surveys it was unoccupied. Nonetheless, when the development is fully complete and occupied it may generate an impact upon the local road networks existing traffic characteristics.

In order to establish the potential quantum of traffic generated by the White Pines East committed development, reference has been made to the corresponding TTA report that was submitted with the application. **Table 5.5** indicates the TRICS derived trip rates and associated vehicle traffic generation for the aforementioned committed residential development.

Trips		AM		PM	
Unit Type	No. of units / sqm	Arr	Dep	Arr	Dep
Community Centre	537	4	2	6	6
Apartments	212	12	36	38	20
Total		16	37	44	25

Table 5.5: Trips generated by Committed Development 1

The above vehicle trips derived from the TRICS database have been incorporated within the Excel based traffic network assignment model developed by DBFL for the subject residential development proposals.

COMMITTED DEVELOPMENT 2: Garretstown House, Stocking Lane Residential Development (SDCC Ref: SD20A/0170)

The Stocking Lane residential development was granted planning permission in December 2020 by SDCC. The development consists of 24 terraced houses, comprising 8 2-bedroom, 2 storey houses; 8 3-bedroom, 2 storey houses; and 8 4-bedroom, 2 storey houses with attic level accommodation; Vehicular and pedestrian access from Stocking Lane; Car parking, public open space, and all associated site works and services.) on a site situated to the south of the subject site, on the eastern side of Stocking Lane. Construction has begun at the site, and so at the time of the traffic surveys it was unoccupied. Nonetheless, when the development is fully complete and occupied it may generate an impact upon the local road networks existing traffic characteristics.

In order to establish the potential quantum of traffic generated by the Stocking Lane committed development, TRICS was used by DBFL to determine the trip rates. **Table 5.6** indicates the TRICS derived trip rates and associated vehicle traffic generation for the aforementioned committed residential development.

Trips		AM		PM	
Unit Type	No. of units	Arr	Dep	Arr	Dep
House	24	4	9	9	6
Total		4	9	9	6

Table 5.6: Trips generated by Committed Development 2

The above vehicle trips derived from the TRICS database have been incorporated within the Excel based traffic network assignment model developed by DBFL for the subject residential development proposals.

COMMITTED DEVELOPMENT 3: Two Oaks, Scholarstown Road Residential Development (Ref: ABP-305878-19)

The Two Oaks residential development was granted planning permission in March 2020 by ABP. The development consists of the provision of 590 residential apartment units (480 Built to Rent and 110 Build to Sell units), creche (438 sqm) and Retail/Café (945 sqm) on a site situated to the west of the subject site, on the northern side of Scholarstown Road. The development is currently partially occupied, however at the time of the traffic surveys it was unoccupied. Nonetheless, when the development is fully complete and occupied it may generate an impact upon the local road networks existing traffic characteristics.

In order to establish the potential quantum of traffic generated by the Scholarstown Road committed development, reference has been made to the corresponding TTA report (November 2019) that was submitted with the application. **Table 5.7** indicates the TRICS derived trip rates and associated vehicle traffic generation for the aforementioned committed residential development.

Land Use	Period	Vehicle Trip Rates (per unit)/100 sqm GFA		Traffic Generation	
		Arr	Dep	Arr	Dep
(590 no.) Apartments/Duplexes	AM	0.051	0.21	30	124
	PM	0.17	0.106	100	63
Creche (438 sqm) *discounted by 40% to account for internal and pass-by traffic generation	AM	1.593	1.056	3	2
	PM	2.419	2.589	5	6
Retail/Café (945 sqm) *discounted by 50% to account for internal and pass-by traffic generation	AM	0.309	0.206	1	1
	PM	1.374	1.236	6	6
Total		**AM**		**36**	**128**
		PM		**114**	**76**

Table 5.7 Trips generated by Committed Development 3

The above vehicle trips derived from the TRICS database have been incorporated within the Excel based traffic network assignment model developed by DBFL for the subject residential development proposals.

COMMITTED DEVELOPMENT 4: Stocking Lane Residential Development (ABP Ref: SHD3ABP-311616-21)

The Stocking Lane residential development was granted planning permission in February 2022 by ABP. The development consists of the construction of 131 residential units including 21 houses (1 three bed, 11 four bed, 9 five bed) of up to two-storey plus roof storey; 2 duplex apartment units

(2 two bed) in a three-storey high block;108 apartment units (29 one bed; 59 two bed; 20 three bed) in ten apartment blocks up to four-storeys; a creche of c. 128sq.m at the ground floor of Block L; a shop of c. 65sq.m at the ground floor of Block G, with associated storage on a site situated to the south of the subject site, on the eastern side of Stocking Lane. The development is currently partially occupied, however at the time of the traffic surveys it was unoccupied. Nonetheless, when the development is fully complete and occupied it may generate an impact upon the local road networks existing traffic characteristics.

In order to establish the potential quantum of traffic generated by the Stocking Lane committed development, reference has been made to the corresponding TTA report (October 2021) that was submitted with the application. **Table 5.8** indicates the TRICS derived trip rates and associated vehicle traffic generation for the aforementioned committed residential development.

Trips		AM		PM	
Unit Type	No. of units / sqm	Arr	Dep	Arr	Dep
Apartments	110 units	7	24	20	9
Houses	21 units	3	8	7	3
Creche	128 sqm	4	3	3	3
Retail Units	65 sqm	0	0	0	0
Total		7	24	20	9

Table 5.8: Trips generated by Committed Development 4

The above vehicle trips derived from the TRICS database have been incorporated within the Excel based traffic network assignment model developed by DBFL for the subject residential development proposals.

COMMITTED DEVELOPMENT 5: White Pines Central Residential Development (ABP Ref: SHD3ABP-310398-21)

The White Pines Central residential development was granted planning permission in September 2021 by ABP. The development consists of the construction of 114 'Build-to-Rent' units in a mix of 1, 2 and 3 bed apartment and duplex units, across 6 separate blocks, on a site situated to the south of the subject site, on the southern side of Stocking Avenue. The development has not begun construction, and at the time of the traffic surveys it was unoccupied. Nonetheless, when the development is fully complete and occupied it may generate an impact upon the local road networks existing traffic characteristics.

In order to establish the potential quantum of traffic generated by the Stocking Avenue committed development, reference has been made to the corresponding TTA report (June 2021) that was submitted with the application. **Table 5.9** indicates the TRICS derived trip rates and associated vehicle traffic generation for the aforementioned committed residential development.

Trips		AM		PM	
Unit Type	No. of units	Arr	Dep	Arr	Dep
Apartments	114 units	5	21	21	9
Total		5	21	21	9

Table 5.9 Trips generated by Committed Development 5

The above vehicle trips derived from the TRICS database have been incorporated within the Excel based traffic network assignment model developed by DBFL for the subject residential development proposals.

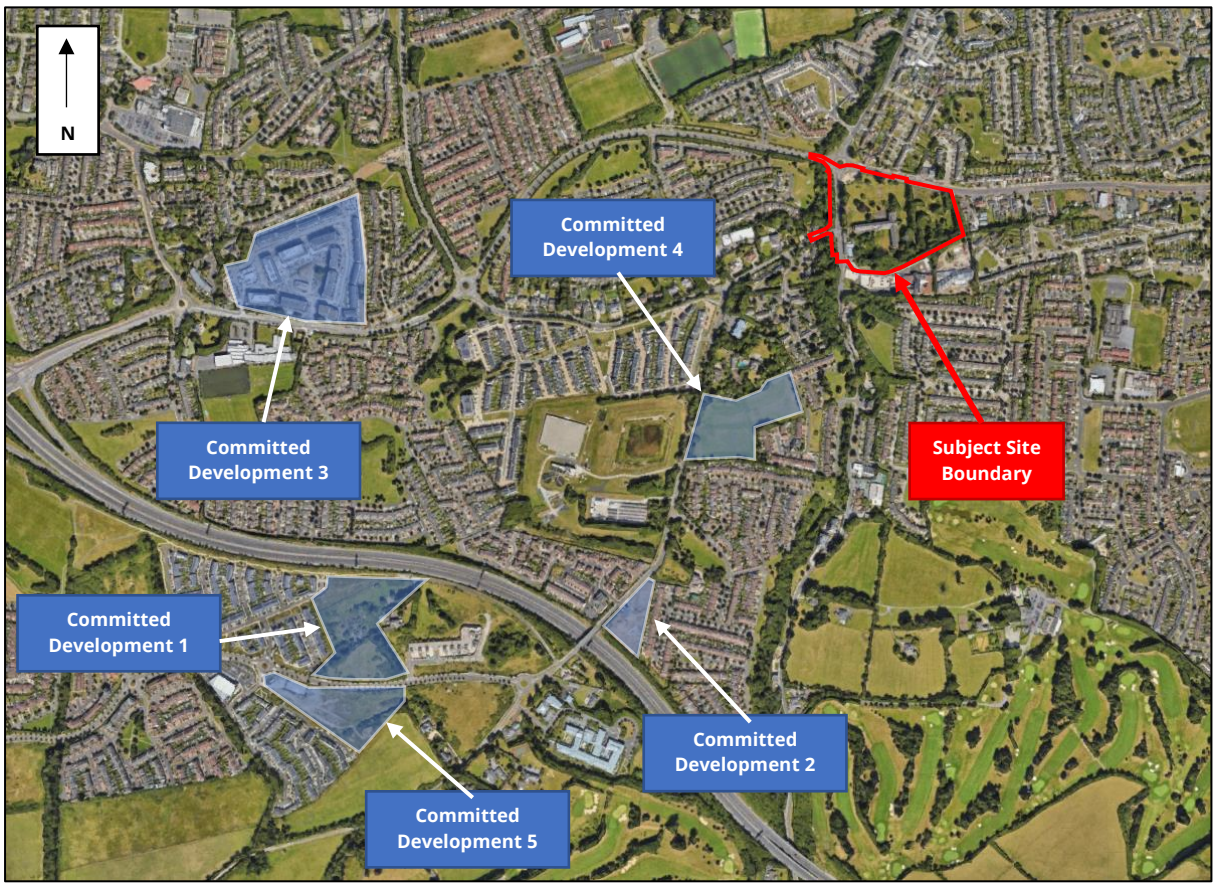


Figure 5.2: Location of Committed Developments in vicinity of subject site

5.4 TRIP DISTRIBUTION & ASSIGNMENT

5.4.1 Subject Development

The distribution of subject development traffic as proposed by DBFL will be based upon the surveyed traffic movements at the nearby key local junctions.

5.4.2 Committed Developments

The trip distribution and assignment of the Committed Developments (as mentioned in **Section 5.3.2)** will be as per the distribution contained within the TTAs submitted with the aforementioned planning applications.

6 NETWORK IMPACT

6.1 ASSESSMENT SCOPE

Two different traffic scenarios have been assessed, namely (a) the 'Base' (Do Nothing) traffic characteristics and (b) the 'Post Development' (Do Something) traffic characteristics.

The proposed development traffic flows have then been added to the network's 'Base' (Base + Committed Development) traffic flows to establish the new 'Post' Development traffic flows. Base Flows for the future design years were based on Project Appraisal Guidelines for National Roads Unit 5.3 - Travel Demand Projections published by Transport Infrastructure Ireland (TII).

In Summary the following scenarios are considered the residential site at Taylor's Lane:

6.1.1 Do Nothing

- A1 – 2025 Base Flows + Committed Development
- A2 – 2030 Base Flows + Committed Development
- A3 – 2040 Base Flows + Committed Development

6.1.2 Do Something

- B1 – 2025 Do Nothing (A1) + Proposed Development Flows
- B2 – 2030 Do Nothing (A2) + Proposed Development Flows
- B3 – 2040 Do Nothing (A2) + Proposed Development Flows

The Do Something Scenario was assessed for the development with the addition of site access arm to the existing three arm signalised junction which will form a four-arm signalised junction.

6.1.3 Assessment Periods

The weekday AM and PM peak hour flows have been identified in traffic survey as occurring between **08:00-09:00** and **17:00-18:00** respectively. These peak hours form the basis of the network assessments.

6.1.4 Network Vehicle Flows

The following Figures as included in **Appendix B** present the vehicle flows across the local road network for each of the adopted development assessment scenarios:

- Figure 1 – 2025 Do Nothing (11)
- Figure 2 – 2030 Do Nothing (13)

- Figure 3 – 2040 Do Nothing (15)
- Figure 4 – 2025 Do Something (12)
- Figure 5 – 2030 Do Something (14)
- Figure 6 – 2040 Do Something (16)

6.2 ROAD NETWORK IMPACT

The Institute of Highways and Transportation document 'Guidelines for Traffic Impact Assessments' states that the impact of a proposed development upon the local road network is considered material when the level of traffic it generates surpasses 10% and 5% on normal and congested networks respectively. When such levels of impact are generated, a more detailed assessment should be undertaken to ascertain the specific impact upon the network's operational performance. These same thresholds are reproduced in the TII document entitled Traffic and Transport Assessment Guidelines (2014).

In accordance with the IHT and TII guidelines, assessments have been undertaken to establish the potential level of impact upon the key junctions of the local road network. To enable this calculation to be undertaken, the analysis took account of the following:

- 2025 Opening Year (Do Nothing & Do Something);
- 2030 Future Design Year Scenario (Do Nothing & Do Something); and
- 2040 Future Design Year Scenario (Do Nothing & Do Something).

Table 6.1 details the percentage impact of the relevant key junctions (illustrated in **Figure 6.1**) for the 2025, 2030 and 2040 design years are the following:

- **Junction 1** – R116 Edmondstown Road / R115 Scholarstown Road / Ballyboden Road Junction (Proposed Site Access) and
- **Junction 2** – R115 Ballyboden Road / Ballyboden Way / Taylor's Lane / R116 Edmondstown Road Junction.



Figure 6.1: Junctions included in Analysis

Ref	Junction	Period	Opening Year 2025	Design Year 2030	Design Year 2040
1	Edmondstown Rd/Scholarstown Rd/Site Access	AM Peak	4.6%	10.2%	9.6%
		PM Peak	4.9 %	9.9%	9.4%
2	Ballyboden Rd/Taylor's Lane/Ballyboden Way Roundabout	AM Peak	1.1%	2.4%	2.4%
		PM Peak	1.1%	2.2%	2.2%

Table 6.1: Network Impact Analysis

In **Table 6.2** and **Table 6.3** overleaf, the predicted impact has been categorised for the 2025 Opening Year, 2030 and 2040 Future Design Year. At the Site Access junction (Junction 1) during 2025 Opening year, Insignificant Impact is predicted at scale of 4.6% and 4.9% during the AM and

PM peak hour period respectively. Whereas for 2040 Future Design Year still moderate impact is predicted at a scale of 9.6% and 9.4% during the AM and PM peak hour period respectively.

The Ballyboden Rd/Taylors Lane roundabout (Junction 2) during 2025 Opening year, the predicted impact is insignificant at scale of 1.1% during both the AM and PM peak hour period respectively. The 2040 Future Design Year predicted impact is still insignificant at a scale of 2.4% and 2.2% during the AM and PM peak hour period respectively.

In **Table 6.2** (AM Peak Hour) and **Table 6.3** (PM Peak Hour) the predicted impacts have been categorised for the 2025 Opening Year, 2030 and 2040 future design year. Table 6.2 and Table 6.3 reveals that, during the AM and PM peak hour period, the impact significance for Junction 1 is categorised as Moderate whilst for Junction 2 is categorised as Insignificant.

Junction - Nature of Impact (Additional Vehicular Traffic on key Junctions)		Year	Impact Scale	Impact Level
1	Edmondstown Rd/Scholarstown Rd/Site Access	2025	4.6%	Insignificant
		2030	10.2%	Moderate
		2040	9.6%	Moderate
2	Ballyboden Rd/Taylor's Lane/Ballyboden Way Roundabout	2025	1.1%	Insignificant
		2030	2.6%	Insignificant
		2040	2.4%	Insignificant

Table 6.2: Network Impact Categorisation AM Peak Hour

Junction - Nature of Impact (Additional Vehicular Traffic on key Junctions)		Year	Impact Scale	Impact Level
1	Edmondstown Rd/Scholarstown Rd/Site Access	2025	4.9%	Insignificant
		2030	9.9%	Moderate
		2040	9.4%	Moderate
2	Ballyboden Rd/Taylor's Lane/Ballyboden Way Roundabout	2025	1.1%	Insignificant
		2030	2.4%	Insignificant
		2040	2.2%	Insignificant

Table 6.3: Network Impact Categorisation PM Peak Hour

Results of this assessment show that Junction 1 (Edmondstown Road/Scholarstown Road/Site Access) exceeds the threshold of 5% traffic impact, and the Junction 2 (Ballyboden Road/Taylors Lane/Ballyboden Way Roundabout Junction) is below the threshold of 5% traffic impact.

However, in the pre-consultation Opinion Report, SDCC have requested additional traffic assessment of Junction 2 (Ballyboden Road/Taylors Lane/Ballyboden Way Roundabout Junction). Therefore, both junctions will be subject to further assessment in order to determine pre-development and post-development performance of the junctions using the modelling software TRANSYT and Junctions 9.0 ARCADY respectively.

7 NETWORK ANALYSIS

7.1.1 Introduction

The operational assessment of the local road network has been undertaken using the Transport Research Laboratory (TRL) computer packages TRANSYT for the signal-controlled junction, and ARCADY software for the roundabout.

When considering signalised junctions, a Degree of Saturation (DoS) of greater than 90% (0.90) would indicate a junction to be approaching capacity, as operation above this DoS value is poor and deteriorates quickly.

When considering roundabouts, a ratio of flow to capacity (RFC) value of greater than 0.90 would indicate a junction to be approaching capacity, as operation above this RFC value is poor and deteriorates quickly.

A 90-minute weekday AM and PM period has been simulated, from 07:45 to 9:15 and 16:45 to 18:15. Traffic flows were entered using an Origin-Destination table for the peak hours.

In order to analyse and assess the impact of the proposed development on the surrounding road network, network, traffic the junctions were created and analysed for the scheme's following Opening and Future Design Years:

- 2022 Base Year
- 2025 Opening Year
- 2030 Future Design Year (Opening Year +5 years)
- 2040 Future Design Year (Opening Year +15 years)

As introduced previously, the following junctions have been considered for further analysis: -

- **Junction 1:** R116 Edmondstown Road / R115 Scholarstown Road / Site Access.
- **Junction 2:** Ballyboden Way / Ballyboden Road N / Taylor's Lane / Ballyboden Road S



Figure 7.1: Junctions Included in Analysis

7.1.2 Junction 1: Edmondstown Rd/Scholarstown Rd/Site Access Road

An assessment of the existing 3 arm signalised junction was undertaken in order to determine the capacity of this junction under the Do Nothing scenario, whereas the proposed four arm signalised junction was analysed within the Do Something scenario. The operational assessment of this junction was undertaken using the Transport Research Laboratory (TRL) computer software TRANSYT for signal-controlled junctions. The junction was assessed for the 2025 Opening Year, as well as the subsequent 2030 and 2040 Future Design Years.

The principal results of the operational assessment of this signal-controlled junction during the weekday morning and evening peaks are summarised in **Tables 7.1** to **Table 7.2**. The arms were labelled as follows within the TRANSYT model:

- Arm A: Scholarstown Road
- Arm B: Ballyboden Road
- Arm C: Proposed Site Access
- Arm D: Edmondstown Road

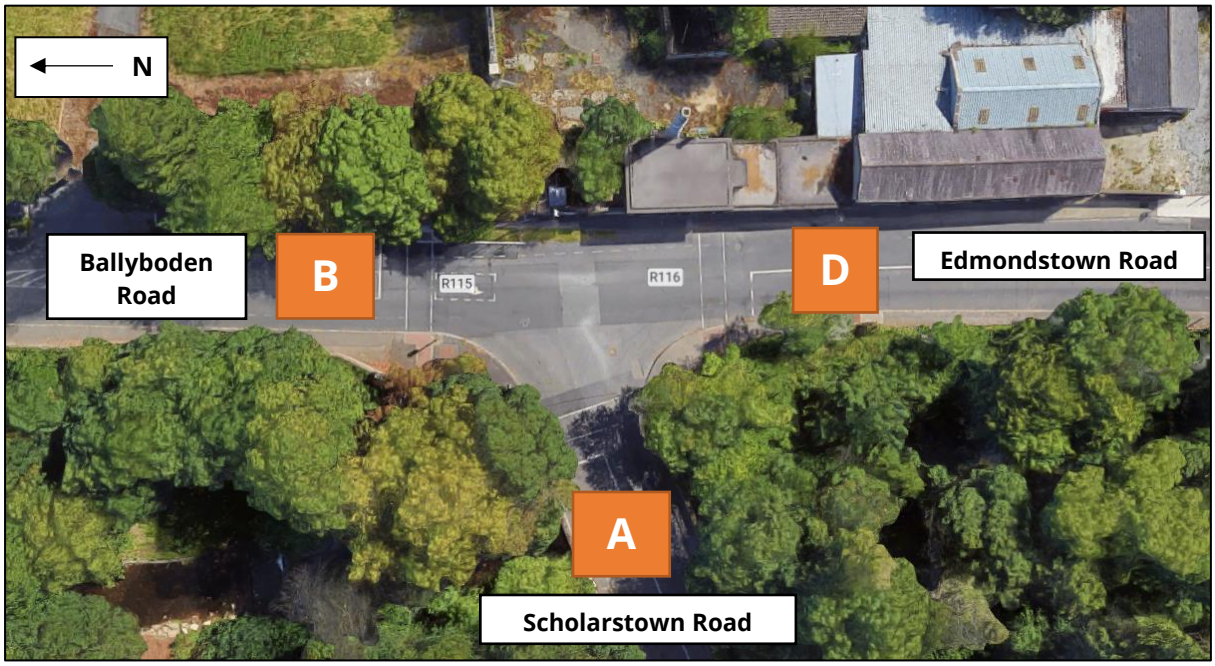


Figure 7.2: Junction Diagram- Do Nothing Scenario

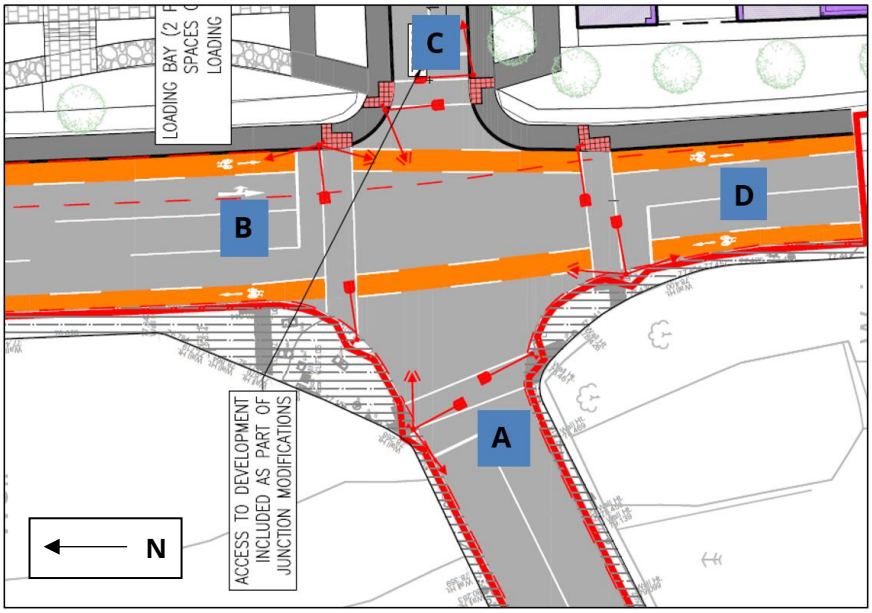


Figure 7.3: Junction's Diagram- Do Something Scenario

2022 Baseline

The 'Baseline' 2022 AM peak hour TRANSYT results (**Table 7.1**) indicate that this junction operates within capacity with a maximum Degree of Saturation (DoS) value of 78% and the highest Mean Max Queue (MMQ) of 10.38 pcu's being recorded.

The PM peak hour 'Baseline' TRANSYT results indicate that this junction is predicted to be again operating well within capacity with a maximum DoS value of 63% and the highest MMQ of 10.87 pcu's being recorded.

Peak Hour	Arm	Stream	Base 2022		
			DoS (%)	Delay (s)	MMQ (pcu)
AM Peak	A	1	51	21.01	9.34
	B	1	26	29.93	2.80
		2	47	33.98	5.90
	C	1	-	-	-
	D	1	78	49.29	10.38
PM Peak	A	1	63	42.87	10.87
	B	1	18	18.60	3.09
		2	41	21.90	8.42
	C	1	-	-	-
	D	1	22	20.76	3.78

Table 7.1: 2022 Baseline TRANSYT Analysis

2025 Opening Year

The 'Do-Nothing' 2025 Opening Year AM peak hour TRANSYT results (**Table 7.2**) indicate that this junction is predicted to be operating within capacity with a maximum Degree of Saturation (DoS) value of 73% and the highest Mean Max Queue (MMQ) of 13.63 pcu's being recorded.

The AM peak hour "Do Something" indicate that this junction is predicted to be operating within capacity with a maximum Degree of Saturation (DoS) value of 77% and the highest Mean Max Queue (MMQ) of 17.11 pcu's being recorded. The max DoS has increased by 4% from DoS Value 73% to 77% and the highest MMQ length increased by 3.49 pcu's (from 13.63 to 17.11pcu's).

Peak Hour	Arm	Stream	Do-Nothing			Do-Something		
			DoS (%)	Delay (s)	MMQ (pcu)	DoS (%)	Delay (s)	MMQ (pcu)
AM Peak	A	1	73	34.56	13.63	77	42.99	17.11
	B	1	21	23.56	2.63	24	30.61	3.47
		2	41	26.42	5.93	44	34.06	7.43
	C	1	-	-	-	29	59.17	1.20
	D	1	62	33.85	9.22	68	43.60	11.79
PM Peak	A	1	66	41.51	12.35	69	43.80	13.05
	B	1	21	20.58	3.41	26	24.90	4.18
		2	48	25.11	10.17	54	30.34	11.21
	C	1	-	-	-	22	57.29	0.91
	D	1	25	22.99	4.32	29	27.42	4.87

Table 7.2: 2025 Opening Year TRANSYT Analysis

The PM peak hour 'Do-Nothing' TRANSYT results indicate that this junction is predicted to be again operating within capacity with a maximum DoS value of 66% and the highest MMQ of 12.35 pcu's being recorded.

The PM peak hour "Do Something" indicate that this junction is predicted to be operating within capacity with a maximum Degree of Saturation (DoS) value of 69% and the highest Mean Max Queue (MMQ) of 13.05 pcu's being recorded. The max DoS for Arm A has increased by 3% from DoS Value 66% to 69% and the highest MMQ length increased by 0.70 pcu's (from 12.35 to 13.05 pcu's).

2030 (Opening Year +5)

The 'Do-Nothing' 2030 (Opening Year+5) AM peak hour TRANSYT results (**Table 7.3**) indicate that this junction is predicted to be operating within capacity with a maximum Degree of Saturation (DoS) value of 73% and the highest Mean Max Queue (MMQ) of 17.28 pcu's being recorded.

The AM peak hour "Do Something" indicate that this junction is predicted to be operating within capacity with a maximum Degree of Saturation (DoS) value of 81% and the highest Mean Max Queue (MMQ) of 19.26 pcu's being recorded. The max DoS has increased by 8% from DoS Value 73% to 81% and the highest MMQ length increased by 1.98 pcu's (from 17.28 to 19.26 pcu's).

Peak Hour	Arm	Stream	Do-Nothing			Do-Something		
			DoS (%)	Delay (s)	MMQ (pcu)	DoS (%)	Delay (s)	MMQ (pcu)
AM Peak	A	1	73	37.32	17.28	81	44.09	19.26
	B	1	22	26.93	3.36	29	33.59	4.15
		2	42	30.28	7.62	51	38.0	8.58
	C	1	-	-	-	71	84.08	4.08
	D	1	64	38.18	11.86	82	55.64	14.81
PM Peak	A	1	69	42.22	13.61	72	42.75	14.63
	B	1	23	20.85	3.78	36	30.60	5.79
		2	53	26.06	11.38	68	38.68	13.85
	C	1	-	-	-	42	64.01	1.81
	D	1	27	21.98	4.61	39	33.12	6.10

Table 7.3: 2030 Future Design Year TRANSYT Analysis

The PM peak hour 'Do-Nothing' TRANSYT results indicate that this junction is predicted to be again operating within capacity with a maximum DoS value of 69% and the highest MMQ of 13.61 pcu's being recorded.

The PM peak hour "Do Something" indicate that this junction is predicted to be operating within capacity with a maximum Degree of Saturation (DoS) value of 72% and the highest Mean Max Queue (MMQ) of 14.63 pcu's being recorded. The max DoS for Arm A has increased by 3% from DoS Value 69% to 72% and the highest MMQ length increased by 1.02 pcu's (from 13.61 to 14.63 pcu's).

2040 (Opening Year +15)

The 'Do-Nothing' 2040 (Opening Year +15) AM peak hour TRANSYT results (**Table 7.4**) indicate that this junction is predicted to be operating within capacity with a maximum Degree of Saturation (DoS) value of 78% and the highest Mean Max Queue (MMQ) of 18.91 pcu's being recorded.

The AM peak hour "Do Something" indicate that this junction is predicted to be operating within capacity with a maximum Degree of Saturation (DoS) value of 85% and the highest Mean Max Queue (MMQ) of 21.50 pcu's being recorded. The max DoS has increased by 7% from DoS Value 78% to 85% and the highest MMQ length increased by 2.59 pcu's (from 18.91 to 21.50 pcu's).

Peak Hour	Arm	Stream	Do-Nothing			Do-Something		
			DoS (%)	Delay (s)	MMQ (pcu)	DoS (%)	Delay (s)	MMQ (pcu)
AM Peak	A	1	78	39.65	18.91	85	48.48	21.50
	B	1	23	27.14	3.63	30	33.05	4.36
		2	45	30.81	8.21	53	37.71	9.13
	C	1	-	-	-	80	105.39	4.67
	D	1	68	39.74	12.98	84	57.59	15.99
PM Peak	A	1	72	42.53	14.51	76	45.04	15.97
	B	1	25	22.34	4.18	38	30.92	6.07
		2	58	28.66	12.70	72	40.46	15.11
	C	1	-	-	-	42	64.01	1.81
	D	1	30	25.02	5.29	41	33.54	6.52

Table 7.4: 2040 Future Design Year TRANSYT Analysis

The PM peak hour 'Do-Nothing' TRANSYT results indicate that this junction is predicted to be again operating well within capacity with a maximum DoS value of 72% and the highest MMQ of 14.51 pcu's being recorded.

The PM peak hour "Do Something" indicate that this junction is predicted to be operating within capacity with a maximum Degree of Saturation (DoS) value of 76% and the highest Mean Max Queue (MMQ) of 15.97 pcu's being recorded. The max DoS for Arm A has increased by 4% from DoS Value 72% to 76% and the highest MMQ length increased by 1.46 pcu's (from 14.51 to 15.97 pcu's).

A copy of the TRANSYT output files can be found in **Appendix C**.

7.1.3 Junction 2: Ballyboden Way / Ballyboden Road N / Taylor's Lane / Ballyboden Road S

The results of the operational assessment of this roundabout junction during the morning and evening peaks are summarised in **Tables 7.5** to **Table 7.8** below. The arms were labelled as follows within the ARCADY model:

- **Arm A: Ballyboden Road(N)**
- **Arm B: Taylor's Lane**
- **Arm C: Ballyboden Road (S)**
- **Arm D: Ballyboden Way**

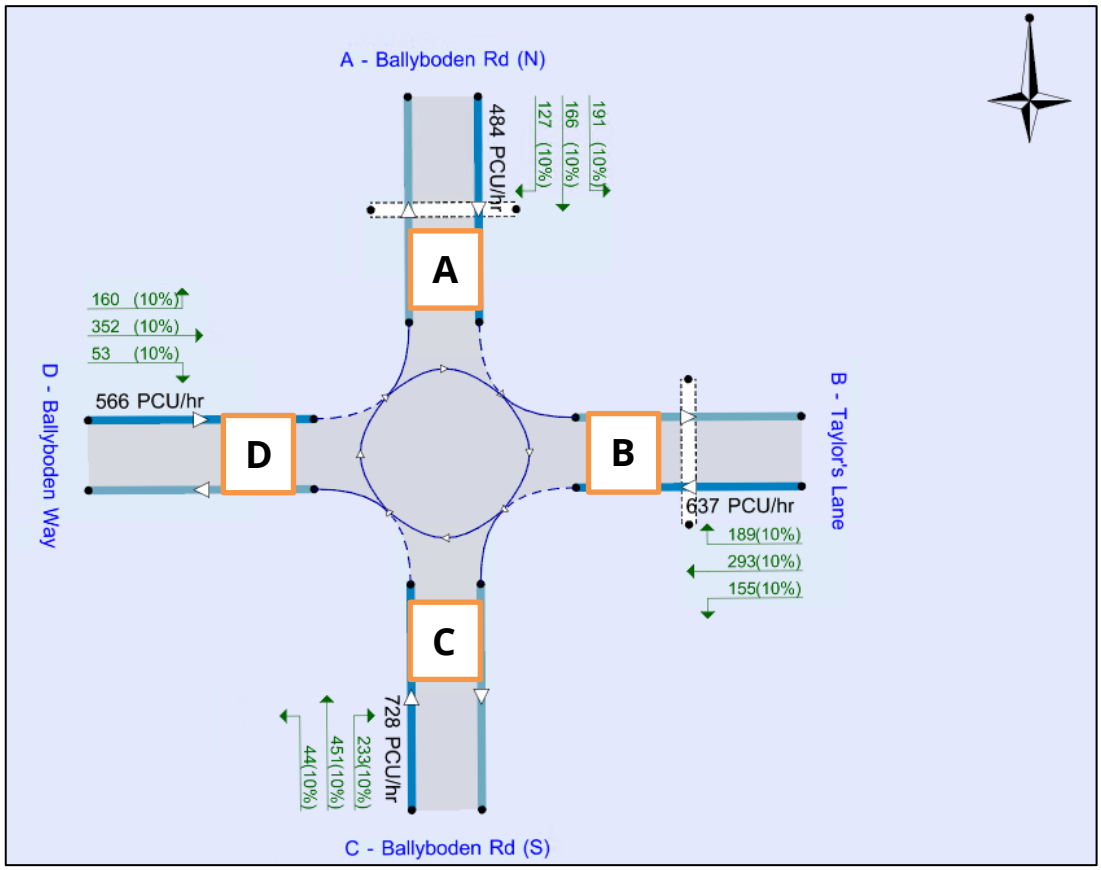


Figure 7.4: Roundabout Junction Diagram

2022 Baseline

The ARCADY results indicate that the operational assessment of the roundabout Junction 2 (R115 Ballyboden Road (N) / Ballyboden Way / Taylor's Lane / R115 Ballyboden Road(S) roundabout) operates just within capacity for the 2022 "Baseline "AM & PM peak hour scenarios.

A maximum Ratio of Flow to Capacity (RFC) value of 0.98 (98%) and a corresponding queue length of 17.4 pcu's was recorded on Ballyboden Road (S) during the "Baseline" AM peak hour whereas in the PM peak hour, the maximum Ratio of Flow to capacity (RFC) value of 0.96 (96%) and a corresponding queue length of 13.2 pcu's was recorded on Taylor's Lane as shown in **Table 7.5** below. The junction was calibrated to reflect the queuing observed in the traffic survey undertaken in September 2022.

Peak Hour	Arm	Base 2022		
		RFC	Delay (s)	Max Queue (pcu)
AM Peak	A	0.55	9.02	1.3
	B	0.81	23.76	4.4
	C	0.98	80.45	17.4
	D	0.98	89.14	15
PM Peak	A	0.71	12.38	2.6
	B	0.96	70.43	13.2
	C	0.6	12.51	1.6
	D	0.68	15.3	2.3

Table 7.5: 2022 Baseline ARCADY Analysis

2025 Opening Year

The ARCADY results indicate that the operational assessment of Junction B (R115 Ballyboden Road (N) / Ballyboden Way / Taylor's Lane / R115 Ballyboden Road (S) roundabout) operates at approaching capacity for both the 2025 "Do Nothing" (DN) and "Do Something" (DS) AM & PM peak hours.

A maximum Ratio of Flow to Capacity (RFC) value of 1.11 (111%) and a corresponding queue length of 43.4 pcu's was recorded on Ballyboden Way during the "Do Nothing" AM peak hour. During the "Do Nothing" 2025 PM peak hour, the maximum Ratio of Flow to capacity (RFC) value of 1.08 (108%) and a corresponding queue length of 37.8 pcu's was recorded on Ballyboden Road (S) as shown in **Table 7.6**.

Peak Hour	Arm	Do-Nothing			Do-Something		
		RFC	Delay (s)	Max Queue (pcu)	RFC	Delay (s)	Max Queue (pcu)
AM Peak	A	0.60	10.02	1.6	0.60	10.09	1.6
	B	0.89	39.45	7.7	0.90	41.35	8.1
	C	1.10	190.66	49.9	1.13	226.4	60.9
	D	1.11	230.54	43.4	1.12	241.74	44.8
PM Peak	A	0.77	16.42	3.6	0.79	17.37	3.9
	B	1.08	166.92	37.8	1.09	187.22	43.1
	C	0.66	14.71	2.1	0.67	15.1	2.2
	D	0.78	22.06	3.6	0.78	22.65	3.7

Table 7.6: 2025 Opening Year ARCADY Analysis

During the AM peak hour "Do Something" 2025 scenario, a maximum Ratio of Flow to Capacity (RFC) value of 1.13 (113%) and a corresponding queue length of 60.9 pcu's was recorded on Ballyboden Road (S). Whereas, during the "Do Something" 2025 PM peak hour, the maximum Ratio of Flow to capacity (RFC) value of 1.09 (109%) and a corresponding queue length of 43.1 pcu's was recorded on Taylor's Lane.

The comparison between the 2025 "Do Something" and the 2025 "Do Nothing" scenarios shows that **maximum RFC increased by only 0.03.** This indicates a **minimal** impact by the development itself.

A copy of the ARCADY output files can be found in **Appendix D**.

2030 Future Design Year (Opening Year+5 Year)

For the 2030 Future Design Year scenario, a maximum RFC value of 1.25 (125%) and a corresponding queue length of 103.2 pcu's was recorded along Ballyboden Road (S) during the "Do Nothing" AM peak hour whereas during PM peak hour, the maximum Ratio of Flow to capacity (RFC) value of 1.23 (123%) and a corresponding queue length of 85.3 pcu's was recorded on Taylor's Lane.

During the AM peak hour "Do Something" 2030 scenario, a maximum Ratio of Flow to Capacity (RFC) value of 1.33 (133%) and a corresponding queue length of 148.0 pcu's was recorded on the Ballyboden Road (S). Whereas, whereas during the "Do Something" 2030 PM peak hour, the maximum Ratio of Flow to capacity (RFC) value of 1.29 (129%) and a corresponding queue length of 103.9 pcu's was recorded on Taylor's Lane as shown in **Table 7.7**.

Peak Hour	Arm	Do-Nothing			Do-Something		
		RFC	Delay (s)	Max Queue (pcu)	RFC	Delay (s)	Max Queue (pcu)
AM Peak	A	0.64	11.17	1.9	0.65	11.35	2
	B	1	90.58	20.5	1.01	11.37	23.5
	C	1.25	446.56	103.2	1.33	633.47	148
	D	1.2	439.99	74.5	1.21	464.95	78.7
PM Peak	A	0.87	27.45	6.4	0.9	35.1	8.4
	B	1.23	379.09	85.3	1.29	493.07	103.9
	C	0.72	17.9	2.7	0.74	18.84	3
	D	0.87	36.34	6.3	0.88	38.98	6.7

Table 7.7: 2030 Future Design Year ARCADY Analysis

The comparison between the 2030 "Do Something" and the 2030 "Do Nothing" scenarios results in **the maximum RFC increasing by only 0.08.** This indicates a **minimal** impact by the development itself.

A copy of the ARCADY output files can be found in **Appendix D**.

2040 Future Design Year (Opening Year+15 Years)

For the 2040 Future Design Year scenario, a maximum RFC value of 1.34 (134%) and a corresponding queue length of 160.9 pcu's was recorded along Ballyboden Road (S) during the "Do Nothing" AM peak hour while an RFC value of 1.35 (135%) and a corresponding queue length of 128.5 pcu's was recorded on Taylor's Lane during the "Do Nothing" PM peak hour

Peak Hour	Arm	Do-Nothing			Do-Something		
		RFC	Delay (s)	Max Queue (pcu)	RFC	Delay (s)	Max Queue (pcu)
AM Peak	A	0.68	12.13	2.2	0.68	12.33	2.3
	B	1.08	165.74	43.1	1.09	181.91	47.9
	C	1.34	699.44	160.9	1.42	905.14	214.4
	D	1.27	626.58	110.4	1.27	653.39	115.2
PM Peak	A	0.94	48.46	12	0.98	65.88	17.3
	B	1.35	625.32	128.5	1.4	759.4	157.8
	C	0.77	21.25	3.4	0.78	22.61	3.8
	D	0.94	61.44	11.3	0.95	68.06	12.7

Table 7.8: 2040 Future Design Year ARCADY Analysis

During the AM peak hour "Do Something" 2040 scenario, a maximum Ratio of Flow to Capacity (RFC) value of 1.42 (142%) and a corresponding queue length of 214.4 pcu's was recorded on the Ballyboden Road(S). Whereas, during the "Do Something" 2040 PM peak hour, the maximum Ratio of Flow to capacity (RFC) value of 1.40 (140%) and a corresponding queue length of 157.8 pcu's was recorded on Ballyboden Road (N) as shown in **Table 7.8**.

The comparison between the 2040 "Do Something" and the 2040 "Do Nothing" scenarios results in the **maximum RFC increasing by only 0.08**. This indicates a **minimal** impact by the development itself.

A copy of the ARCADY output files can be found in **Appendix D**.

The ARCADY analysis results showed that the roundabout is above capacity in the Do-Nothing scenario which means that the roundabout will not be able to cater for future increasing flows. However, the proposed development will have a marginal impact on the roundabout with the maximum Ratio of Flow to Capacity (RFC) increasing by up to 0.08 from the "Do Nothing" scenario to the "Do Something" scenario in all three modelled Horizon years.

Accordingly, it is demonstrated that the residential proposals will not result in significant impact on the surrounding junctions, however, the Ballyboden Road/Taylor's Lane roundabout is imminently approaching capacity and will need to be updated to cater for future flows.

South Dublin County Council outlined that the Taylor's Lane Roundabout will form part of the Tallaght to Knocklyon Active Travel network, which is currently at Options Assessment/Preliminary Design Phase. According to SDCC, a preferred junction option/design is not currently available, however, SDCC have advised that vehicle capacity of the roundabout would be reduced to improve facilities, safety and overall Level of Service (LOS) for pedestrians and cyclists using this junction in accordance with National Policy. The traffic capacity at the Taylor's Lane roundabout will be partially reallocated for the active modes, and this will be followed by a reduction of traffic demand. This provision of enhanced pedestrian & cycle facilities is most welcome and will serve the residents and visitors to the proposed development which will have a high proportion of users cycling & walking.

7.1.4 Network Analysis Conclusion

The above network analysis has concluded that Junction 1 (The Site Access junction) operates within capacity for all scenarios, and that Junction 2 (Taylor's Lane Roundabout) is above capacity for a both the Do-Nothing and Do-Something scenarios. However, it is noted that the impact of the development is **minimal** and that **Junction 2 would be above capacity in both the Do-Nothing and Do-Something scenarios**. It is also worth noting there are a variety of other factors which will reduce the total impact of the proposed development on the local road network, most notably:

- Reduced car parking provision per unit (**0.68** spaces per unit)
- 1054 cycle parking spaces which allow for a large modal split dedicated to cycling (in accordance with the SDCC Development standards.)

- Provision of a suitable bus network in the local area, which has considerable residual capacity to cater for the proposed residential development (See **Section 2.8**).
- BusConnects will introduce over 29% more services to the area when fully implemented (see **Section 2.6.3**).
- Retail and Creche facilities on site, which reduce the need for residents to travel to retail/creche units off-site.
- High permeability through a large number of pedestrian and cycling site accesses, as well a high permeability throughout the site itself, which makes walking and cycling a much more attractive option.

7.2 MITIGATION MEASURES

7.2.1 Mobility Management Plan (MMP)

A Mobility Management Plan (MMP) has been prepared by DBFL for this development and is submitted as part of this application.

The MMP has been prepared to guide the delivery and management of a package of integrated initiatives which seek to encourage sustainable travel practices at the proposed residential and commercial development in Rathfarnham.

It is noted that a successfully implemented MMP can provide reductions in car usage, particularly influencing levels of single-occupancy car travel, with increased trips made by public transport, walking and cycling.

Within the MMP document, a number of 1 year to 5 year targets have been outlined with a specific objective of reducing single-occupancy car travel. The existing modal split within the area surrounding the proposed development (taken from the 2016 census data) has been used as a basis for these targets in order to outline a realistic target for the development. The 2016 Census data modal split as well as the 1st and 5th year targets proposed are outlined in **Table 7.9**.

Mode of Travel	Census 2016	1st Year Target (2025)	MMP 5-year Target (2030)
On foot	11%	11%	12%
Bicycle	5%	7%	9%
Bus, minibus or coach	13%	14%	17%
Train, DART, LUAS, MetroLink	1%	1%	1%
Motorcycle or scooter	1%	1%	1%
Car Driver	46%	38%	34%
Van	4%	4%	4%
Car Passenger	14%	12%	13%
Other (incl. lorry)	0%	0%	0%
Work mainly at or from home	2%	9%	6%
Not stated	3%	3%	3%

Table 7.9: MMP Targets for Modal Split

The MMP also sets out a number of Actions and Targets to help achieve the modal split targets of increasing sustainable travel within the development. The document also provides mode specific ideas for sustainable travel promotion and requires that the document be actively managed and monitored within the development with yearly travel surveys undertaken by residents to determine the actual changes in travel behaviour.

7.2.2 Car Parking Strategy

A Car Parking Strategy document has been prepared by DBFL for this development and has been submitted as part of this planning application.

This document has been prepared in order to present a rationale behind the identification of the quantum of vehicle parking and cycle parking proposed within the development. The document also sets out the management measures that will be deployed to allocate the use and control of parking provided at the proposed development site, and states that parking spaces for these units will be actively managed by the management company on the site.

The document highlights some of the initiatives that are proposed within the development to encourage alternative travel modes, such as the allocation of 4 GoCar spaces within the development that will accommodate residents as well as the provision of **1054** cycle parking spaces.

Taking all of the Mobility Management factors, such as the characteristics of the development, the baseline low levels of car use in apartment developments in the area, the proposed mobility measures, the level of car ownership & usage as well the requirement for reduced car parking as set out in the 'Sustainable Urban Housing: Design Standards for New Apartments, into account, it is considered appropriate that a parking provision of **290** car parking spaces be provided for the development.

8 CONSTRUCTION PHASE

8.1 OVERVIEW

In general, the impact of the construction period will be temporary in nature and less significant than the final post development operational stage.

All construction activities will be governed by a Construction Traffic Management Plan (CTMP), the details of which will be agreed with South Dublin County Council prior to the commencement of construction activities on site. The principal objective of the CTMP is to ensure that the impacts of all building activities generated during the construction phase upon the public (off-site), visitors to the subject site (on-site) and internal (on-site) workers environments, are fully considered and proactively managed/programmed thereby ensuring that safety is maintained at all times, disruption is minimised and undertaken within a controlled hazard free/minimised environment.

During the general excavation of the foundations there may be additional HGV movements from the site. All suitable material will be used for construction and fill activities where possible and appropriate. All spoil material will be removed to a registered landfill site which will be agreed in advance with South Dublin County Council.

In addition to the traffic generated by the disposal of surplus subsoil from the site, there will be traffic generated from deliveries of construction materials and equipment. It should be noted that construction traffic generated during the development works tends to be at off-peak hours. Such trips would generally be spread out over the full working day and are unlikely to be higher than the peak hour predicted for the operational stage.

Construction traffic will consist of the following categories:

- Private vehicles owned and driven by site construction staff and by full time supervisory staff.
- Excavation plant and dumper trucks involved in site development works and material delivery vehicles for the following: granular fill materials, concrete pipes, manholes, reinforcement steel, ready-mix concrete and mortar, concrete blocks, miscellaneous building materials, etc.
- On-site employees will generally arrive before 08:00, thus avoiding the morning peak hour traffic. These employees will generally depart after 18:00. It should be noted that a large

proportion of construction workers would arrive in shared transport. Deliveries would arrive at a steady rate during the course of the day.

In the absence of a final construction programme, it is difficult to assess the exact impact during the construction period. Nevertheless, the following estimates have been made in respect of the construction period impacts:

- Appropriate on-site parking and compounding will be provided to prevent overflow onto the local network.
- It is likely that some numbers of the construction team will be brought to/from the site in vans/minibuses, which will serve to reduce the trip generation potential.
- Delivery vehicles to and from the site will be spread across the course of the working day, therefore, the number of HGVs travelling during the peak hours will be relatively low.
- Site offices and compound will be located within the site boundary. The site will be able to accommodate employee and visitor parking throughout the construction period. Initially, hard-standing parking areas will be provided and as the development progresses, employees will use constructed car-parking spaces, as they become available.
- Finally, truck wheel washes will be installed at construction entrances and any specific recommendations with regard to construction traffic management made by South Dublin County Council will be adhered to.

9 SUMMARY AND CONCLUSION

9.1 SUMMARY & CONCLUSION

DBFL Consulting Engineers (DBFL) have been commissioned to prepare a Traffic and Transport Assessment (TTA) for a proposed residential development at a site located at Taylor's Lane, Ballyboden, Dublin 16.

The proposal is for a Large Residential Development on this site of net c. 3.5ha comprising the following:

- Demolition of existing former Institutional buildings and associated outbuildings (c.5231 sq.m);
- Construction of 402 residential units within 3 apartment/duplex blocks ranging in height from 2-5 storeys and comprising of 39 no. 1-Beds; 302 no. 2-Beds; and 61 no. 3-Beds all with associated private balconies/terraces to the north/south/east/west elevations;
    - Provision of one crèche and two retail units.
    - Provision of 290 no. car parking spaces
    - Provision of 1054 no. cycle parking spaces
    - Vehicular access to the site via Edmondstown Road to the west.
    - Pedestrian Access to the site via Edmondstown Road to the west and Taylor's Lane to the north.
- The development proposal also includes the creation of a new access from the existing 3 arm signalised junction (Scholarstown Road / Ballyboden Road / Edmondstown Road) which will result in the upgrade of the junction to a four-arm signalised junction.

To gain vehicular access to the subject site, the proposed arrangement is to create a new vehicular and pedestrian access from the existing 3 arm signalised junction (Scholarstown Road/Edmondstown Road) which will result in the upgrade of the junction to a four arm signalised junction.

The purpose of this TTA was to quantify the existing transport environment and to detail the results of assessment work undertaken to identify the potential level of transport impact generated as a result of the proposed residential/commercial development.

In terms of future transport proposals, the GDA Cycle Network Plan (2022), BusConnects as well as the SDCC Development Plan (2022-2028) proposes a number of cycle routes, bus routes and road improvement proposals within the area in proximity to the development site.

A number of policy and guidance documents reviewed as part of this assessment emphasises the requirement for increasing sustainable travel modes such as walking, cycling and public transport. The 'Design Standards for New Apartments – December 2022' outlines the car parking requirements for new apartment units. The document states that for new apartments within an 'Intermediate Urban Location' with good access to public transport, consideration should be given to a reduced overall car parking provision.

It is proposed for this development that the car parking provision for the creche and retail units will be in accordance with the SDCC Development Plan standards. The apartment units, however, will make reference to the 'Design Standards for New Apartments' and will provide a ratio of **0.68** car parking spaces per unit.

A Parking Management Strategy and a Mobility Management Plan (MMP) have been prepared as part of this application. The Parking Strategy document provides justification of reduced car parking provision for the apartments. The MMP document presents a number of objectives and targets for reducing private car travel in favour of more sustainable travel modes within the development.

A total of **1054** cycle parking spaces are proposed within the development to accommodate residents, visitors and staff. It is also proposed to provide five car sharing vehicles within the development to be used by residents within the apartment units.

Traffic Surveys were carried out in September 2022 on a number of key junctions surrounding the proposed development site.

In order to undertake an assessment of the likely traffic impacts that the proposed development would have on the surrounding road network, a traffic generation assessment was undertaken. Traffic growth rates were applied to background traffic using the TII Project Appraisal Guidelines (PAG). Development trips were generated using the TRICS database. Committed Developments close to the proposed development site were also included as part of the assessment.

A detailed traffic model was developed of the road and junction network. Trips were assigned to the network for the Opening Year (2025) as well as the Future Design Years (2030 and 2040). A traffic impact assessment was undertaken in order to determine whether the impact threshold of

5% was exceeded (as per the TII Traffic and Transport Assessment Guidance which recommended a 10% impact threshold for non-congested road networks and a 5% impact threshold for congested road networks).

It was determined that the Edmondstown Road / Scholarstown Road / Ballyboden Road Junction (Junction 1), where the site access for the residential site is proposed to be located, exceeded the 5% threshold, while the Roundabout junction (Ballyboden Road/Taylors Lane/Ballyboden Way) is subthreshold (2%). However, in the pre-consultation Opinion Report, SDCC have requested additional traffic assessment of Junction 2 (Ballyboden Road/Taylors Lane/Ballyboden Way Roundabout Junction). Therefore, both Junction 1 and 2 were further analysed using TRL computer software packages TRANSYT and ARCADY in order to determine the extent of the impact.

A TRANSYT analysis results showed that the proposed site access junction (Junction 1) operates within capacity during the AM and PM peak hours for all scenario years.

The ARCADY analysis results showed that the Taylors Lane roundabout (Junction 2) will imminently be above capacity in the Do-Nothing scenario which means that the roundabout will not be able to cater for future increasing flows. **However, the proposed development will have a marginal impact on the roundabout with the maximum Ratio of Flow to Capacity (RFC) increasing by up to 0.08 from the "Do Nothing" scenario to the "Do Something" scenario in all three modelled Horizon years.**

Accordingly, it is demonstrated that the residential proposals will not result in significant impact on the surrounding junctions, however, the Ballyboden Road/Taylor's Lane roundabout is currently approaching capacity and will need to be updated to cater for future flows. As mentioned in **Section 2.7,** the Ballyboden Road/Taylor's Lane roundabout will be updated as part of Tallaght to Knocklyon Active Travel scheme, to improve facilities, safety and overall Level of Service (LOS) for pedestrians and cyclists using this junction in accordance with National Policy. The traffic capacity at the Taylor's Lane roundabout will be partially reallocated for the active modes, and this will be followed by a reduction of traffic demand. This provision of enhanced pedestrian & cycle facilities is most welcome and will serve the residents and visitors to the proposed development which will have a high proportion of users cycling & walking.

The Ballyboden Road/Taylor's Lane is a very busy junction particularly at peak commuting times. It is clear that current commuting habits based on the private motor car are unsustainable and even a low density residential development would not improve matters and in fact damage the economic viability of public transport or make more sustainable modes unattractive. The

introduction of the proposed Active Travel Schemes on the local road network, such as the nearby Tallaght to Knocklyon scheme, will tie in with the sustainable approach of the subject development.

The proposed development is located at a well-served suburban location close to a variety of amenities and facilities. Current public transport options are limited to low and high frequency bus services with defined bus corridors on sections Taylors Lane and Ballyboden Road, but this may change in the future as BusConnects is developed. As the public transport capacity analysis revealed, **the existing public transport network has sufficient capacity available to accommodate the additional demand projected to be generated by the proposed development.**

The facilities proposed within the subject development include for **1054** cycle parking spaces, linkages to good public transport services (current and future), reduced parking for residents as well as the representation of GoCar within the development. Therefore, this development proposes a sustainable approach to travel within the development. This will encourage existing and future residents to increase modal shift away from car use to more sustainable modes of transport and this can be achieved by the implementation of the Mobility Management Plan (MMP) and Car Parking Strategy, both of which have been prepared for this development.

In conclusion, we believe that the opportunity is available, in terms of transport and traffic, for the planning authority to consider favourably the proposed residential development on the subject site.

The findings of this report, therefore, concludes that there are no traffic or transportation related reasons that should prevent the granting of planning permission for the construction of the proposed residential development on Taylor's Lane, Ballyboden, Dublin 16.

Appendix A : TRICS Database Outputs

DBFL Ormond House Dublin Licence No: 638801

Filtering Summary

Land Use	03/C	RESIDENTIAL/FLATS PRIVATELY OWNED
Selected Trip Rate Calculation Parameter Range	75-372 DWELLS	
Actual Trip Rate Calculation Parameter Range	9-332 DWELLS	
Date Range	Minimum: 01/01/12	Maximum: 15/10/21
Parking Spaces Range	All Surveys Included	
Parking Spaces Per Dwelling Range:	All Surveys Included	
Bedrooms Per Dwelling Range:	All Surveys Included	
Percentage of dwellings privately owned:	All Surveys Included	
Days of the week selected	Monday	3
	Tuesday	12
	Wednesday	8
	Thursday	1
	Friday	5
Main Location Types selected	Suburban Area (PPS6 Out of Centre)	20
	Edge of Town	5
	Neighbourhood Centre (PPS6 Local Centre)	4
Population within 500m	All Surveys Included	
Population <1 Mile ranges selected	1,001 to 5,000	3
	5,001 to 10,000	2
	10,001 to 15,000	4
	15,001 to 20,000	1
	20,001 to 25,000	7
	25,001 to 50,000	12
Population <5 Mile ranges selected	5,001 to 25,000	1
	25,001 to 50,000	1
	50,001 to 75,000	7
	125,001 to 250,000	5
	250,001 to 500,000	6
	500,001 or More	9
Car Ownership <5 Mile ranges selected	0.5 or Less	1
	0.6 to 1.0	12
	1.1 to 1.5	16
PTAL Rating	No PTAL Present	29

DBFL Ormond House Dublin Licence No: 638801

Calculation Reference: AUDIT-638801-220907-0932

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

03	SOUTH WEST		
	DC	DORSET	1 days
04	EAST ANGLIA		
	CA	CAMBRIDGESHIRE	1 days
	NF	NORFOLK	1 days
	SF	SUFFOLK	2 days
05	EAST MIDLANDS		
	DS	DERBYSHIRE	1 days
	LE	LEICESTERSHIRE	1 days
	NT	NOTTINGHAMSHIRE	2 days
07	YORKSHIRE & NORTH LINCOLNSHIRE		
	RI	EAST RIDING OF YORKSHIRE	1 days
08	NORTH WEST		
	MS	MERSEYSIDE	2 days
09	NORTH		
	CB	CUMBRIA	2 days
	TW	TYNE & WEAR	1 days
11	SCOTLAND		
	EB	CITY OF EDINBURGH	1 days
	SR	STIRLING	1 days
12	CONNAUGHT		
	GA	GALWAY	1 days
13	MUNSTER		
	WA	WATERFORD	1 days
14	LEINSTER		
	LU	LOUTH	1 days
15	GREATER DUBLIN		
	DL	DUBLIN	8 days
17	ULSTER (NORTHERN IRELAND)		
	AN	ANTRIM	1 days

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

Primary Filtering selection:

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

Parameter: No of Dwellings
Actual Range: 9 to 332 (units:)
Range Selected by User: 75 to 372 (units:)

Parking Spaces Range: All Surveys Included

Parking Spaces per Dwelling Range: All Surveys Included

Bedrooms per Dwelling Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/12 to 15/10/21

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

Selected survey days:

Monday	3 days
Tuesday	12 days
Wednesday	8 days
Thursday	1 days
Friday	5 days

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

Selected survey types:

Manual count	29 days
Directional ATC Count	0 days

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

Selected Locations:

Suburban Area (PPS6 Out of Centre)	20
Edge of Town	5
Neighbourhood Centre (PPS6 Local Centre)	4

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

Selected Location Sub Categories:

Development Zone	2
Residential Zone	21
Built-Up Zone	1
No Sub Category	5

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

Secondary Filtering selection:

Use Class:

C3	29 days

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

Population within 500m Range:
All Surveys Included

Secondary Filtering selection (Cont.):

Population within 1 mile:

1,001 to 5,000	3 days
5,001 to 10,000	2 days
10,001 to 15,000	4 days
15,001 to 20,000	1 days
20,001 to 25,000	7 days
25,001 to 50,000	12 days

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

Population within 5 miles:

5,001 to 25,000	1 days
25,001 to 50,000	1 days
50,001 to 75,000	7 days
125,001 to 250,000	5 days
250,001 to 500,000	6 days
500,001 or More	9 days

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

Car ownership within 5 miles:

0.5 or Less	1 days
0.6 to 1.0	12 days
1.1 to 1.5	16 days

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

Travel Plan:

No	29 days

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

PTAL Rating:

No PTAL Present	29 days

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

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

LIST OF SITES relevant to selection parameters

Site(1):	AN-03-C-02	Site area:	0.20 hect
Development Name:	BLOCK OF FLATS	No of Dwellings:	22
Location:	BELFAST	Housing density:	110
Postcode:	BT5 7HD	Total Bedrooms:	44
Main Location Type:	Edge of Town	Survey Date:	28/11/14
Sub-Location Type:	Residential Zone	Survey Day:	Friday
PTAL:	n/a	Parking Spaces:	22
Site(2):	CA-03-C-03	Site area:	1.20 hect
Development Name:	BLOCKS OF FLATS	No of Dwellings:	82
Location:	CAMBRIDGE	Housing density:	137
Postcode:	CB1 3UR	Total Bedrooms:	152
Main Location Type:	Suburban Area (PPS6 Out of Centre)	Survey Date:	18/09/17
Sub-Location Type:	No Sub Category	Survey Day:	Monday
PTAL:	n/a	Parking Spaces:	93
Site(3):	CB-03-C-02	Site area:	0.56 hect
Development Name:	BLOCK OF FLATS	No of Dwellings:	35
Location:	PENRITH	Housing density:	109
Postcode:	CA11 8RH	Total Bedrooms:	70
Main Location Type:	Edge of Town	Survey Date:	11/06/14
Sub-Location Type:	No Sub Category	Survey Day:	Wednesday
PTAL:	n/a	Parking Spaces:	38
Site(4):	CB-03-C-03	Site area:	0.45 hect
Development Name:	FLATS & BUNGALOWS	No of Dwellings:	33
Location:	KENDAL	Housing density:	220
Postcode:	LA9 7FE	Total Bedrooms:	33
Main Location Type:	Suburban Area (PPS6 Out of Centre)	Survey Date:	09/06/14
Sub-Location Type:	Residential Zone	Survey Day:	Monday
PTAL:	n/a	Parking Spaces:	17
Site(5):	DC-03-C-02	Site area:	0.14 hect
Development Name:	FLATS IN BLOCKS	No of Dwellings:	14
Location:	WEYMOUTH	Housing density:	467
Postcode:	DT3 5DA	Total Bedrooms:	28
Main Location Type:	Suburban Area (PPS6 Out of Centre)	Survey Date:	28/03/14
Sub-Location Type:	Residential Zone	Survey Day:	Friday
PTAL:	n/a	Parking Spaces:	20
Site(6):	DL-03-C-11	Site area:	1.23 hect
Development Name:	BLOCK OF FLATS	No of Dwellings:	96
Location:	DUBLIN	Housing density:	356
Postcode:		Total Bedrooms:	190
Main Location Type:	Neighbourhood Centre (PPS6 Local Centre)	Survey Date:	10/09/13
Sub-Location Type:	Residential Zone	Survey Day:	Tuesday
PTAL:	n/a	Parking Spaces:	67
Site(7):	DL-03-C-12	Site area:	0.46 hect
Development Name:	BLOCK OF FLATS	No of Dwellings:	47
Location:	DUBLIN	Housing density:	109
Postcode:		Total Bedrooms:	93
Main Location Type:	Suburban Area (PPS6 Out of Centre)	Survey Date:	10/09/13
Sub-Location Type:	Residential Zone	Survey Day:	Tuesday
PTAL:	n/a	Parking Spaces:	79
Site(8):	DL-03-C-13	Site area:	0.66 hect
Development Name:	BLOCK OF FLATS	No of Dwellings:	52
Location:	DUBLIN	Housing density:	162
Postcode:		Total Bedrooms:	104
Main Location Type:	Neighbourhood Centre (PPS6 Local Centre)	Survey Date:	10/09/13
Sub-Location Type:	Built-Up Zone	Survey Day:	Tuesday
PTAL:	n/a	Parking Spaces:	77
Site(9):	DL-03-C-14	Site area:	1.10 hect
Development Name:	BLOCKS OF FLATS	No of Dwellings:	140
Location:	DUBLIN	Housing density:	359
Postcode:		Total Bedrooms:	287
Main Location Type:	Suburban Area (PPS6 Out of Centre)	Survey Date:	10/09/13
Sub-Location Type:	Residential Zone	Survey Day:	Tuesday
PTAL:	n/a	Parking Spaces:	145

LIST OF SITES relevant to selection parameters (Cont.)

Site(10):	DL-03-C-15	Site area:	0.72 hect
Development Name:	BLOCKS OF FLATS	No of Dwellings:	20
Location:	DUBLIN	Housing density:	167
Postcode:		Total Bedrooms:	43
Main Location Type:	Suburban Area (PPS6 Out of Centre)	Survey Date:	01/10/14
Sub-Location Type:	Residential Zone	Survey Day:	Wednesday
PTAL:	n/a	Parking Spaces:	38
Site(11):	DL-03-C-16	Site area:	0.19 hect
Development Name:	BLOCKS OF FLATS	No of Dwellings:	31
Location:	DUBLIN	Housing density:	388
Postcode:	DUBLIN 9	Total Bedrooms:	54
Main Location Type:	Suburban Area (PPS6 Out of Centre)	Survey Date:	22/11/16
Sub-Location Type:	Residential Zone	Survey Day:	Tuesday
PTAL:	n/a	Parking Spaces:	40
Site(12):	DL-03-C-17	Site area:	2.80 hect
Development Name:	BLOCKS OF FLATS	No of Dwellings:	332
Location:	DUBLIN	Housing density:	415
Postcode:		Total Bedrooms:	725
Main Location Type:	Suburban Area (PPS6 Out of Centre)	Survey Date:	23/10/20
Sub-Location Type:	Residential Zone	Survey Day:	Friday
PTAL:	n/a	Parking Spaces:	386
Site(13):	DL-03-C-18	Site area:	0.77 hect
Development Name:	BLOCKS OF FLATS	No of Dwellings:	102
Location:	DUBLIN	Housing density:	212
Postcode:		Total Bedrooms:	102
Main Location Type:	Suburban Area (PPS6 Out of Centre)	Survey Date:	19/05/21
Sub-Location Type:	Residential Zone	Survey Day:	Wednesday
PTAL:	n/a	Parking Spaces:	72
Site(14):	DS-03-C-03	Site area:	0.17 hect
Development Name:	BLOCKS OF FLATS	No of Dwellings:	30
Location:	DERBY	Housing density:	600
Postcode:	DE1 3RG	Total Bedrooms:	62
Main Location Type:	Suburban Area (PPS6 Out of Centre)	Survey Date:	25/09/19
Sub-Location Type:	Residential Zone	Survey Day:	Wednesday
PTAL:	n/a	Parking Spaces:	16
Site(15):	EB-03-C-01	Site area:	0.52 hect
Development Name:	BLOCKS OF FLATS	No of Dwellings:	32
Location:	EDINBURGH	Housing density:	82
Postcode:	EH10 5LX	Total Bedrooms:	64
Main Location Type:	Suburban Area (PPS6 Out of Centre)	Survey Date:	26/05/15
Sub-Location Type:	Residential Zone	Survey Day:	Tuesday
PTAL:	n/a	Parking Spaces:	50
Site(16):	GA-03-C-01	Site area:	0.46 hect
Development Name:	FLATS	No of Dwellings:	34
Location:	GALWAY	Housing density:	87
Postcode:		Total Bedrooms:	72
Main Location Type:	Suburban Area (PPS6 Out of Centre)	Survey Date:	31/10/13
Sub-Location Type:	No Sub Category	Survey Day:	Thursday
PTAL:	n/a	Parking Spaces:	44
Site(17):	LE-03-C-01	Site area:	0.13 hect
Development Name:	BLOCK OF FLATS	No of Dwellings:	19
Location:	LEICESTER	Housing density:	475
Postcode:	LE2 5EB	Total Bedrooms:	38
Main Location Type:	Neighbourhood Centre (PPS6 Local Centre)	Survey Date:	16/10/20
Sub-Location Type:	Residential Zone	Survey Day:	Friday
PTAL:	n/a	Parking Spaces:	21
Site(18):	LU-03-C-04	Site area:	0.93 hect
Development Name:	BLOCKS OF FLATS	No of Dwellings:	42
Location:	DROGHEDA	Housing density:	45
Postcode:		Total Bedrooms:	94
Main Location Type:	Neighbourhood Centre (PPS6 Local Centre)	Survey Date:	22/09/21
Sub-Location Type:	Residential Zone	Survey Day:	Wednesday
PTAL:	n/a	Parking Spaces:	72

LIST OF SITES relevant to selection parameters (Cont.)

Site(19):	MS-03-C-02	Site area:	1.54 hect
Development Name:	BLOCKS OF FLATS	No of Dwellings:	184
Location:	LIVERPOOL	Housing density:	420
Postcode:	L3 4ES	Total Bedrooms:	368
Main Location Type:	Suburban Area (PPS6 Out of Centre)	Survey Date:	13/11/18
Sub-Location Type:	Development Zone	Survey Day:	Tuesday
PTAL:	n/a	Parking Spaces:	267

Site(20):	MS-03-C-03	Site area:	0.12 hect
Development Name:	BLOCK OF FLATS	No of Dwellings:	9
Location:	LIVERPOOL	Housing density:	75
Postcode:	L3 4DR	Total Bedrooms:	21
Main Location Type:	Suburban Area (PPS6 Out of Centre)	Survey Date:	13/11/18
Sub-Location Type:	Development Zone	Survey Day:	Tuesday
PTAL:	n/a	Parking Spaces:	12

Site(21):	NF-03-C-02	Site area:	2.04 hect
Development Name:	MIXED FLATS & HOUSES	No of Dwellings:	82
Location:	NORWICH	Housing density:	64
Postcode:	NR1 2PY	Total Bedrooms:	143
Main Location Type:	Suburban Area (PPS6 Out of Centre)	Survey Date:	18/11/19
Sub-Location Type:	Residential Zone	Survey Day:	Monday
PTAL:	n/a	Parking Spaces:	82

Site(22):	NT-03-C-01	Site area:	0.80 hect
Development Name:	HOUSES (SPLIT INTO FLATS)	No of Dwellings:	56
Location:	NOTTINGHAM	Housing density:	70
Postcode:	NG7 1GE	Total Bedrooms:	76
Main Location Type:	Suburban Area (PPS6 Out of Centre)	Survey Date:	08/11/16
Sub-Location Type:	No Sub Category	Survey Day:	Tuesday
PTAL:	n/a	Parking Spaces:	103

Site(23):	NT-03-C-02	Site area:	1.50 hect
Development Name:	HOUSES (SPLIT INTO FLATS)	No of Dwellings:	135
Location:	NOTTINGHAM	Housing density:	90
Postcode:	NG7 1GW	Total Bedrooms:	219
Main Location Type:	Suburban Area (PPS6 Out of Centre)	Survey Date:	09/11/16
Sub-Location Type:	No Sub Category	Survey Day:	Wednesday
PTAL:	n/a	Parking Spaces:	98

Site(24):	RI-03-C-01	Site area:	0.72 hect
Development Name:	FLATS	No of Dwellings:	20
Location:	HULL	Housing density:	167
Postcode:	HU5 5SB	Total Bedrooms:	44
Main Location Type:	Edge of Town	Survey Date:	13/05/14
Sub-Location Type:	Residential Zone	Survey Day:	Tuesday
PTAL:	n/a	Parking Spaces:	22

Site(25):	SF-03-C-03	Site area:	0.60 hect
Development Name:	BLOCKS OF FLATS	No of Dwellings:	30
Location:	BURY ST EDMUNDS	Housing density:	300
Postcode:	IP32 6BT	Total Bedrooms:	42
Main Location Type:	Suburban Area (PPS6 Out of Centre)	Survey Date:	03/12/14
Sub-Location Type:	Residential Zone	Survey Day:	Wednesday
PTAL:	n/a	Parking Spaces:	40

Site(26):	SF-03-C-04	Site area:	0.75 hect
Development Name:	BLOCKS OF FLATS	No of Dwellings:	56
Location:	IPSWICH	Housing density:	118
Postcode:	IP4 4SD	Total Bedrooms:	88
Main Location Type:	Suburban Area (PPS6 Out of Centre)	Survey Date:	16/09/20
Sub-Location Type:	Residential Zone	Survey Day:	Wednesday
PTAL:	n/a	Parking Spaces:	24

Site(27):	SR-03-C-03	Site area:	1.30 hect
Development Name:	BLOCK OF FLATS & TERRACED	No of Dwellings:	82
Location:	STIRLING	Housing density:	167
Postcode:	FK7 9RA	Total Bedrooms:	194
Main Location Type:	Edge of Town	Survey Date:	01/09/20
Sub-Location Type:	Residential Zone	Survey Day:	Tuesday
PTAL:	n/a	Parking Spaces:	128

LIST OF SITES relevant to selection parameters (Cont.)

Site(28):	TW-03-C-01	Site area:	0.40 hect
Development Name:	BLOCKS OF FLATS	No of Dwellings:	45
Location:	WHITLEY BAY	Housing density:	112
Postcode:	NE25 9BA	Total Bedrooms:	90
Main Location Type:	Edge of Town	Survey Date:	15/10/21
Sub-Location Type:	Residential Zone	Survey Day:	Friday
PTAL:	n/a	Parking Spaces:	48

Site(29):	WA-03-C-01	Site area:	0.60 hect
Development Name:	BLOCKS OF FLATS	No of Dwellings:	51
Location:	WATERFORD	Housing density:	204
Postcode:		Total Bedrooms:	128
Main Location Type:	Suburban Area (PPS6 Out of Centre)	Survey Date:	12/05/15
Sub-Location Type:	Residential Zone	Survey Day:	Tuesday
PTAL:	n/a	Parking Spaces:	53

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	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	29	66	0.047	29	66	0.172	29	66	0.219
08:00 - 09:00	29	66	0.067	29	66	0.212	29	66	0.279
09:00 - 10:00	29	66	0.082	29	66	0.093	29	66	0.175
10:00 - 11:00	29	66	0.058	29	66	0.079	29	66	0.137
11:00 - 12:00	29	66	0.061	29	66	0.075	29	66	0.136
12:00 - 13:00	29	66	0.077	29	66	0.084	29	66	0.161
13:00 - 14:00	29	66	0.079	29	66	0.088	29	66	0.167
14:00 - 15:00	29	66	0.099	29	66	0.088	29	66	0.187
15:00 - 16:00	29	66	0.108	29	66	0.076	29	66	0.184
16:00 - 17:00	29	66	0.125	29	66	0.079	29	66	0.204
17:00 - 18:00	29	66	0.186	29	66	0.083	29	66	0.269
18:00 - 19:00	29	66	0.157	29	66	0.102	29	66	0.259
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.146			1.231			2.377

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

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

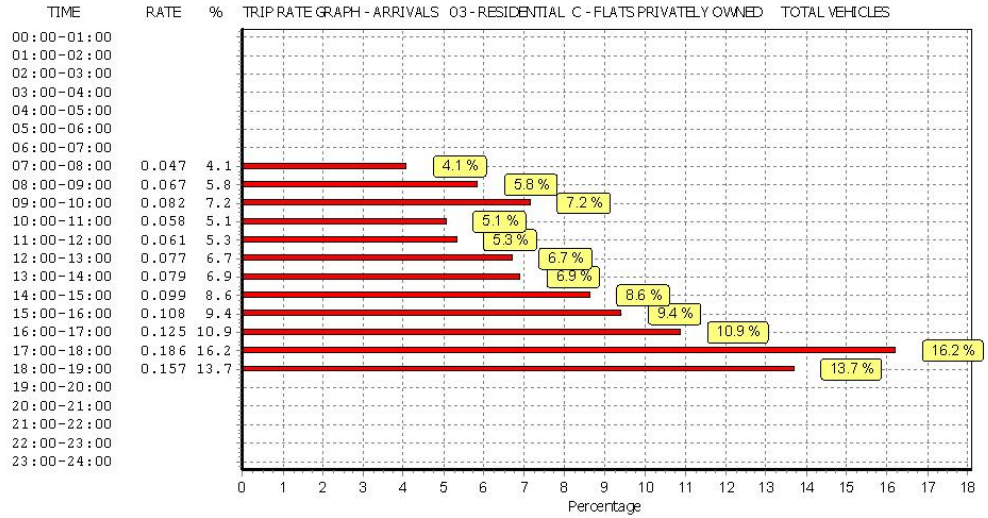
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Parameter summary

Trip rate parameter range selected:	9 - 332 (units:)
Survey date date range:	01/01/12 - 15/10/21
Number of weekdays (Monday-Friday):	29
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

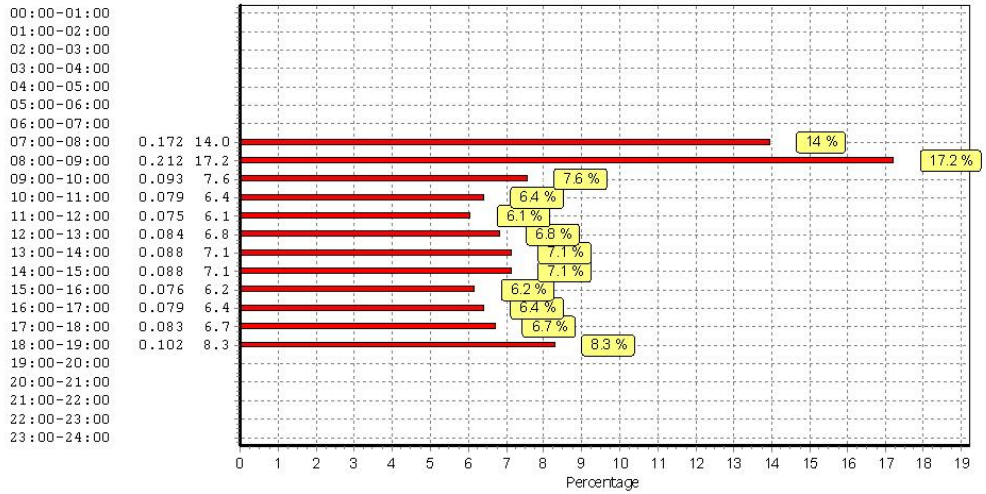
This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected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



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

TRIP RATE GRAPH - DEPARTURES 03 - RESIDENTIAL C - FLATS PRIVATELY OWNED TOTAL VEHICLES

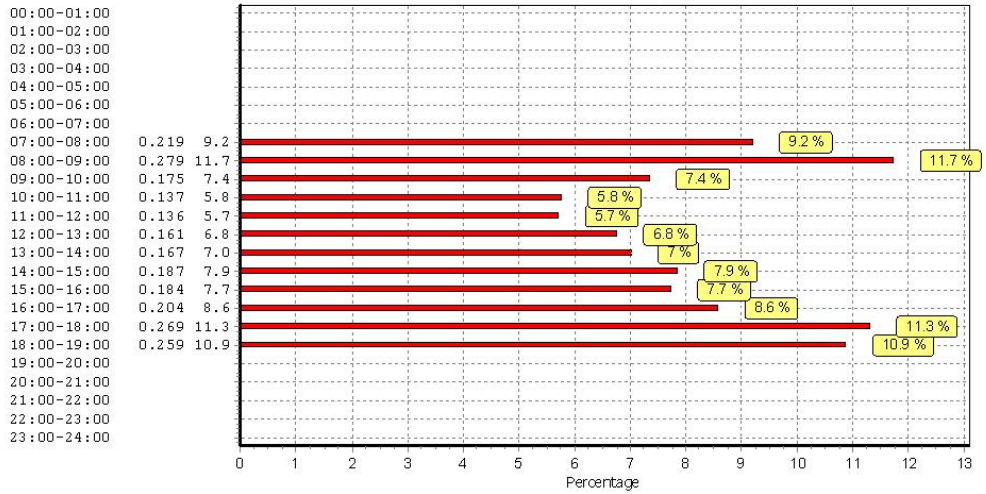
TIME	RATE	%
00:00-01:00		
01:00-02:00		
02:00-03:00		
03:00-04:00		
04:00-05:00		
05:00-06:00		
06:00-07:00		
07:00-08:00	0.172	14.0
08:00-09:00	0.212	17.2
09:00-10:00	0.093	7.6
10:00-11:00	0.079	6.4
11:00-12:00	0.075	6.1
12:00-13:00	0.084	6.8
13:00-14:00	0.088	7.1
14:00-15:00	0.088	7.1
15:00-16:00	0.076	6.2
16:00-17:00	0.079	6.4
17:00-18:00	0.083	6.7
18:00-19:00	0.102	8.3
19:00-20:00		
20:00-21:00		
21:00-22:00		
22:00-23:00		
23:00-24:00		



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

TRIP RATE GRAPH - TOTALS 03 - RESIDENTIAL C - FLATS PRIVATELY OWNED TOTAL VEHICLES

TIME	RATE	%
00:00-01:00		
01:00-02:00		
02:00-03:00		
03:00-04:00		
04:00-05:00		
05:00-06:00		
06:00-07:00		
07:00-08:00	0.219	9.2
08:00-09:00	0.279	11.7
09:00-10:00	0.175	7.4
10:00-11:00	0.137	5.8
11:00-12:00	0.136	5.7
12:00-13:00	0.161	6.8
13:00-14:00	0.167	7.0
14:00-15:00	0.187	7.9
15:00-16:00	0.184	7.7
16:00-17:00	0.204	8.6
17:00-18:00	0.269	11.3
18:00-19:00	0.259	10.9
19:00-20:00		
20:00-21:00		
21:00-22:00		
22:00-23:00		
23:00-24:00		



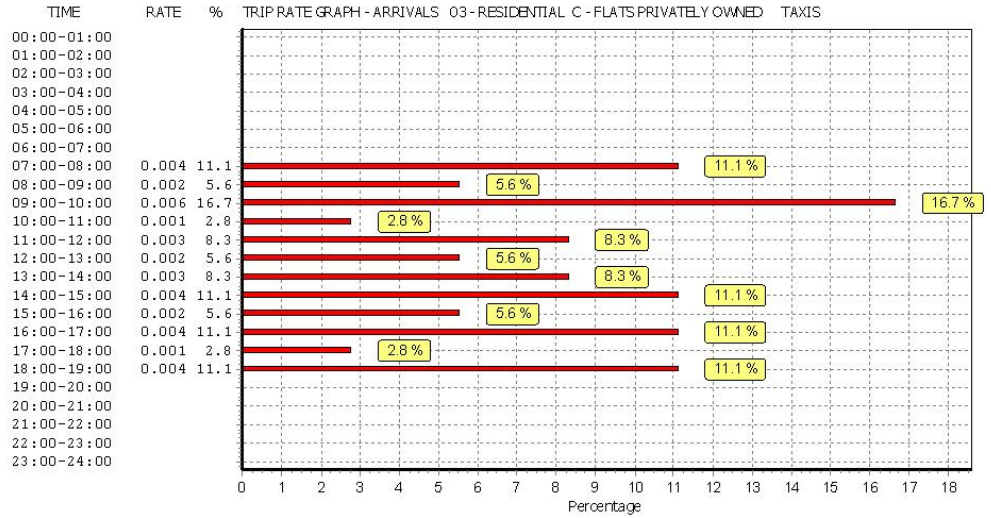
This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

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

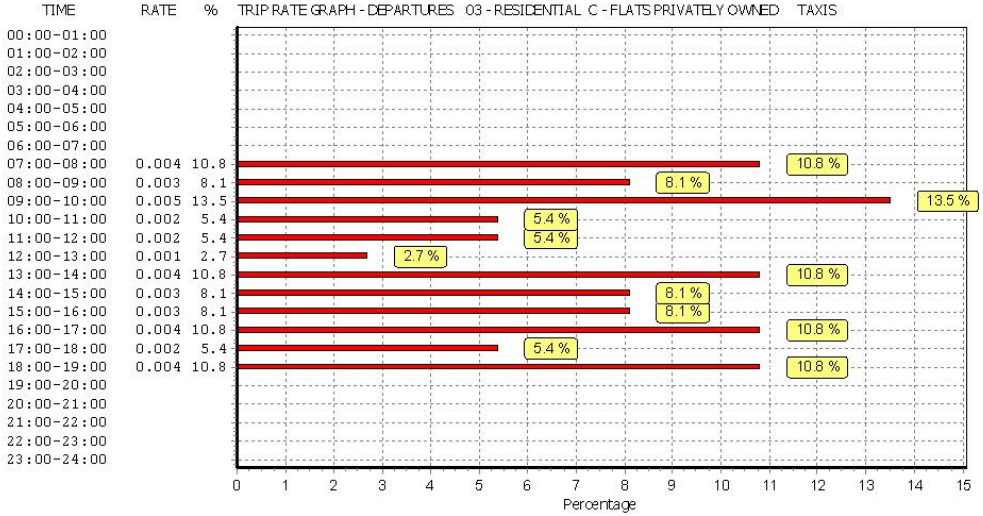
Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	29	66	0.004	29	66	0.004	29	66	0.008
08:00 - 09:00	29	66	0.002	29	66	0.003	29	66	0.005
09:00 - 10:00	29	66	0.006	29	66	0.005	29	66	0.011
10:00 - 11:00	29	66	0.001	29	66	0.002	29	66	0.003
11:00 - 12:00	29	66	0.003	29	66	0.002	29	66	0.005
12:00 - 13:00	29	66	0.002	29	66	0.001	29	66	0.003
13:00 - 14:00	29	66	0.003	29	66	0.004	29	66	0.007
14:00 - 15:00	29	66	0.004	29	66	0.003	29	66	0.007
15:00 - 16:00	29	66	0.002	29	66	0.003	29	66	0.005
16:00 - 17:00	29	66	0.004	29	66	0.004	29	66	0.008
17:00 - 18:00	29	66	0.001	29	66	0.002	29	66	0.003
18:00 - 19:00	29	66	0.004	29	66	0.004	29	66	0.008
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.036			0.037			0.073

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

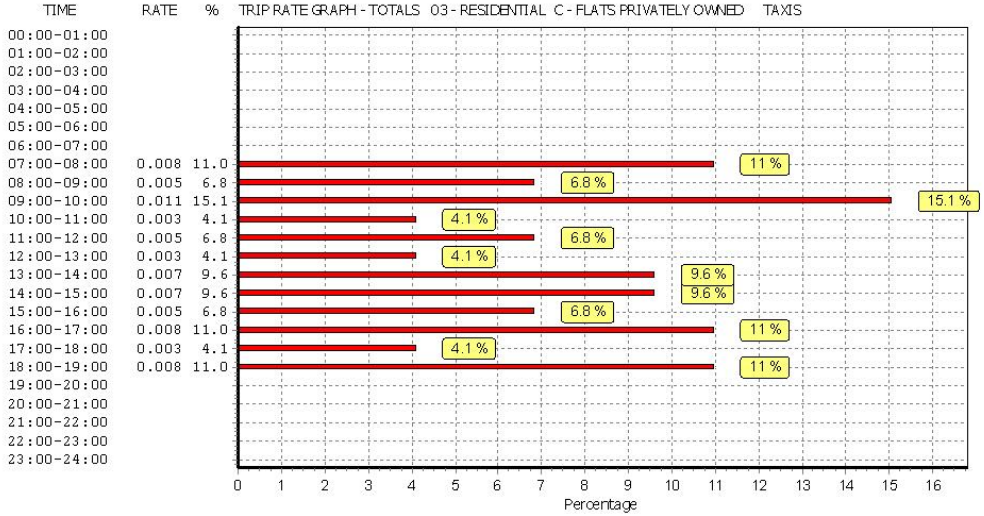
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This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



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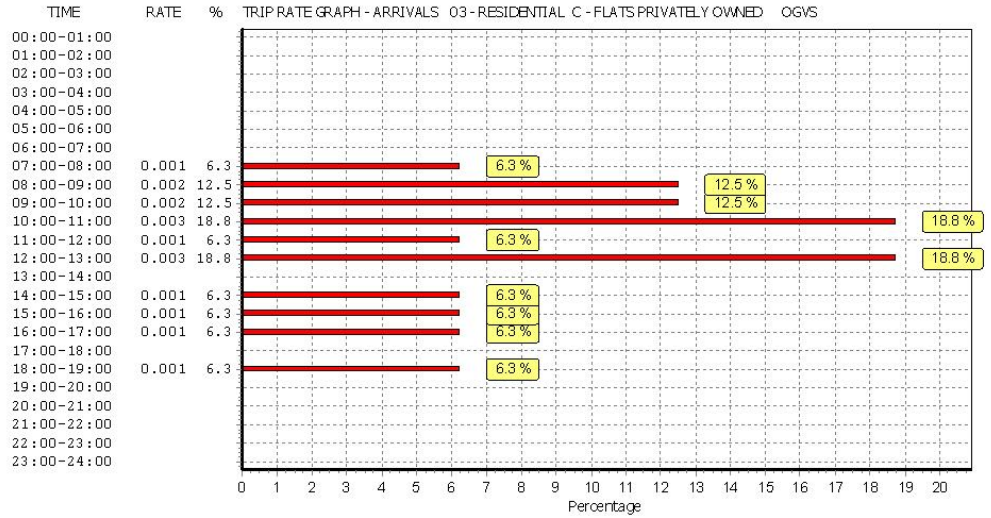
This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

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

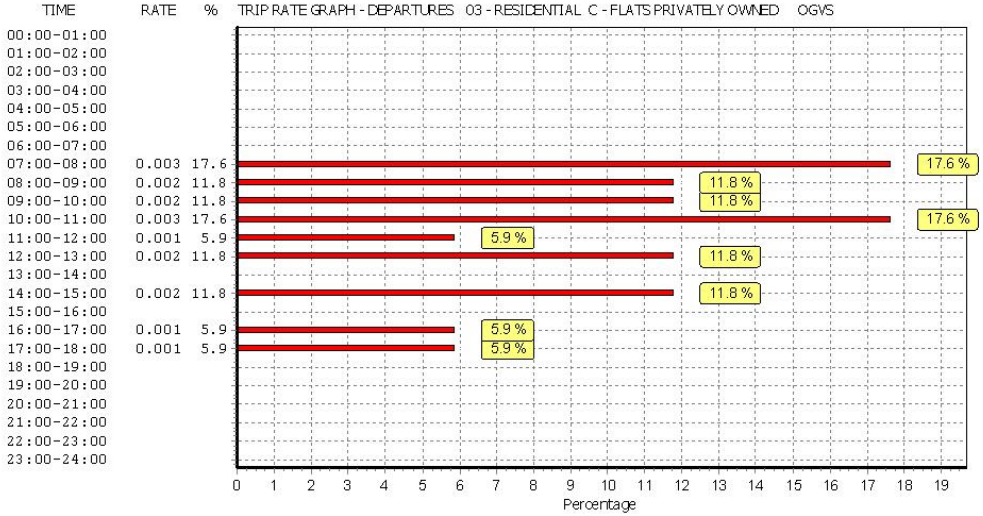
	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	29	66	0.001	29	66	0.003	29	66	0.004
08:00 - 09:00	29	66	0.002	29	66	0.002	29	66	0.004
09:00 - 10:00	29	66	0.002	29	66	0.002	29	66	0.004
10:00 - 11:00	29	66	0.003	29	66	0.003	29	66	0.006
11:00 - 12:00	29	66	0.001	29	66	0.001	29	66	0.002
12:00 - 13:00	29	66	0.003	29	66	0.002	29	66	0.005
13:00 - 14:00	29	66	0.000	29	66	0.000	29	66	0.000
14:00 - 15:00	29	66	0.001	29	66	0.002	29	66	0.003
15:00 - 16:00	29	66	0.001	29	66	0.000	29	66	0.001
16:00 - 17:00	29	66	0.001	29	66	0.001	29	66	0.002
17:00 - 18:00	29	66	0.000	29	66	0.001	29	66	0.001
18:00 - 19:00	29	66	0.001	29	66	0.000	29	66	0.001
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.016			0.017			0.033

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.

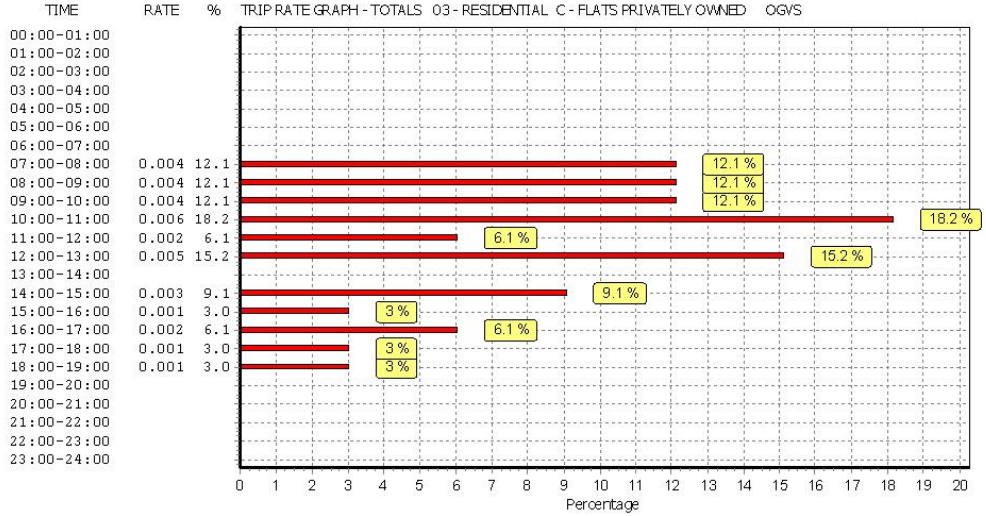
*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected 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.*



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



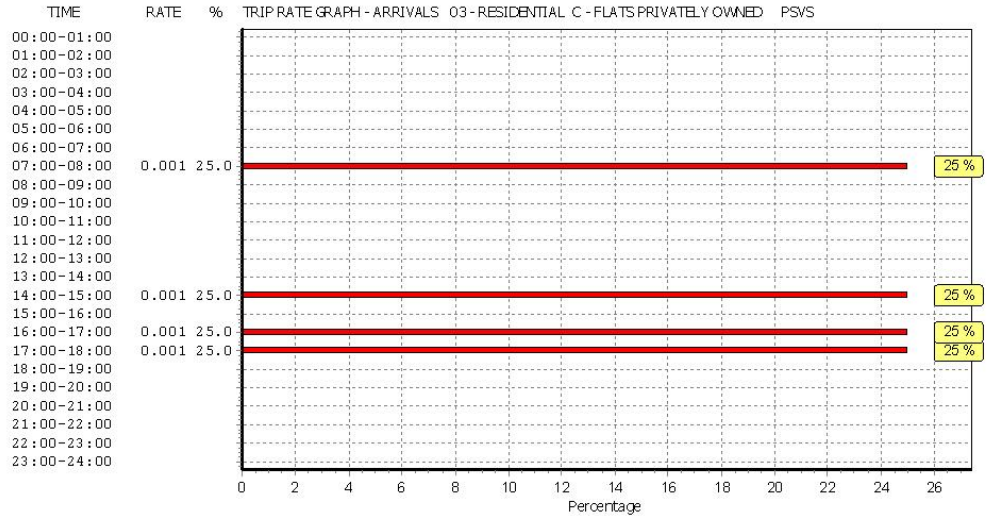
This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

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

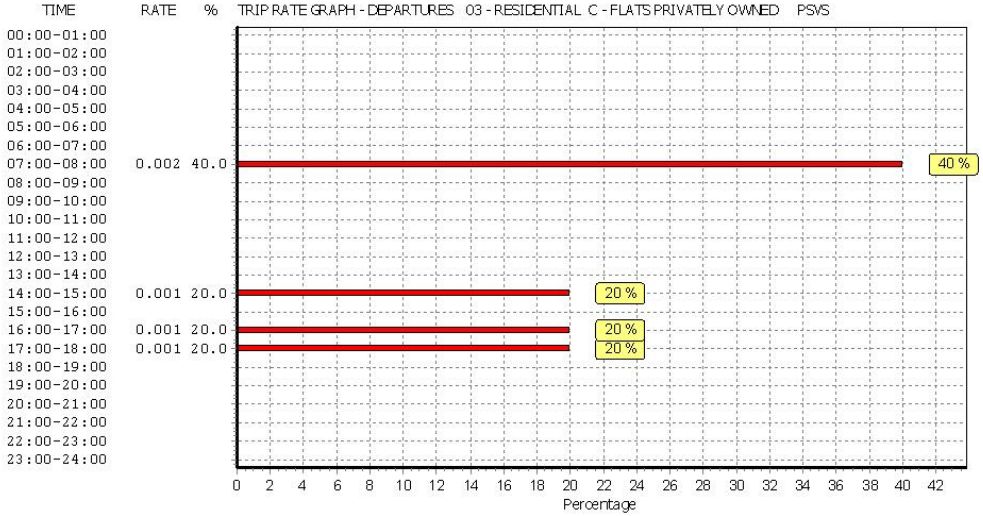
Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	29	66	0.001	29	66	0.002	29	66	0.003
08:00 - 09:00	29	66	0.000	29	66	0.000	29	66	0.000
09:00 - 10:00	29	66	0.000	29	66	0.000	29	66	0.000
10:00 - 11:00	29	66	0.000	29	66	0.000	29	66	0.000
11:00 - 12:00	29	66	0.000	29	66	0.000	29	66	0.000
12:00 - 13:00	29	66	0.000	29	66	0.000	29	66	0.000
13:00 - 14:00	29	66	0.000	29	66	0.000	29	66	0.000
14:00 - 15:00	29	66	0.001	29	66	0.001	29	66	0.002
15:00 - 16:00	29	66	0.000	29	66	0.000	29	66	0.000
16:00 - 17:00	29	66	0.001	29	66	0.001	29	66	0.002
17:00 - 18:00	29	66	0.001	29	66	0.001	29	66	0.002
18:00 - 19:00	29	66	0.000	29	66	0.000	29	66	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.004			0.005			0.009

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.

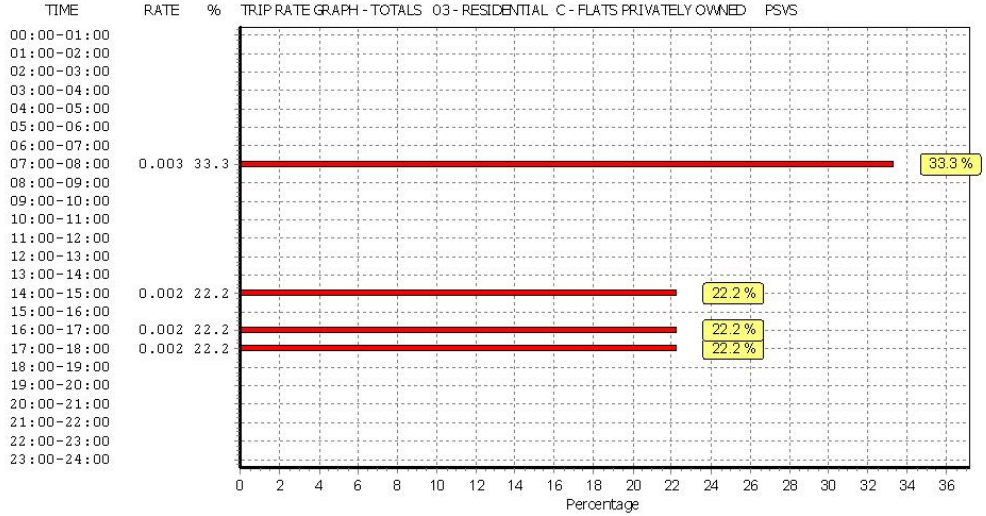
*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected 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.*



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



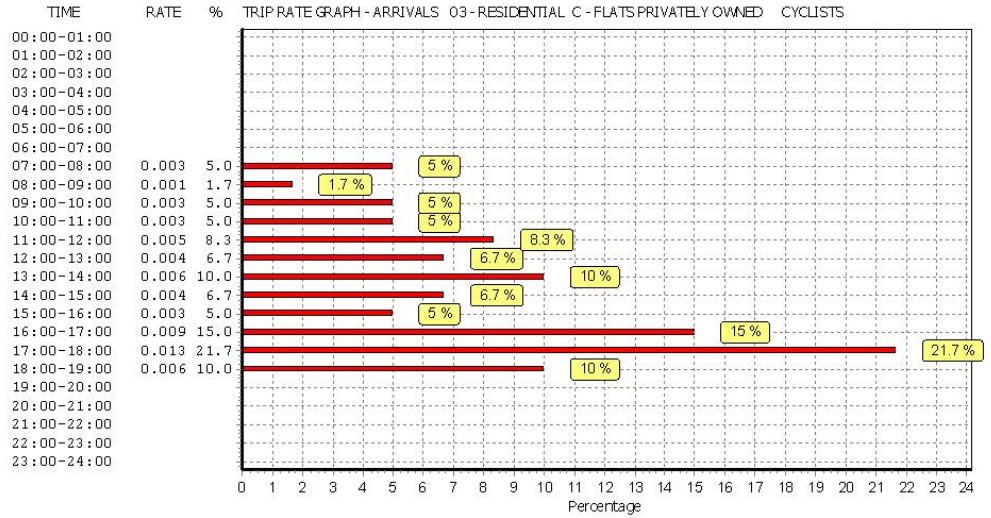
This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

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

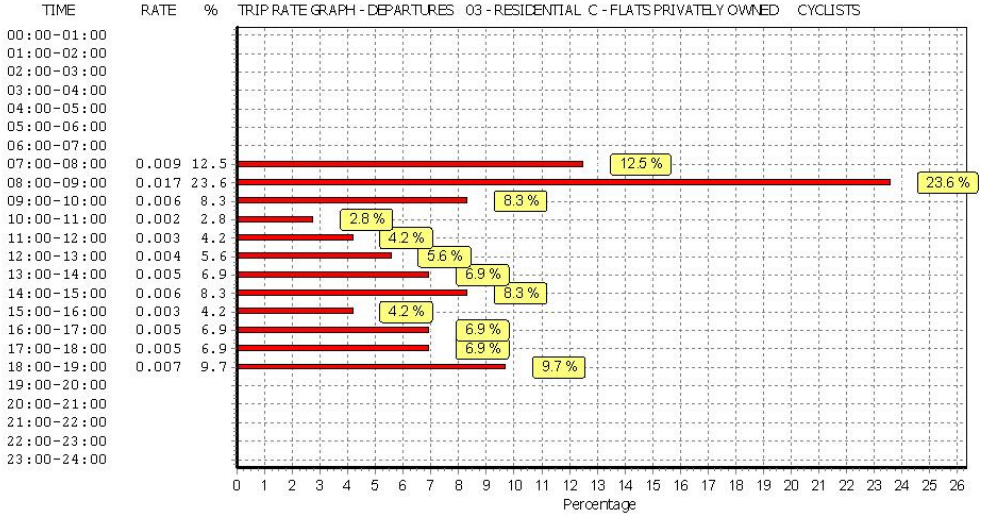
Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	29	66	0.003	29	66	0.009	29	66	0.012
08:00 - 09:00	29	66	0.001	29	66	0.017	29	66	0.018
09:00 - 10:00	29	66	0.003	29	66	0.006	29	66	0.009
10:00 - 11:00	29	66	0.003	29	66	0.002	29	66	0.005
11:00 - 12:00	29	66	0.005	29	66	0.003	29	66	0.008
12:00 - 13:00	29	66	0.004	29	66	0.004	29	66	0.008
13:00 - 14:00	29	66	0.006	29	66	0.005	29	66	0.011
14:00 - 15:00	29	66	0.004	29	66	0.006	29	66	0.010
15:00 - 16:00	29	66	0.003	29	66	0.003	29	66	0.006
16:00 - 17:00	29	66	0.009	29	66	0.005	29	66	0.014
17:00 - 18:00	29	66	0.013	29	66	0.005	29	66	0.018
18:00 - 19:00	29	66	0.006	29	66	0.007	29	66	0.013
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.060			0.072			0.132

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.

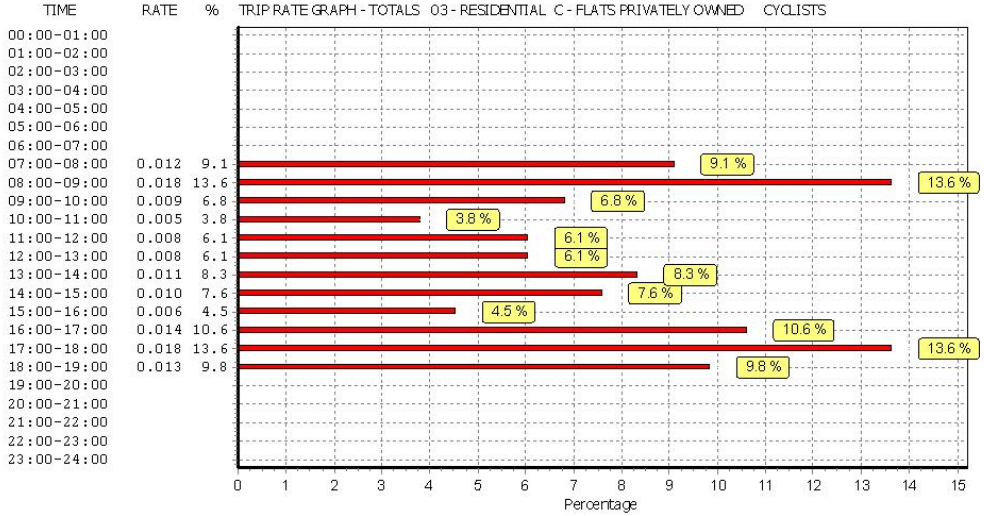
*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected 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.*



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



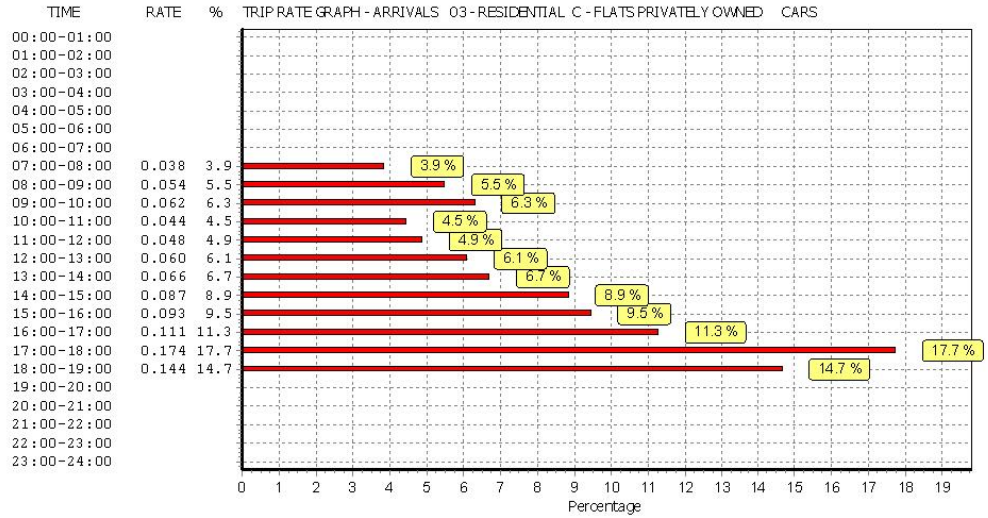
This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

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

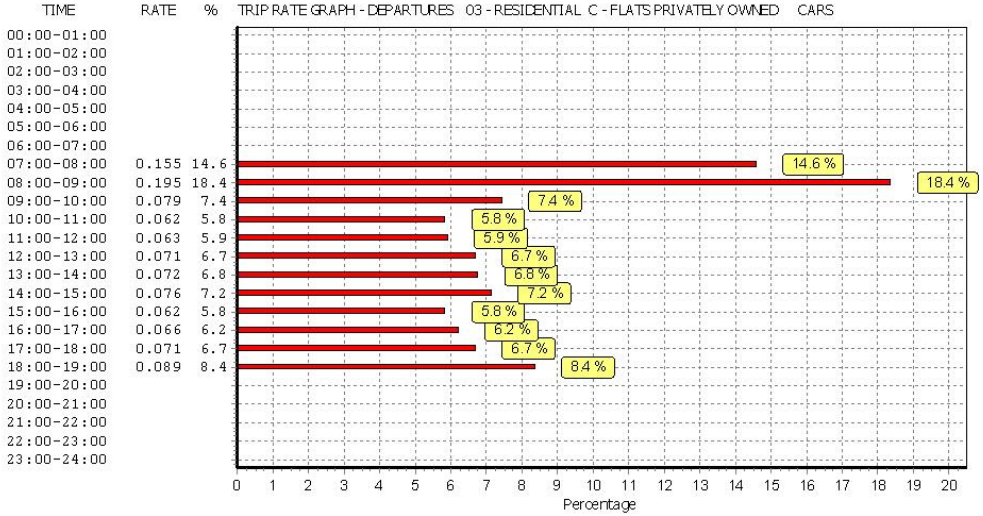
Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	29	66	0.038	29	66	0.155	29	66	0.193
08:00 - 09:00	29	66	0.054	29	66	0.195	29	66	0.249
09:00 - 10:00	29	66	0.062	29	66	0.079	29	66	0.141
10:00 - 11:00	29	66	0.044	29	66	0.062	29	66	0.106
11:00 - 12:00	29	66	0.048	29	66	0.063	29	66	0.111
12:00 - 13:00	29	66	0.060	29	66	0.071	29	66	0.131
13:00 - 14:00	29	66	0.066	29	66	0.072	29	66	0.138
14:00 - 15:00	29	66	0.087	29	66	0.076	29	66	0.163
15:00 - 16:00	29	66	0.093	29	66	0.062	29	66	0.155
16:00 - 17:00	29	66	0.111	29	66	0.066	29	66	0.177
17:00 - 18:00	29	66	0.174	29	66	0.071	29	66	0.245
18:00 - 19:00	29	66	0.144	29	66	0.089	29	66	0.233
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.981			1.061			2.042

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

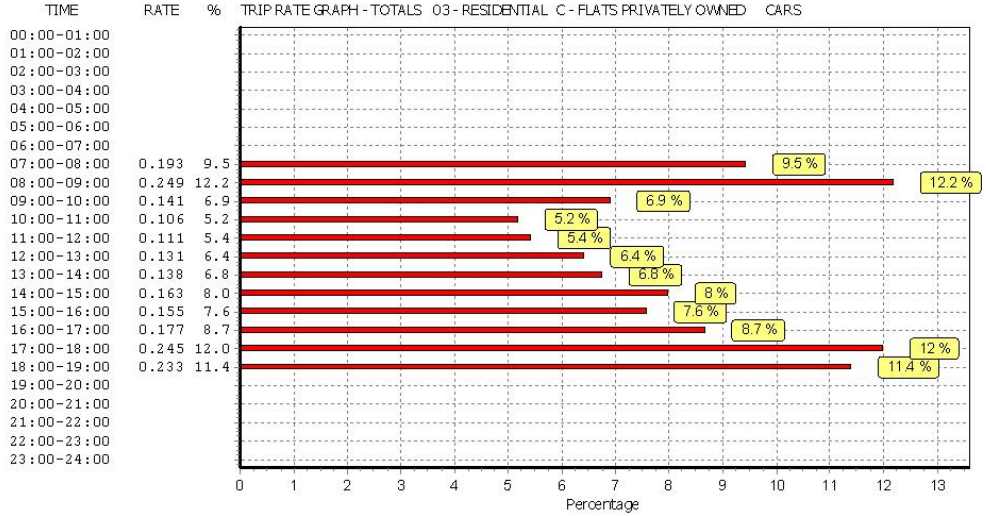
*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected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



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



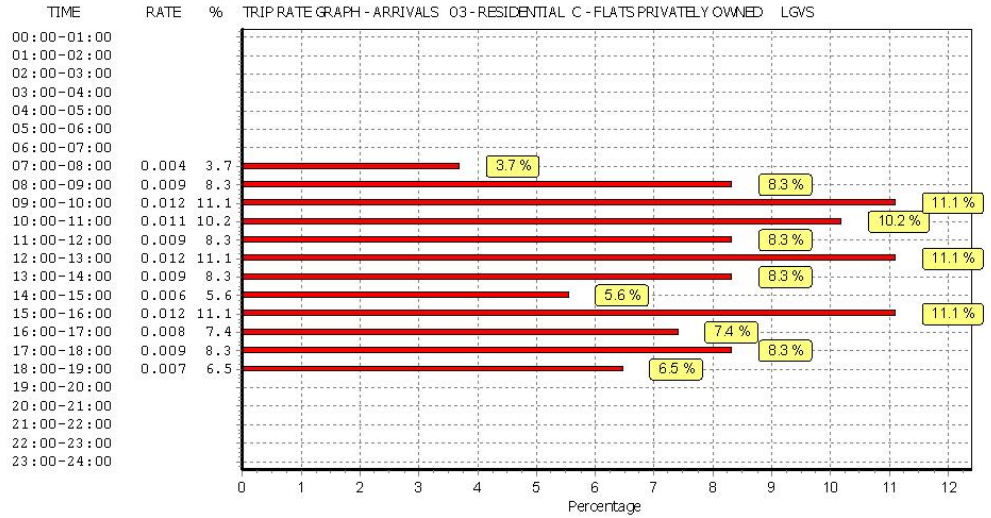
This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

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

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	29	66	0.004	29	66	0.009	29	66	0.013
08:00 - 09:00	29	66	0.009	29	66	0.012	29	66	0.021
09:00 - 10:00	29	66	0.012	29	66	0.007	29	66	0.019
10:00 - 11:00	29	66	0.011	29	66	0.014	29	66	0.025
11:00 - 12:00	29	66	0.009	29	66	0.009	29	66	0.018
12:00 - 13:00	29	66	0.012	29	66	0.009	29	66	0.021
13:00 - 14:00	29	66	0.009	29	66	0.012	29	66	0.021
14:00 - 15:00	29	66	0.006	29	66	0.006	29	66	0.012
15:00 - 16:00	29	66	0.012	29	66	0.011	29	66	0.023
16:00 - 17:00	29	66	0.008	29	66	0.008	29	66	0.016
17:00 - 18:00	29	66	0.009	29	66	0.007	29	66	0.016
18:00 - 19:00	29	66	0.007	29	66	0.007	29	66	0.014
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.108			0.111			0.219

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.

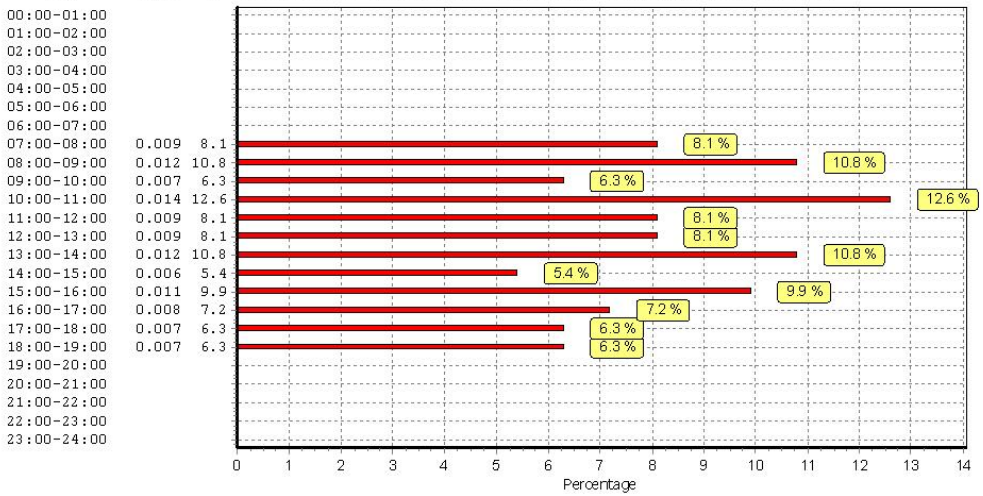
*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected 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.*



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

TRIP RATE GRAPH - DEPARTURES 03 - RESIDENTIAL C - FLATS PRIVATELY OWNED LGVS

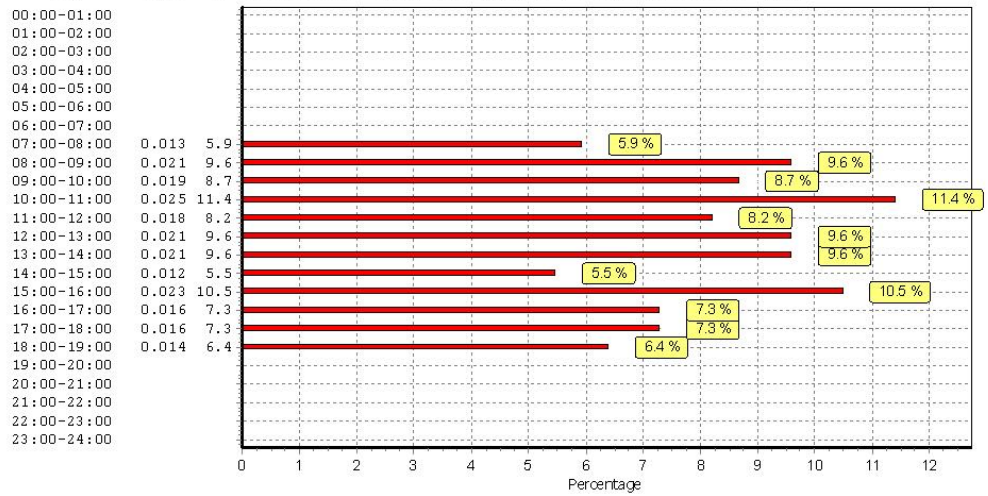
TIME	RATE	%
00:00-01:00		
01:00-02:00		
02:00-03:00		
03:00-04:00		
04:00-05:00		
05:00-06:00		
06:00-07:00		
07:00-08:00	0.009	8.1
08:00-09:00	0.012	10.8
09:00-10:00	0.007	6.3
10:00-11:00	0.014	12.6
11:00-12:00	0.009	8.1
12:00-13:00	0.009	8.1
13:00-14:00	0.012	10.8
14:00-15:00	0.006	5.4
15:00-16:00	0.011	9.9
16:00-17:00	0.008	7.2
17:00-18:00	0.007	6.3
18:00-19:00	0.007	6.3
19:00-20:00		
20:00-21:00		
21:00-22:00		
22:00-23:00		
23:00-24:00		



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

TRIP RATE GRAPH - TOTALS 03 - RESIDENTIAL C - FLATS PRIVATELY OWNED LGVS

TIME	RATE	%
00:00-01:00		
01:00-02:00		
02:00-03:00		
03:00-04:00		
04:00-05:00		
05:00-06:00		
06:00-07:00		
07:00-08:00	0.013	5.9
08:00-09:00	0.021	9.6
09:00-10:00	0.019	8.7
10:00-11:00	0.025	11.4
11:00-12:00	0.018	8.2
12:00-13:00	0.021	9.6
13:00-14:00	0.021	9.6
14:00-15:00	0.012	5.5
15:00-16:00	0.023	10.5
16:00-17:00	0.016	7.3
17:00-18:00	0.016	7.3
18:00-19:00	0.014	6.4
19:00-20:00		
20:00-21:00		
21:00-22:00		
22:00-23:00		
23:00-24:00		



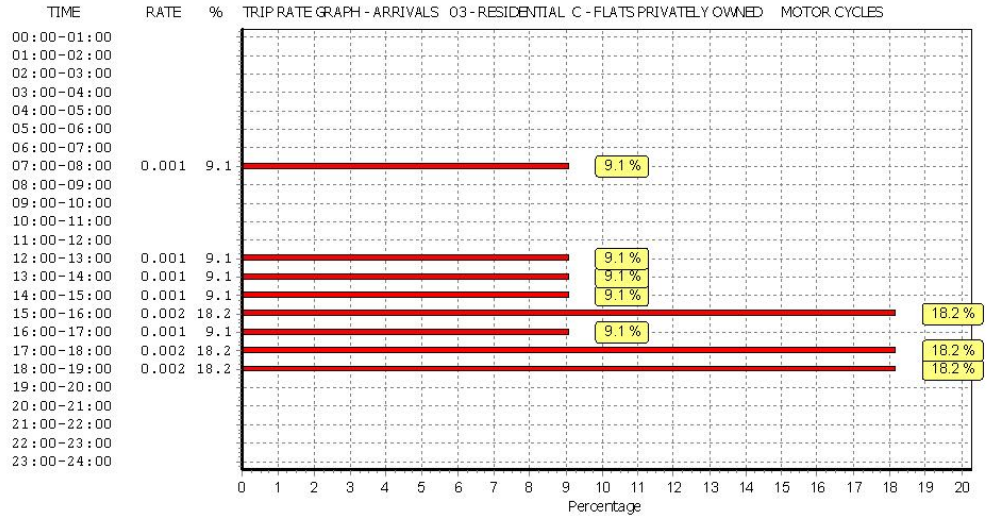
This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

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

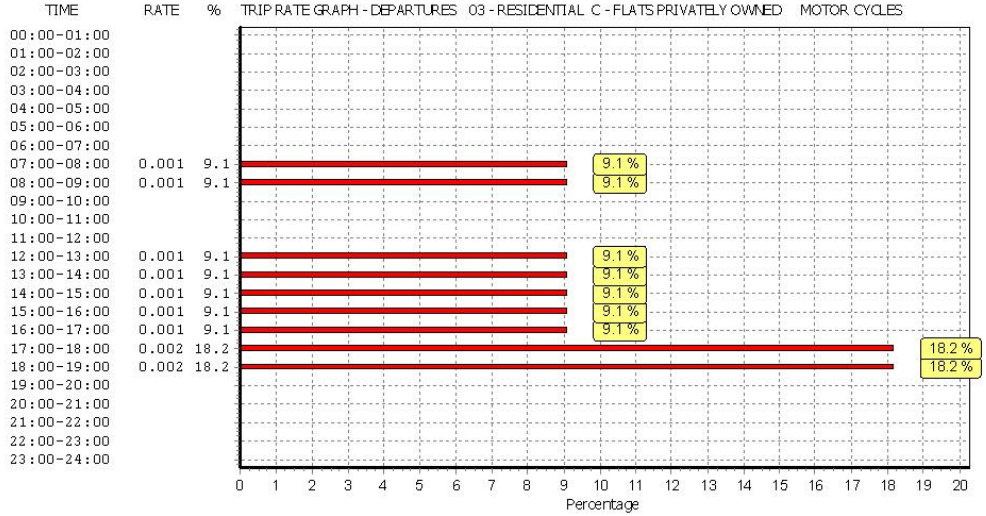
	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	29	66	0.001	29	66	0.001	29	66	0.002
08:00 - 09:00	29	66	0.000	29	66	0.001	29	66	0.001
09:00 - 10:00	29	66	0.000	29	66	0.000	29	66	0.000
10:00 - 11:00	29	66	0.000	29	66	0.000	29	66	0.000
11:00 - 12:00	29	66	0.000	29	66	0.000	29	66	0.000
12:00 - 13:00	29	66	0.001	29	66	0.001	29	66	0.002
13:00 - 14:00	29	66	0.001	29	66	0.001	29	66	0.002
14:00 - 15:00	29	66	0.001	29	66	0.001	29	66	0.002
15:00 - 16:00	29	66	0.002	29	66	0.001	29	66	0.003
16:00 - 17:00	29	66	0.001	29	66	0.001	29	66	0.002
17:00 - 18:00	29	66	0.002	29	66	0.002	29	66	0.004
18:00 - 19:00	29	66	0.002	29	66	0.002	29	66	0.004
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.011			0.011			0.022

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

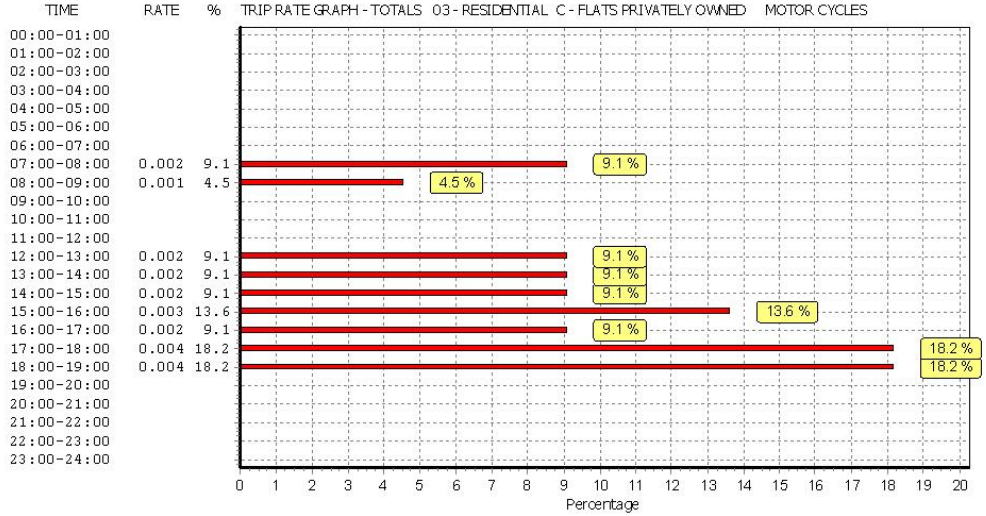
*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected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



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

Filtering Summary

Land Use	04/D	EDUCATION/NURSERY
Selected Trip Rate Calculation Parameter Range	150-2350 sqm GFA	
Actual Trip Rate Calculation Parameter Range	150-880 sqm GFA	
Date Range	Minimum: 01/01/14	Maximum: 19/11/21
Parking Spaces Range	All Surveys Included	
Days of the week selected	Monday	3
	Tuesday	3
	Thursday	4
	Friday	5
Main Location Types selected	Suburban Area (PPS6 Out of Centre)	5
	Edge of Town	8
	Neighbourhood Centre (PPS6 Local Centre)	2
Population within 500m	All Surveys Included	
Population <1 Mile ranges selected	1,001 to 5,000	3
	5,001 to 10,000	2
	10,001 to 15,000	1
	15,001 to 20,000	3
	20,001 to 25,000	1
	25,001 to 50,000	5
Population <5 Mile ranges selected	5,001 to 25,000	1
	50,001 to 75,000	1
	75,001 to 100,000	3
	125,001 to 250,000	6
	250,001 to 500,000	3
	500,001 or More	1
Car Ownership <5 Mile ranges selected	0.5 or Less	1
	0.6 to 1.0	5
	1.1 to 1.5	8
	2.1 to 2.5	1
PTAL Rating	No PTAL Present	15

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Page 2
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Calculation Reference: AUDIT-638801-220906-0925

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

03	SOUTH WEST		
	WL	WILTSHIRE	1 days
04	EAST ANGLIA		
	CA	CAMBRIDGESHIRE	1 days
05	EAST MIDLANDS		
	DS	DERBYSHIRE	1 days
	LE	LEICESTERSHIRE	1 days
	LN	LINCOLNSHIRE	1 days
06	WEST MIDLANDS		
	WK	WARWICKSHIRE	1 days
	WM	WEST MIDLANDS	1 days
09	NORTH		
	TV	TEES VALLEY	1 days
	TW	TYNE & WEAR	1 days
10	WALES		
	BG	BRIDGEND	1 days
	MM	MONMOUTHSHIRE	1 days
	RC	RHONDDA CYNON TAFF	1 days
11	SCOTLAND		
	DU	DUNDEE CITY	1 days
	SR	STIRLING	1 days
12	CONNAUGHT		
	RO	ROSCOMMON	1 days

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

Primary Filtering selection:

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

Parameter: Gross floor area
Actual Range: 150 to 880 (units: sqm)
Range Selected by User: 150 to 2350 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/14 to 19/11/21

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

Selected survey days:

Monday	3 days
Tuesday	3 days
Thursday	4 days
Friday	5 days

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

Selected survey types:

Manual count	15 days
Directional ATC Count	0 days

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

Selected Locations:

Suburban Area (PPS6 Out of Centre)	5
Edge of Town	8
Neighbourhood Centre (PPS6 Local Centre)	2

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and

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

Secondary Filtering selection:

Use Class:

E(f)	15 days

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

Population within 500m Range:
All Surveys Included

Population within 1 mile:

1,001 to 5,000	3 days
5,001 to 10,000	2 days
10,001 to 15,000	1 days
15,001 to 20,000	3 days
20,001 to 25,000	1 days
25,001 to 50,000	5 days

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

Population within 5 miles:

5,001 to 25,000	1 days
50,001 to 75,000	1 days
75,001 to 100,000	3 days
125,001 to 250,000	6 days
250,001 to 500,000	3 days
500,001 or More	1 days

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

Car ownership within 5 miles:

0.5 or Less	1 days
0.6 to 1.0	5 days
1.1 to 1.5	8 days
2.1 to 2.5	1 days

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

Travel Plan:

No	15 days

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

PTAL Rating:

No PTAL Present	15 days

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

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

LIST OF SITES relevant to selection parameters

Site(1):	BG-04-D-01	Gross floor area:	210 sqm
Development Name:	NURSERY	Number of pupils:	58
Location:	BRIDGEND		
Postcode:	CF31 3TS	No of Employees:	40
Main Location Type:	Edge of Town	Survey Date:	13/10/14
Sub-Location Type:	Industrial Zone	Survey Day:	Monday
PTAL:	n/a	Parking Spaces:	16
Site(2):	CA-04-D-02	Gross floor area:	400 sqm
Development Name:	NURSERY	Number of pupils:	50
Location:	PETERBOROUGH		
Postcode:	PE1 4RA	No of Employees:	17
Main Location Type:	Suburban Area (PPS6 Out of Centre)	Survey Date:	18/10/16
Sub-Location Type:	Residential Zone	Survey Day:	Tuesday
PTAL:	n/a	Parking Spaces:	12
Site(3):	DS-04-D-02	Gross floor area:	415 sqm
Development Name:	NURSERY	Number of pupils:	54
Location:	DERBY		
Postcode:	DE22 1GQ	No of Employees:	20
Main Location Type:	Edge of Town	Survey Date:	12/07/18
Sub-Location Type:	Residential Zone	Survey Day:	Thursday
PTAL:	n/a	Parking Spaces:	22
Site(4):	DU-04-D-01	Gross floor area:	325 sqm
Development Name:	NURSERY	Number of pupils:	36
Location:	DUNDEE		
Postcode:	DD4 8JP	No of Employees:	9
Main Location Type:	Suburban Area (PPS6 Out of Centre)	Survey Date:	24/04/17
Sub-Location Type:	Residential Zone	Survey Day:	Monday
PTAL:	n/a	Parking Spaces:	18
Site(5):	LE-04-D-01	Gross floor area:	375 sqm
Development Name:	NURSERY	Number of pupils:	80
Location:	LEICESTER		
Postcode:	LE2 5QF	No of Employees:	12
Main Location Type:	Edge of Town	Survey Date:	30/10/14
Sub-Location Type:	Residential Zone	Survey Day:	Thursday
PTAL:	n/a	Parking Spaces:	14
Site(6):	LN-04-D-01	Gross floor area:	600 sqm
Development Name:	NURSERY	Number of pupils:	49
Location:	LINCOLN		
Postcode:	LN6 8RY	No of Employees:	12
Main Location Type:	Suburban Area (PPS6 Out of Centre)	Survey Date:	31/10/17
Sub-Location Type:	Residential Zone	Survey Day:	Tuesday
PTAL:	n/a	Parking Spaces:	9
Site(7):	MM-04-D-01	Gross floor area:	860 sqm
Development Name:	NURSERY	Number of pupils:	210
Location:	NEWPORT		
Postcode:	NP10 8FZ	No of Employees:	31
Main Location Type:	Edge of Town	Survey Date:	27/09/19
Sub-Location Type:	Commercial Zone	Survey Day:	Friday
PTAL:	n/a	Parking Spaces:	45
Site(8):	RC-04-D-01	Gross floor area:	664 sqm
Development Name:	NURSERY	Number of pupils:	133
Location:	NEAR CARDIFF		
Postcode:	CF15 7QY	No of Employees:	29
Main Location Type:	Neighbourhood Centre (PPS6 Local Centre)	Survey Date:	06/05/21
Sub-Location Type:	Village	Survey Day:	Thursday
PTAL:	n/a	Parking Spaces:	22
Site(9):	RO-04-D-01	Gross floor area:	500 sqm
Development Name:	NURSERY	Number of pupils:	106
Location:	ROSCOMMON		
Postcode:		No of Employees:	17
Main Location Type:	Edge of Town	Survey Date:	26/09/14
Sub-Location Type:	Residential Zone	Survey Day:	Friday
PTAL:	n/a	Parking Spaces:	35

LIST OF SITES relevant to selection parameters (Cont.)

Site(10):	SR-04-D-01	Gross floor area:	250 sqm
Development Name:	NURSERY	Number of pupils:	30
Location:	STIRLING		
Postcode:	FK9 4RJ	No of Employees:	10
Main Location Type:	Edge of Town	Survey Date:	16/06/14
Sub-Location Type:	No Sub Category	Survey Day:	Monday
PTAL:	n/a	Parking Spaces:	12
Site(11):	TV-04-D-01	Gross floor area:	150 sqm
Development Name:	NURSERY	Number of pupils:	25
Location:	REDCAR		
Postcode:	TS10 4AB	No of Employees:	8
Main Location Type:	Edge of Town	Survey Date:	19/05/17
Sub-Location Type:	Residential Zone	Survey Day:	Friday
PTAL:	n/a	Parking Spaces:	
Site(12):	TW-04-D-03	Gross floor area:	725 sqm
Development Name:	NURSERY	Number of pupils:	108
Location:	NEWCASTLE UPON TYNE		
Postcode:	NE3 3PU	No of Employees:	35
Main Location Type:	Suburban Area (PPS6 Out of Centre)	Survey Date:	21/05/19
Sub-Location Type:	Residential Zone	Survey Day:	Tuesday
PTAL:	n/a	Parking Spaces:	15
Site(13):	WK-04-D-01	Gross floor area:	340 sqm
Development Name:	NURSERY	Number of pupils:	61
Location:	STRATFORD UPON AVON		
Postcode:	CV37 9JL	No of Employees:	16
Main Location Type:	Edge of Town	Survey Date:	29/06/18
Sub-Location Type:	Residential Zone	Survey Day:	Friday
PTAL:	n/a	Parking Spaces:	10
Site(14):	WL-04-D-01	Gross floor area:	500 sqm
Development Name:	NURSERY	Number of pupils:	75
Location:	SWINDON		
Postcode:	SN3 3AH	No of Employees:	21
Main Location Type:	Suburban Area (PPS6 Out of Centre)	Survey Date:	22/09/16
Sub-Location Type:	Residential Zone	Survey Day:	Thursday
PTAL:	n/a	Parking Spaces:	8
Site(15):	WM-04-D-02	Gross floor area:	880 sqm
Development Name:	NURSERY	Number of pupils:	30
Location:	BIRMINGHAM		
Postcode:	B10 9QP	No of Employees:	6
Main Location Type:	Neighbourhood Centre (PPS6 Local Centre)	Survey Date:	19/11/21
Sub-Location Type:	Residential Zone	Survey Day:	Friday
PTAL:	n/a	Parking Spaces:	8

Trip Rates for Key Periods		Trips per 100 sqm GFA	
Period	Inbound	Outbound	Total
0800-0900	3.559	2.947	6.506
1700-1800	2.544	3.169	5.713

TRIP RATE for Land Use 04 - EDUCATION/D - NURSERY
TOTAL VEHICLES
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	1	400	0.000	1	400	0.000	1	400	0.000
07:00 - 08:00	15	480	2.335	15	480	1.112	15	480	3.447
08:00 - 09:00	15	480	3.559	15	480	2.947	15	480	6.506
09:00 - 10:00	15	480	1.460	15	480	1.390	15	480	2.850
10:00 - 11:00	15	480	0.556	15	480	0.375	15	480	0.931
11:00 - 12:00	15	480	0.653	15	480	0.514	15	480	1.167
12:00 - 13:00	15	480	1.404	15	480	1.432	15	480	2.836
13:00 - 14:00	15	480	0.931	15	480	1.487	15	480	2.418
14:00 - 15:00	15	480	0.695	15	480	0.695	15	480	1.390
15:00 - 16:00	15	480	0.709	15	480	0.904	15	480	1.613
16:00 - 17:00	15	480	1.710	15	480	1.863	15	480	3.573
17:00 - 18:00	15	480	2.544	15	480	3.169	15	480	5.713
18:00 - 19:00	14	503	0.142	14	503	0.781	14	503	0.923
19:00 - 20:00	1	400	0.000	1	400	0.000	1	400	0.000
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			16.698			16.669			33.367

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

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

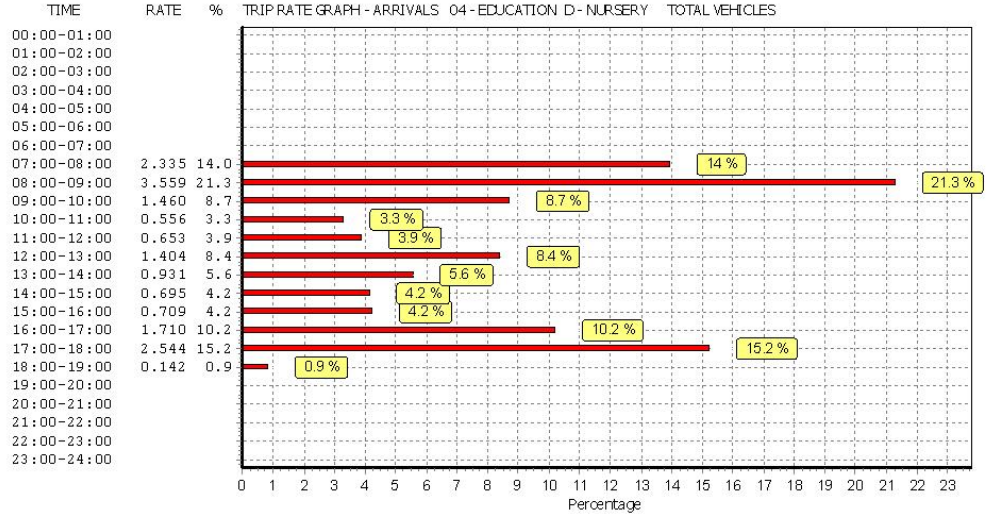
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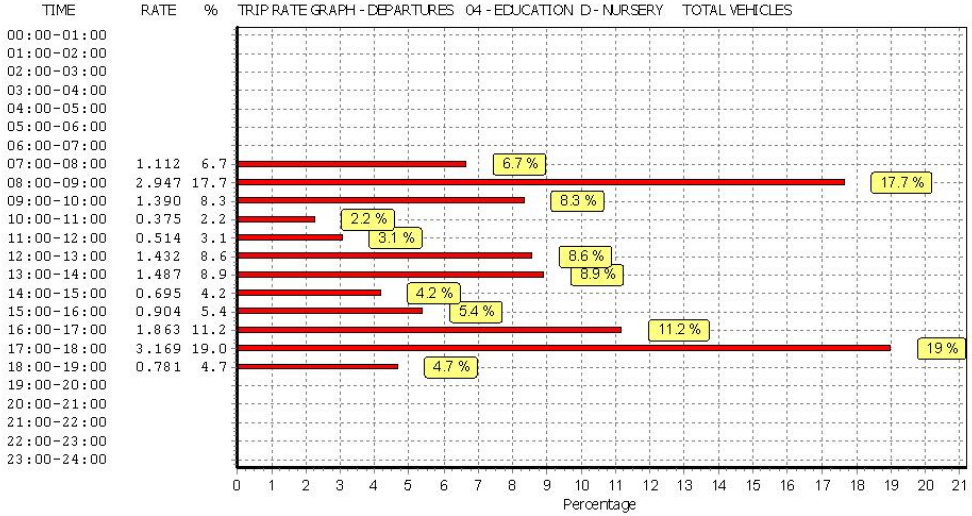
Parameter summary

Trip rate parameter range selected:	150 - 880 (units: sqm)
Survey date date range:	01/01/14 - 19/11/21
Number of weekdays (Monday-Friday):	15
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

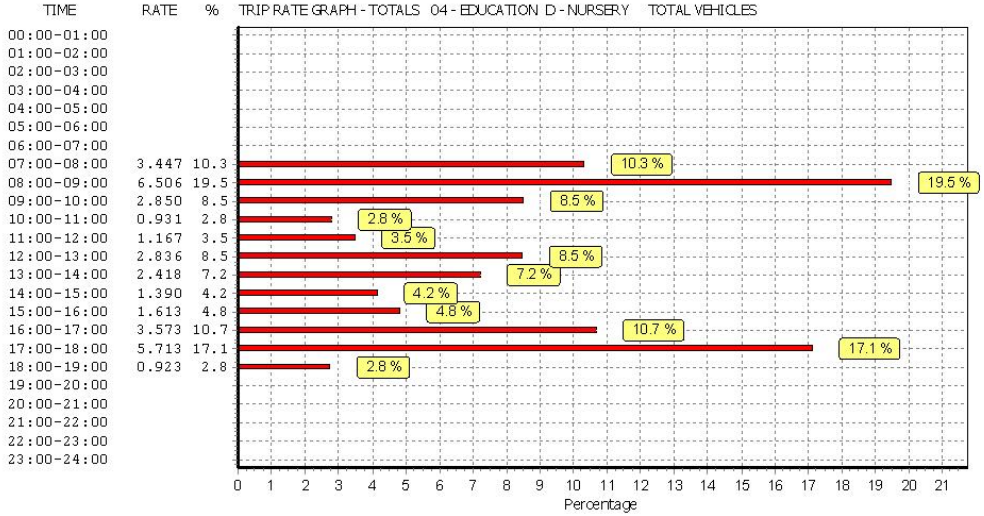
This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected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



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



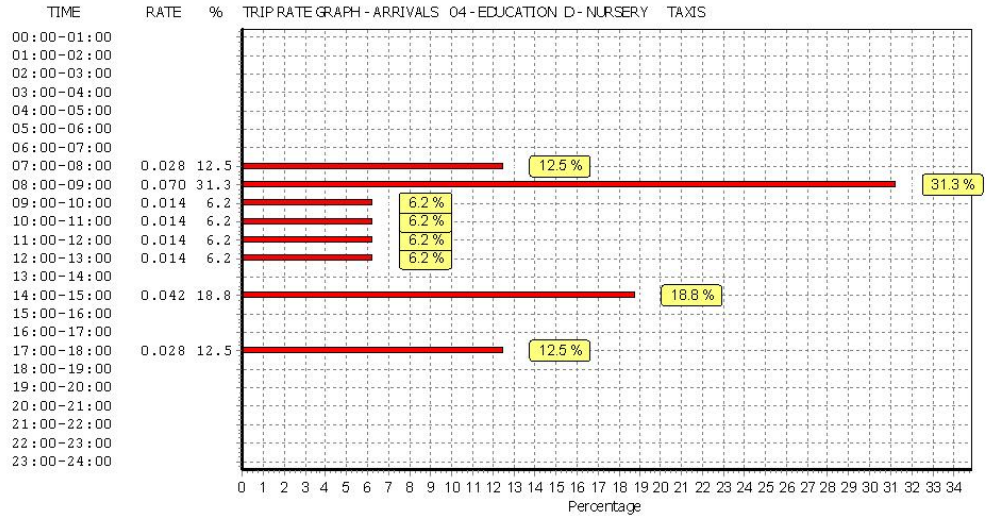
This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

TRIP RATE for Land Use 04 - EDUCATION/D - NURSERY
TAXIS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

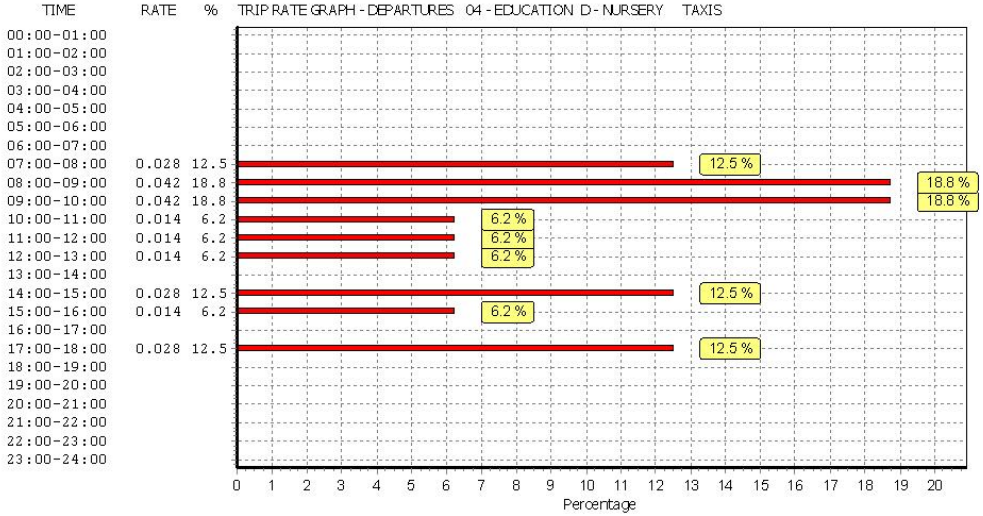
Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	1	400	0.000	1	400	0.000	1	400	0.000
07:00 - 08:00	15	480	0.028	15	480	0.028	15	480	0.056
08:00 - 09:00	15	480	0.070	15	480	0.042	15	480	0.112
09:00 - 10:00	15	480	0.014	15	480	0.042	15	480	0.056
10:00 - 11:00	15	480	0.014	15	480	0.014	15	480	0.028
11:00 - 12:00	15	480	0.014	15	480	0.014	15	480	0.028
12:00 - 13:00	15	480	0.014	15	480	0.014	15	480	0.028
13:00 - 14:00	15	480	0.000	15	480	0.000	15	480	0.000
14:00 - 15:00	15	480	0.042	15	480	0.028	15	480	0.070
15:00 - 16:00	15	480	0.000	15	480	0.014	15	480	0.014
16:00 - 17:00	15	480	0.000	15	480	0.000	15	480	0.000
17:00 - 18:00	15	480	0.028	15	480	0.028	15	480	0.056
18:00 - 19:00	14	503	0.000	14	503	0.000	14	503	0.000
19:00 - 20:00	1	400	0.000	1	400	0.000	1	400	0.000
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.224			0.224			0.448

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.

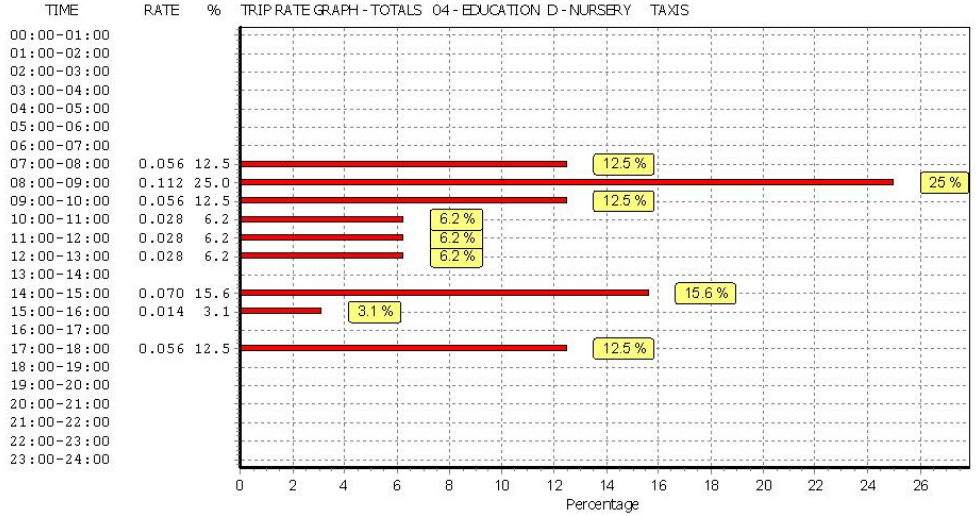
*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected 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.*



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



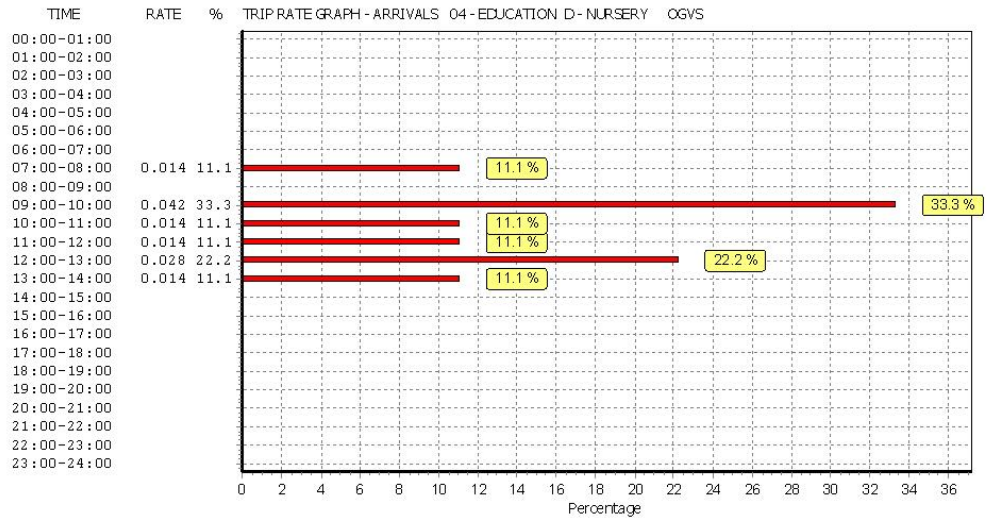
This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

TRIP RATE for Land Use 04 - EDUCATION/D - NURSERY
OGVS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

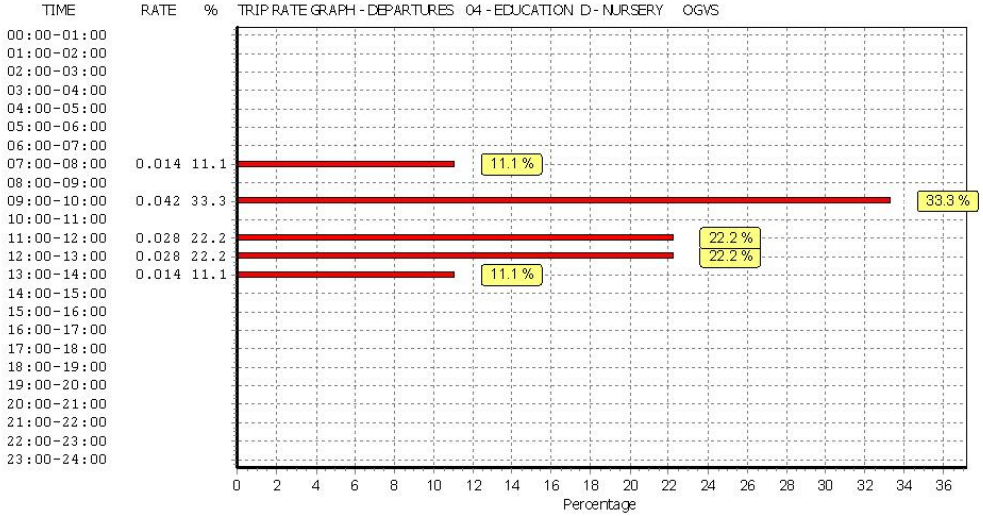
Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	1	400	0.000	1	400	0.000	1	400	0.000
07:00 - 08:00	15	480	0.014	15	480	0.014	15	480	0.028
08:00 - 09:00	15	480	0.000	15	480	0.000	15	480	0.000
09:00 - 10:00	15	480	0.042	15	480	0.042	15	480	0.084
10:00 - 11:00	15	480	0.014	15	480	0.000	15	480	0.014
11:00 - 12:00	15	480	0.014	15	480	0.028	15	480	0.042
12:00 - 13:00	15	480	0.028	15	480	0.028	15	480	0.056
13:00 - 14:00	15	480	0.014	15	480	0.014	15	480	0.028
14:00 - 15:00	15	480	0.000	15	480	0.000	15	480	0.000
15:00 - 16:00	15	480	0.000	15	480	0.000	15	480	0.000
16:00 - 17:00	15	480	0.000	15	480	0.000	15	480	0.000
17:00 - 18:00	15	480	0.000	15	480	0.000	15	480	0.000
18:00 - 19:00	14	503	0.000	14	503	0.000	14	503	0.000
19:00 - 20:00	1	400	0.000	1	400	0.000	1	400	0.000
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.126			0.126			0.252

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.

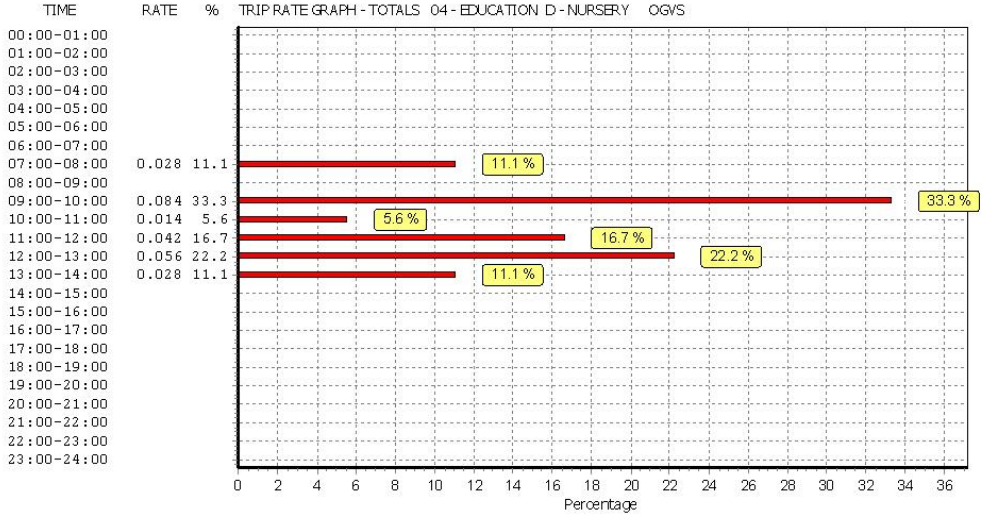
*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected 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.*



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



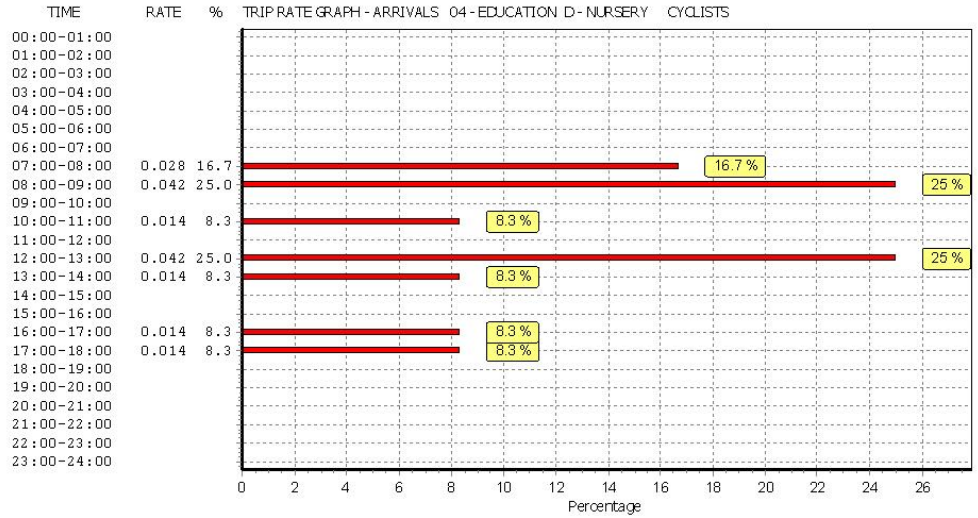
This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

TRIP RATE for Land Use 04 - EDUCATION/D - NURSERY
CYCLISTS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

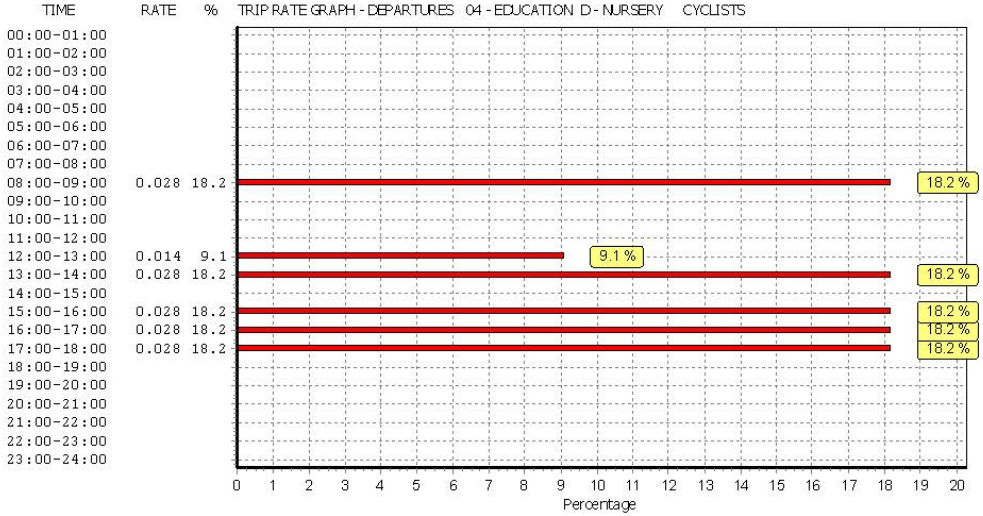
Time Range	ARRIVALS No. Days	ARRIVALS Ave. GFA	ARRIVALS Trip Rate	DEPARTURES No. Days	DEPARTURES Ave. GFA	DEPARTURES Trip Rate	TOTALS No. Days	TOTALS Ave. GFA	TOTALS Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	1	400	0.000	1	400	0.000	1	400	0.000
07:00 - 08:00	15	480	0.028	15	480	0.000	15	480	0.028
08:00 - 09:00	15	480	0.042	15	480	0.028	15	480	0.070
09:00 - 10:00	15	480	0.000	15	480	0.000	15	480	0.000
10:00 - 11:00	15	480	0.014	15	480	0.000	15	480	0.014
11:00 - 12:00	15	480	0.000	15	480	0.000	15	480	0.000
12:00 - 13:00	15	480	0.042	15	480	0.014	15	480	0.056
13:00 - 14:00	15	480	0.014	15	480	0.028	15	480	0.042
14:00 - 15:00	15	480	0.000	15	480	0.000	15	480	0.000
15:00 - 16:00	15	480	0.000	15	480	0.028	15	480	0.028
16:00 - 17:00	15	480	0.014	15	480	0.028	15	480	0.042
17:00 - 18:00	15	480	0.014	15	480	0.028	15	480	0.042
18:00 - 19:00	14	503	0.000	14	503	0.000	14	503	0.000
19:00 - 20:00	1	400	0.000	1	400	0.000	1	400	0.000
20:00 - 21:00	1	400	0.000	1	400	0.000	1	400	0.000
21:00 - 22:00	1	400	0.000	1	400	0.000	1	400	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.168			0.154			0.322

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.

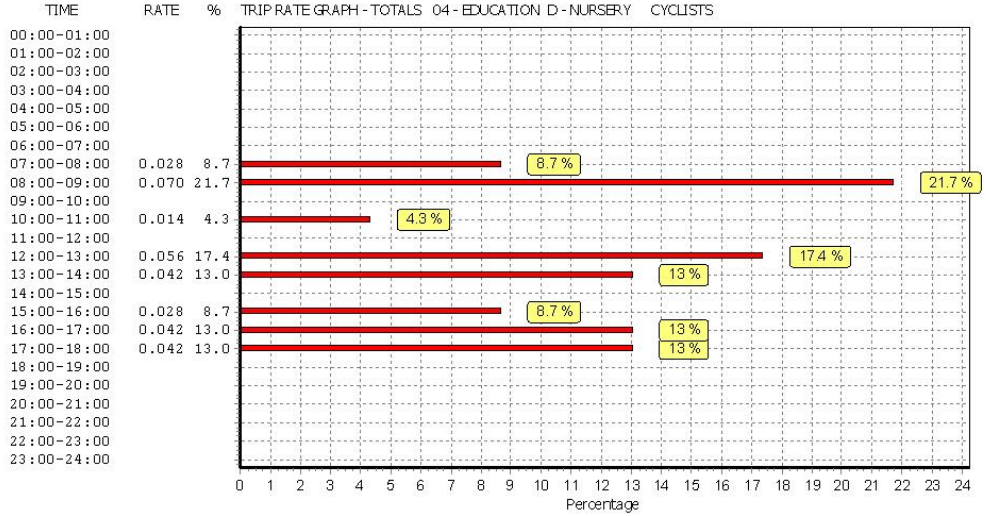
*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected 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.*



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



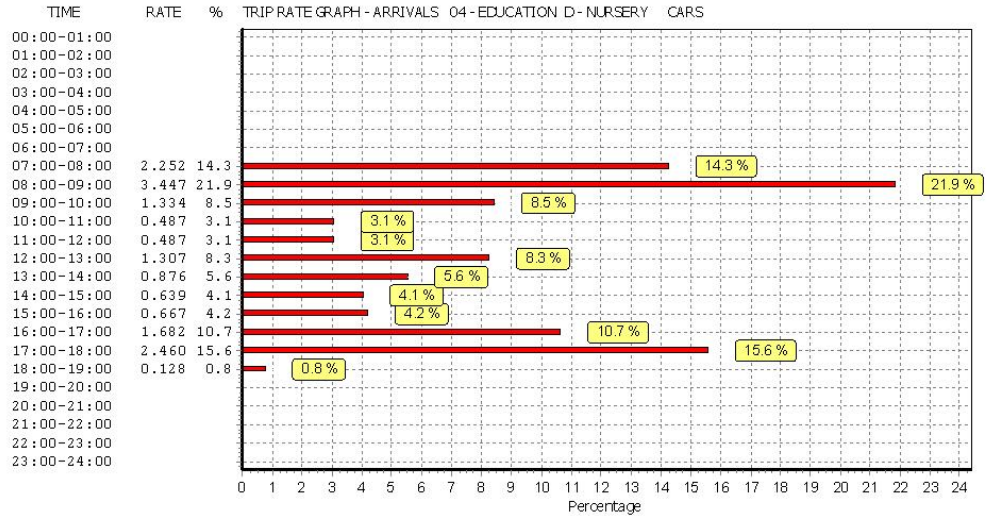
This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

TRIP RATE for Land Use 04 - EDUCATION/D - NURSERY
CARS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

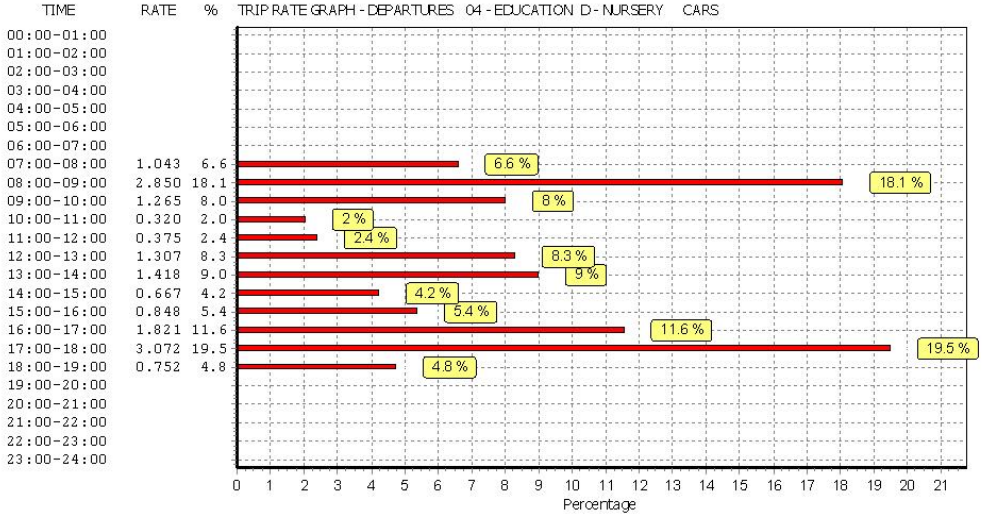
Time Range	ARRIVALS No. Days	ARRIVALS Ave. GFA	ARRIVALS Trip Rate	DEPARTURES No. Days	DEPARTURES Ave. GFA	DEPARTURES Trip Rate	TOTALS No. Days	TOTALS Ave. GFA	TOTALS Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	1	400	0.000	1	400	0.000	1	400	0.000
07:00 - 08:00	15	480	2.252	15	480	1.043	15	480	3.295
08:00 - 09:00	15	480	3.447	15	480	2.850	15	480	6.297
09:00 - 10:00	15	480	1.334	15	480	1.265	15	480	2.599
10:00 - 11:00	15	480	0.487	15	480	0.320	15	480	0.807
11:00 - 12:00	15	480	0.487	15	480	0.375	15	480	0.862
12:00 - 13:00	15	480	1.307	15	480	1.307	15	480	2.614
13:00 - 14:00	15	480	0.876	15	480	1.418	15	480	2.294
14:00 - 15:00	15	480	0.639	15	480	0.667	15	480	1.306
15:00 - 16:00	15	480	0.667	15	480	0.848	15	480	1.515
16:00 - 17:00	15	480	1.682	15	480	1.821	15	480	3.503
17:00 - 18:00	15	480	2.460	15	480	3.072	15	480	5.532
18:00 - 19:00	14	503	0.128	14	503	0.752	14	503	0.880
19:00 - 20:00	1	400	0.000	1	400	0.000	1	400	0.000
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			15.766			15.738			31.504

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.

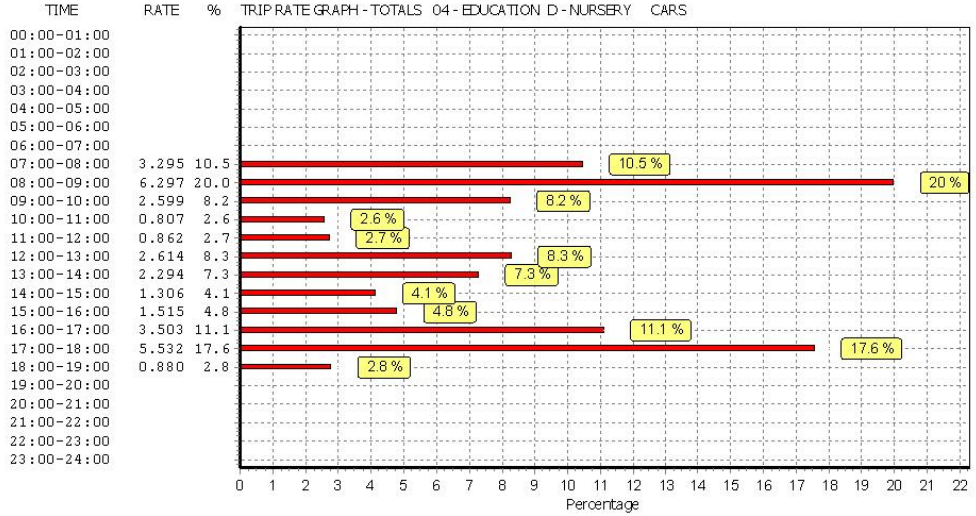
*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected 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.*



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



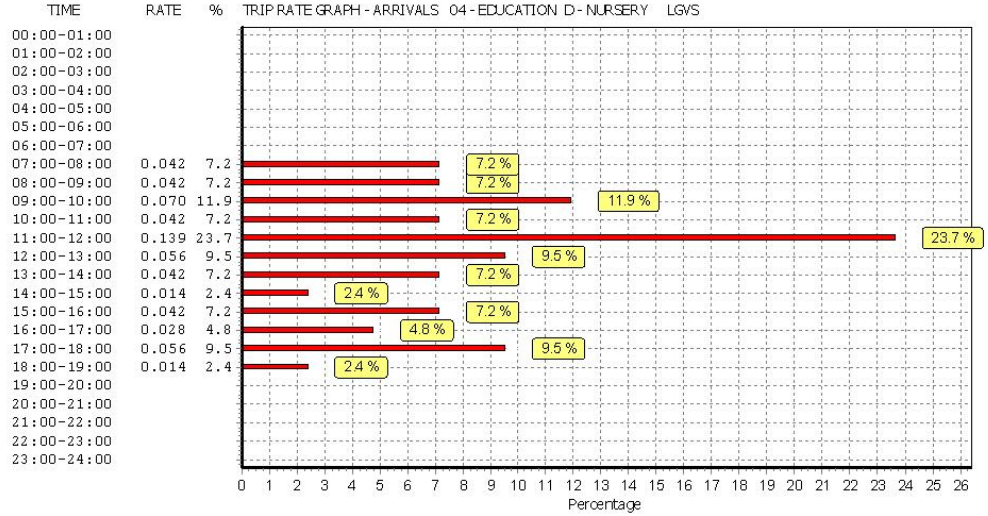
This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

TRIP RATE for Land Use 04 - EDUCATION/D - NURSERY
LGVS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

Time Range	ARRIVALS No. Days	ARRIVALS Ave. GFA	ARRIVALS Trip Rate	DEPARTURES No. Days	DEPARTURES Ave. GFA	DEPARTURES Trip Rate	TOTALS No. Days	TOTALS Ave. GFA	TOTALS Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	1	400	0.000	1	400	0.000	1	400	0.000
07:00 - 08:00	15	480	0.042	15	480	0.028	15	480	0.070
08:00 - 09:00	15	480	0.042	15	480	0.056	15	480	0.098
09:00 - 10:00	15	480	0.070	15	480	0.042	15	480	0.112
10:00 - 11:00	15	480	0.042	15	480	0.042	15	480	0.084
11:00 - 12:00	15	480	0.139	15	480	0.097	15	480	0.236
12:00 - 13:00	15	480	0.056	15	480	0.083	15	480	0.139
13:00 - 14:00	15	480	0.042	15	480	0.056	15	480	0.098
14:00 - 15:00	15	480	0.014	15	480	0.000	15	480	0.014
15:00 - 16:00	15	480	0.042	15	480	0.042	15	480	0.084
16:00 - 17:00	15	480	0.028	15	480	0.042	15	480	0.070
17:00 - 18:00	15	480	0.056	15	480	0.070	15	480	0.126
18:00 - 19:00	14	503	0.014	14	503	0.028	14	503	0.042
19:00 - 20:00	1	400	0.000	1	400	0.000	1	400	0.000
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.587			0.586			1.173

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.

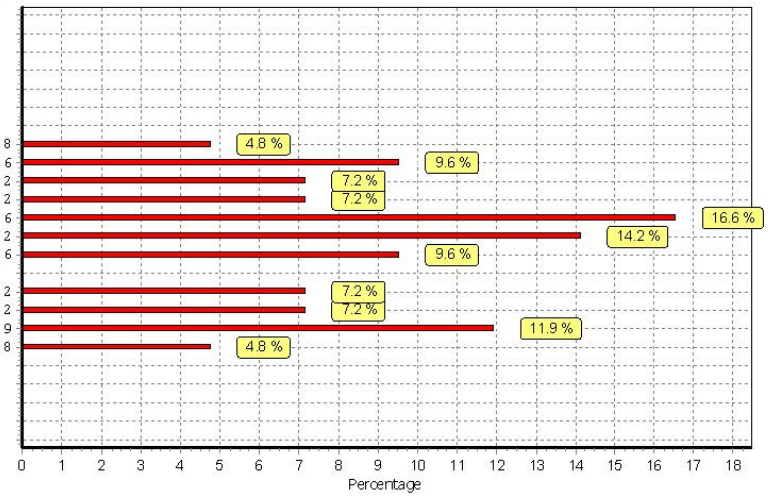
*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected 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.*



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

TRIP RATE GRAPH - DEPARTURES 04 - EDUCATION D - NURSERY LGVS

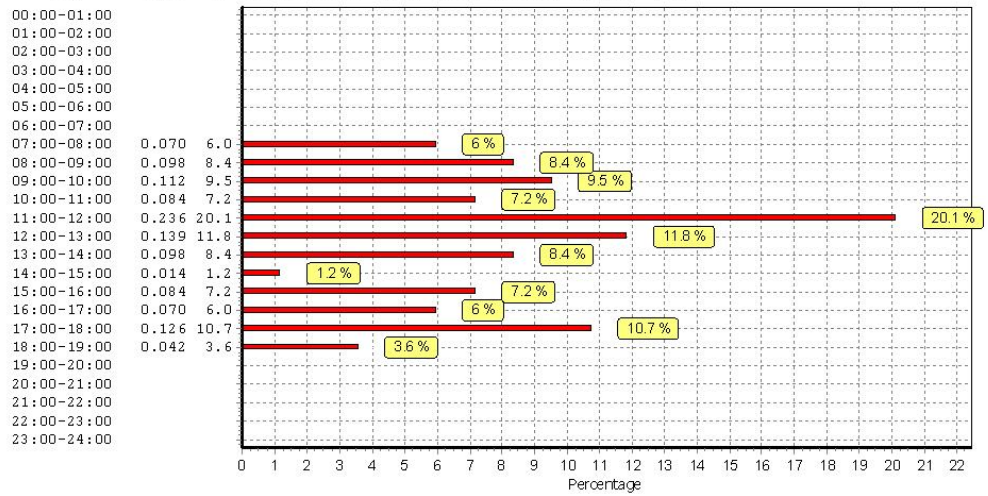
TIME	RATE	%
00:00-01:00		
01:00-02:00		
02:00-03:00		
03:00-04:00		
04:00-05:00		
05:00-06:00		
06:00-07:00		
07:00-08:00	0.028	4.8
08:00-09:00	0.056	9.6
09:00-10:00	0.042	7.2
10:00-11:00	0.042	7.2
11:00-12:00	0.097	16.6
12:00-13:00	0.083	14.2
13:00-14:00	0.056	9.6
14:00-15:00		
15:00-16:00	0.042	7.2
16:00-17:00	0.042	7.2
17:00-18:00	0.070	11.9
18:00-19:00	0.028	4.8
19:00-20:00		
20:00-21:00		
21:00-22:00		
22:00-23:00		
23:00-24:00		



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

TRIP RATE GRAPH - TOTALS 04 - EDUCATION D - NURSERY LGVS

TIME	RATE	%
00:00-01:00		
01:00-02:00		
02:00-03:00		
03:00-04:00		
04:00-05:00		
05:00-06:00		
06:00-07:00		
07:00-08:00	0.070	6.0
08:00-09:00	0.098	8.4
09:00-10:00	0.112	9.5
10:00-11:00	0.084	7.2
11:00-12:00	0.236	20.1
12:00-13:00	0.139	11.8
13:00-14:00	0.098	8.4
14:00-15:00	0.014	1.2
15:00-16:00	0.084	7.2
16:00-17:00	0.070	6.0
17:00-18:00	0.126	10.7
18:00-19:00	0.042	3.6
19:00-20:00		
20:00-21:00		
21:00-22:00		
22:00-23:00		
23:00-24:00		



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

Filtering Summary

Land Use	01/I	RETAIL/SHOPPING CENTRE - LOCAL SHOPS
Selected Trip Rate Calculation Parameter Range	210-84009 sqm GFA	
Actual Trip Rate Calculation Parameter Range	450-4052 sqm GFA	
Date Range	Minimum: 01/01/14	Maximum: 15/10/21
Parking Spaces Range	All Surveys Included	
Days of the week selected	Tuesday	3
	Wednesday	1
	Thursday	2
	Friday	4
	Saturday	1
	Sunday	2
Main Location Types selected	Suburban Area (PPS6 Out of Centre)	4
	Edge of Town	3
	Neighbourhood Centre (PPS6 Local Centre)	6
Population within 500m	All Surveys Included	
Population <1 Mile ranges selected	1,001 to 5,000	1
	5,001 to 10,000	1
	10,001 to 15,000	2
	15,001 to 20,000	1
	20,001 to 25,000	5
	25,001 to 50,000	3
Population <5 Mile ranges selected	25,001 to 50,000	1
	75,001 to 100,000	2
	100,001 to 125,000	1
	125,001 to 250,000	3
	250,001 to 500,000	4
	500,001 or More	2
Car Ownership <5 Mile ranges selected	0.6 to 1.0	6
	1.1 to 1.5	7
PTAL Rating	No PTAL Present	13

Calculation Reference: AUDIT-638801-220906-0919

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 01 - RETAIL
Category : I - SHOPPING CENTRE - LOCAL SHOPS
TOTAL VEHICLES

Selected regions and areas:

03	SOUTH WEST		
	BR	BRISTOL CITY	1 days
05	EAST MIDLANDS		
	LE	LEICESTERSHIRE	1 days
06	WEST MIDLANDS		
	WM	WEST MIDLANDS	1 days
	WO	WORCESTERSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE		
	SY	SOUTH YORKSHIRE	1 days
	WY	WEST YORKSHIRE	1 days
08	NORTH WEST		
	MS	MERSEYSIDE	1 days
09	NORTH		
	CB	CUMBRIA	1 days
	TW	TYNE & WEAR	1 days
11	SCOTLAND		
	SR	STIRLING	1 days
13	MUNSTER		
	CR	CORK	1 days
14	LEINSTER		
	WX	WEXFORD	1 days
15	GREATER DUBLIN		
	DL	DUBLIN	1 days

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

Primary Filtering selection:

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

Parameter: Gross floor area
Actual Range: 450 to 4052 (units: sqm)
Range Selected by User: 210 to 84009 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/14 to 15/10/21

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

Selected survey days:

Tuesday	3 days
Wednesday	1 days
Thursday	2 days
Friday	4 days
Saturday	1 days
Sunday	2 days

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

Selected survey types:

Manual count	13 days
Directional ATC Count	0 days

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

Selected Locations:

Suburban Area (PPS6 Out of Centre)	4
Edge of Town	3
Neighbourhood Centre (PPS6 Local Centre)	6

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	8
Retail Zone	2
Village	1
High Street	1
No Sub Category	1

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

Secondary Filtering selection:

Use Class:

n/a	13 days

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

Population within 500m Range:
All Surveys Included

Population within 1 mile:

1,001 to 5,000	1 days
5,001 to 10,000	1 days
10,001 to 15,000	2 days
15,001 to 20,000	1 days
20,001 to 25,000	5 days
25,001 to 50,000	3 days

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

Population within 5 miles:

25,001 to 50,000	1 days
75,001 to 100,000	2 days
100,001 to 125,000	1 days
125,001 to 250,000	3 days
250,001 to 500,000	4 days
500,001 or More	2 days

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

Car ownership within 5 miles:

0.6 to 1.0	6 days
1.1 to 1.5	7 days

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

Petrol filling station:

Included in the survey count	0 days
Excluded from count or no filling station	13 days

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

Travel Plan:

Yes	1 days
No	12 days

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

PTAL Rating:

No PTAL Present	13 days

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

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

LIST OF SITES relevant to selection parameters

Site(1):	BR-01-I-01	Gross floor area:	770 sqm
Development Name:	LOCAL SHOPS	Retail floor area:	635 sqm
Location:	BRISTOL		
Postcode:	BS14 0EW	No of Employees:	49
Main Location Type:	Neighbourhood Centre (PPS6 Local Centre)	Survey Date:	22/09/15
Sub-Location Type:	Residential Zone	Survey Day:	Tuesday
PTAL:	n/a	Parking Spaces:	22
Site(2):	CB-01-I-01	Gross floor area:	1325 sqm
Development Name:	LOCAL SHOPS	Retail floor area:	940 sqm
Location:	CARLISLE		
Postcode:	CA1 3QB	No of Employees:	82
Main Location Type:	Suburban Area (PPS6 Out of Centre)	Survey Date:	15/10/21
Sub-Location Type:	Residential Zone	Survey Day:	Friday
PTAL:	n/a	Parking Spaces:	74
Site(3):	CR-01-I-01	Gross floor area:	1575 sqm
Development Name:	LOCAL SHOPS	Retail floor area:	1260 sqm
Location:	CORK		
Postcode:		No of Employees:	55
Main Location Type:	Neighbourhood Centre (PPS6 Local Centre)	Survey Date:	23/03/18
Sub-Location Type:	Retail Zone	Survey Day:	Friday
PTAL:	n/a	Parking Spaces:	67
Site(4):	DL-01-I-07	Gross floor area:	1034 sqm
Development Name:	LOCAL SHOPS	Retail floor area:	498 sqm
Location:	DUBLIN		
Postcode:		No of Employees:	39
Main Location Type:	Suburban Area (PPS6 Out of Centre)	Survey Date:	01/10/14
Sub-Location Type:	No Sub Category	Survey Day:	Wednesday
PTAL:	n/a	Parking Spaces:	23
Site(5):	LE-01-I-02	Gross floor area:	550 sqm
Development Name:	LOCAL SHOPS	Retail floor area:	300 sqm
Location:	LEICESTER		
Postcode:	LE3 6UJ	No of Employees:	31
Main Location Type:	Edge of Town	Survey Date:	28/10/14
Sub-Location Type:	Residential Zone	Survey Day:	Tuesday
PTAL:	n/a	Parking Spaces:	33
Site(6):	MS-01-I-02	Gross floor area:	1230 sqm
Development Name:	LOCAL SHOPS	Retail floor area:	685 sqm
Location:	LIVERPOOL		
Postcode:	L36 2PA	No of Employees:	35
Main Location Type:	Suburban Area (PPS6 Out of Centre)	Survey Date:	25/04/21
Sub-Location Type:	Residential Zone	Survey Day:	Sunday
PTAL:	n/a	Parking Spaces:	23
Site(7):	SR-01-I-02	Gross floor area:	550 sqm
Development Name:	LOCAL SHOPS	Retail floor area:	370 sqm
Location:	STIRLING		
Postcode:	FK9 5LH	No of Employees:	57
Main Location Type:	Edge of Town	Survey Date:	26/06/14
Sub-Location Type:	Residential Zone	Survey Day:	Thursday
PTAL:	n/a	Parking Spaces:	1
Site(8):	SY-01-I-01	Gross floor area:	1645 sqm
Development Name:	LOCAL SHOPS	Retail floor area:	1300 sqm
Location:	DONCASTER		
Postcode:	DN4 6JG	No of Employees:	40
Main Location Type:	Neighbourhood Centre (PPS6 Local Centre)	Survey Date:	17/09/21
Sub-Location Type:	Residential Zone	Survey Day:	Friday
PTAL:	n/a	Parking Spaces:	40
Site(9):	TW-01-I-03	Gross floor area:	2700 sqm
Development Name:	LOCAL SHOPS	Retail floor area:	2000 sqm
Location:	WASHINGTON		
Postcode:	NE37 2SY	No of Employees:	170
Main Location Type:	Neighbourhood Centre (PPS6 Local Centre)	Survey Date:	24/05/19
Sub-Location Type:	High Street	Survey Day:	Friday
PTAL:	n/a	Parking Spaces:	46

LIST OF SITES relevant to selection parameters (Cont.)

Site(10):	WM-01-I-03	Gross floor area:	450 sqm
Development Name:	LOCAL SHOPS	Retail floor area:	365 sqm
Location:	BIRMINGHAM		
Postcode:	B31 2JR	No of Employees:	23
Main Location Type:	Edge of Town	Survey Date:	10/11/15
Sub-Location Type:	Retail Zone	Survey Day:	Tuesday
PTAL:	n/a	Parking Spaces:	29
Site(11):	WO-01-I-02	Gross floor area:	4052 sqm
Development Name:	LOCAL SHOPS	Retail floor area:	1975 sqm
Location:	WORCESTER		
Postcode:	WR4 9PA	No of Employees:	77
Main Location Type:	Neighbourhood Centre (PPS6 Local Centre)	Survey Date:	22/05/14
Sub-Location Type:	Residential Zone	Survey Day:	Thursday
PTAL:	n/a	Parking Spaces:	41
Site(12):	WX-01-I-01	Gross floor area:	3060 sqm
Development Name:	LOCAL SHOPS	Retail floor area:	2475 sqm
Location:	WEXFORD		
Postcode:		No of Employees:	66
Main Location Type:	Suburban Area (PPS6 Out of Centre)	Survey Date:	28/09/14
Sub-Location Type:	Residential Zone	Survey Day:	Sunday
PTAL:	n/a	Parking Spaces:	115
Site(13):	WY-01-I-01	Gross floor area:	676 sqm
Development Name:	LOCAL SHOPS	Retail floor area:	420 sqm
Location:	NEAR HALIFAX		
Postcode:	HX3 8LT	No of Employees:	60
Main Location Type:	Neighbourhood Centre (PPS6 Local Centre)	Survey Date:	03/05/14
Sub-Location Type:	Village	Survey Day:	Saturday
PTAL:	n/a	Parking Spaces:	30

TRIP RATE for Land Use 01 - RETAIL/I - SHOPPING CENTRE - LOCAL SHOPS
TOTAL VEHICLES
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	2	1485	1.582	2	1485	1.313	2	1485	2.895
07:00 - 08:00	12	1380	2.500	12	1380	2.380	12	1380	4.880
08:00 - 09:00	13	1509	3.104	13	1509	2.671	13	1509	5.775
09:00 - 10:00	13	1509	3.706	13	1509	3.364	13	1509	7.070
10:00 - 11:00	13	1509	4.200	13	1509	3.940	13	1509	8.140
11:00 - 12:00	13	1509	4.175	13	1509	4.083	13	1509	8.258
12:00 - 13:00	13	1509	5.036	13	1509	4.965	13	1509	10.001
13:00 - 14:00	13	1509	5.006	13	1509	5.098	13	1509	10.104
14:00 - 15:00	13	1509	4.466	13	1509	4.522	13	1509	8.988
15:00 - 16:00	13	1509	4.369	13	1509	4.573	13	1509	8.942
16:00 - 17:00	13	1509	4.695	13	1509	4.481	13	1509	9.176
17:00 - 18:00	13	1509	4.838	13	1509	5.093	13	1509	9.931
18:00 - 19:00	13	1509	4.068	13	1509	4.307	13	1509	8.375
19:00 - 20:00	13	1509	3.522	13	1509	3.614	13	1509	7.136
20:00 - 21:00	13	1509	2.365	13	1509	2.600	13	1509	4.965
21:00 - 22:00	11	1354	1.659	11	1354	1.914	11	1354	3.573
22:00 - 23:00	2	1278	0.744	2	1278	0.783	2	1278	1.527
23:00 - 24:00	1	1230	0.244	1	1230	0.650	1	1230	0.894
Total Rates:			60.279			60.351			120.630

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

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

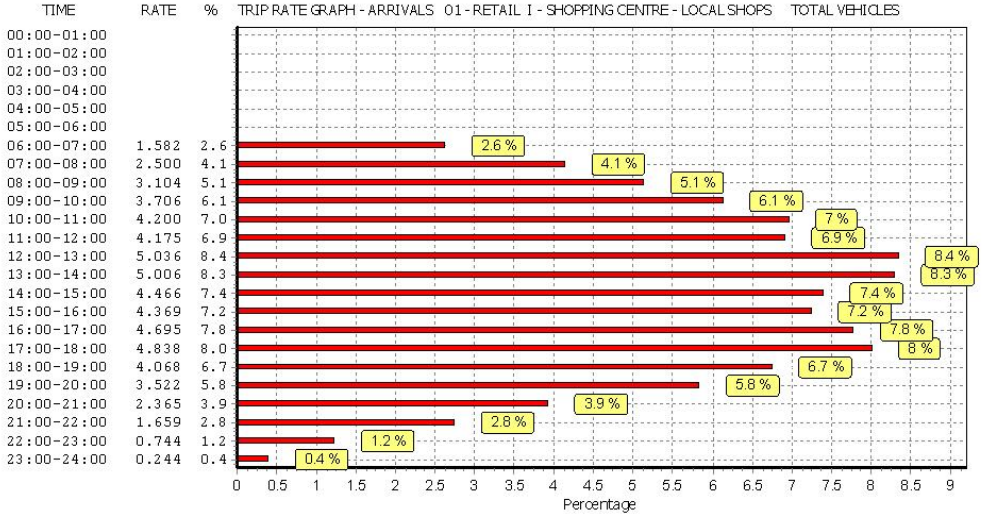
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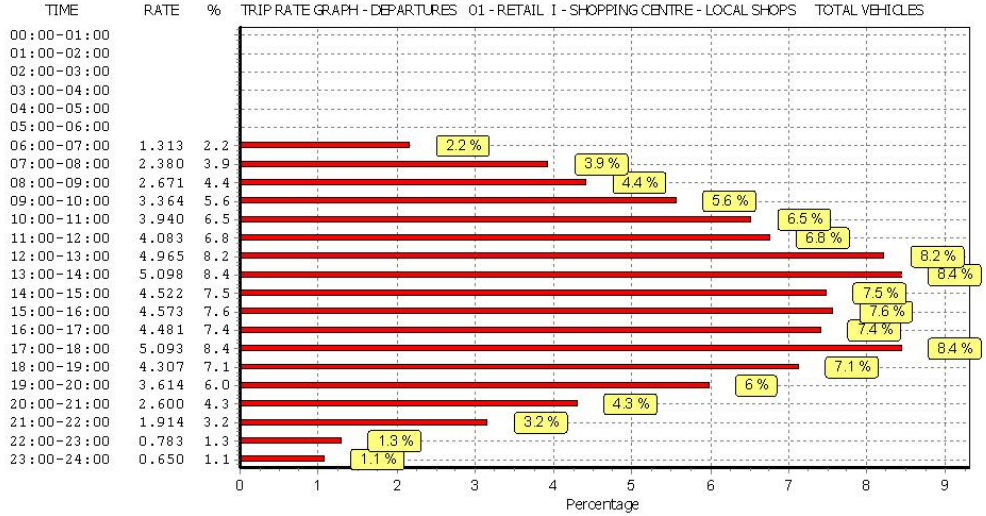
Parameter summary

Trip rate parameter range selected:	450 - 4052 (units: sqm)
Survey date date range:	01/01/14 - 15/10/21
Number of weekdays (Monday-Friday):	10
Number of Saturdays:	1
Number of Sundays:	2
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

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



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



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TRIP RATE for Land Use 01 - RETAIL/I - SHOPPING CENTRE - LOCAL SHOPS
TAXIS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

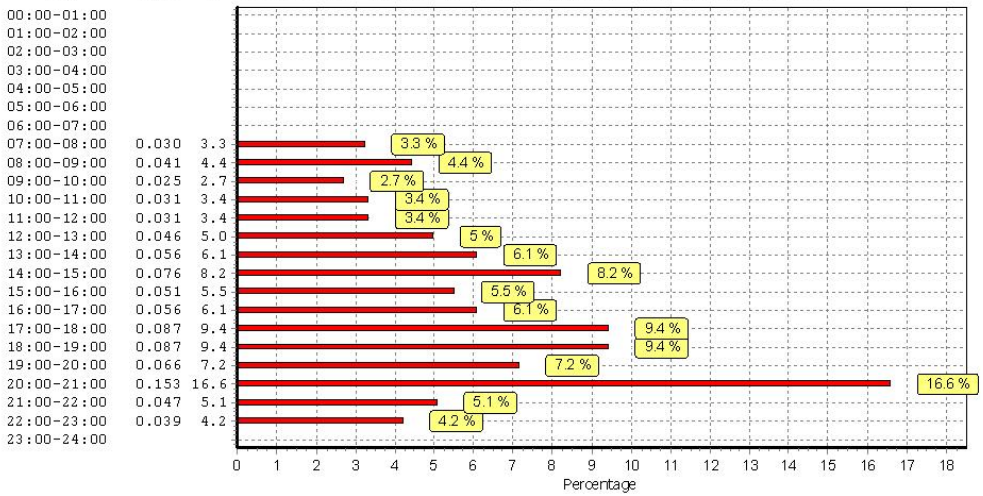
	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	2	1485	0.000	2	1485	0.000	2	1485	0.000
07:00 - 08:00	12	1380	0.030	12	1380	0.030	12	1380	0.060
08:00 - 09:00	13	1509	0.041	13	1509	0.041	13	1509	0.082
09:00 - 10:00	13	1509	0.025	13	1509	0.025	13	1509	0.050
10:00 - 11:00	13	1509	0.031	13	1509	0.015	13	1509	0.046
11:00 - 12:00	13	1509	0.031	13	1509	0.046	13	1509	0.077
12:00 - 13:00	13	1509	0.046	13	1509	0.041	13	1509	0.087
13:00 - 14:00	13	1509	0.056	13	1509	0.051	13	1509	0.107
14:00 - 15:00	13	1509	0.076	13	1509	0.076	13	1509	0.152
15:00 - 16:00	13	1509	0.051	13	1509	0.051	13	1509	0.102
16:00 - 17:00	13	1509	0.056	13	1509	0.061	13	1509	0.117
17:00 - 18:00	13	1509	0.087	13	1509	0.082	13	1509	0.169
18:00 - 19:00	13	1509	0.087	13	1509	0.076	13	1509	0.163
19:00 - 20:00	13	1509	0.066	13	1509	0.076	13	1509	0.142
20:00 - 21:00	13	1509	0.153	13	1509	0.082	13	1509	0.235
21:00 - 22:00	11	1354	0.047	11	1354	0.121	11	1354	0.168
22:00 - 23:00	2	1278	0.039	2	1278	0.039	2	1278	0.078
23:00 - 24:00	1	1230	0.000	1	1230	0.000	1	1230	0.000
Total Rates:			0.922			0.913			1.835

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

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TRIP RATE GRAPH - ARRIVALS 01 - RETAIL I - SHOPPING CENTRE - LOCAL SHOPS TAXIS

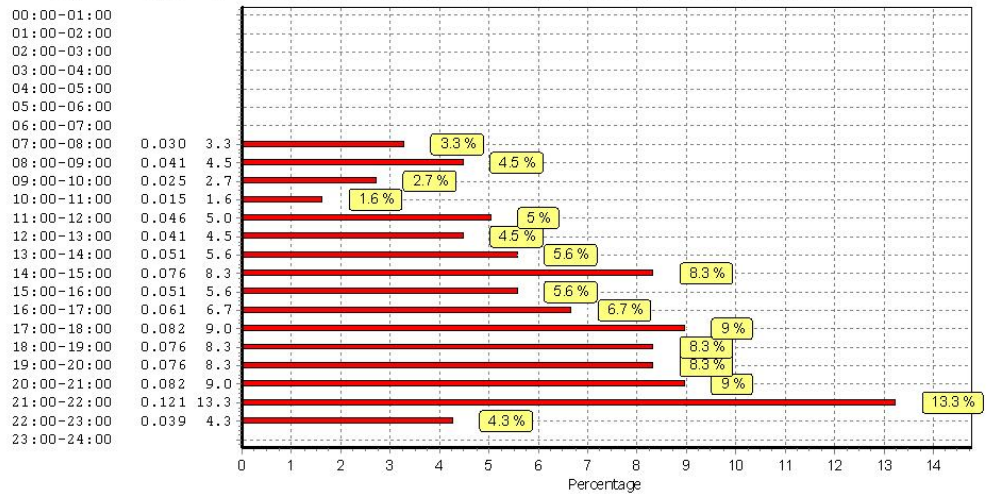
TIME	RATE	%
00:00-01:00		
01:00-02:00		
02:00-03:00		
03:00-04:00		
04:00-05:00		
05:00-06:00		
06:00-07:00		
07:00-08:00	0.030	3.3
08:00-09:00	0.041	4.4
09:00-10:00	0.025	2.7
10:00-11:00	0.031	3.4
11:00-12:00	0.031	3.4
12:00-13:00	0.046	5.0
13:00-14:00	0.056	6.1
14:00-15:00	0.076	8.2
15:00-16:00	0.051	5.5
16:00-17:00	0.056	6.1
17:00-18:00	0.087	9.4
18:00-19:00	0.087	9.4
19:00-20:00	0.066	7.2
20:00-21:00	0.153	16.6
21:00-22:00	0.047	5.1
22:00-23:00	0.039	4.2
23:00-24:00		



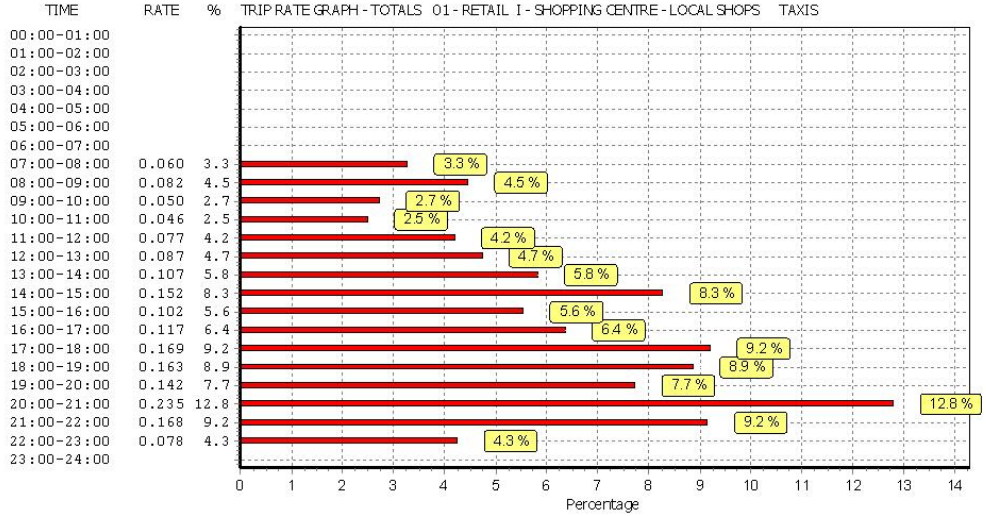
This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

TRIP RATE GRAPH - DEPARTURES 01 - RETAIL I - SHOPPING CENTRE - LOCAL SHOPS TAXIS

TIME	RATE	%
00:00-01:00		
01:00-02:00		
02:00-03:00		
03:00-04:00		
04:00-05:00		
05:00-06:00		
06:00-07:00		
07:00-08:00	0.030	3.3
08:00-09:00	0.041	4.5
09:00-10:00	0.025	2.7
10:00-11:00	0.015	1.6
11:00-12:00	0.046	5.0
12:00-13:00	0.041	4.5
13:00-14:00	0.051	5.6
14:00-15:00	0.076	8.3
15:00-16:00	0.051	5.6
16:00-17:00	0.061	6.7
17:00-18:00	0.082	9.0
18:00-19:00	0.076	8.3
19:00-20:00	0.076	8.3
20:00-21:00	0.082	9.0
21:00-22:00	0.121	13.3
22:00-23:00	0.039	4.3
23:00-24:00		



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



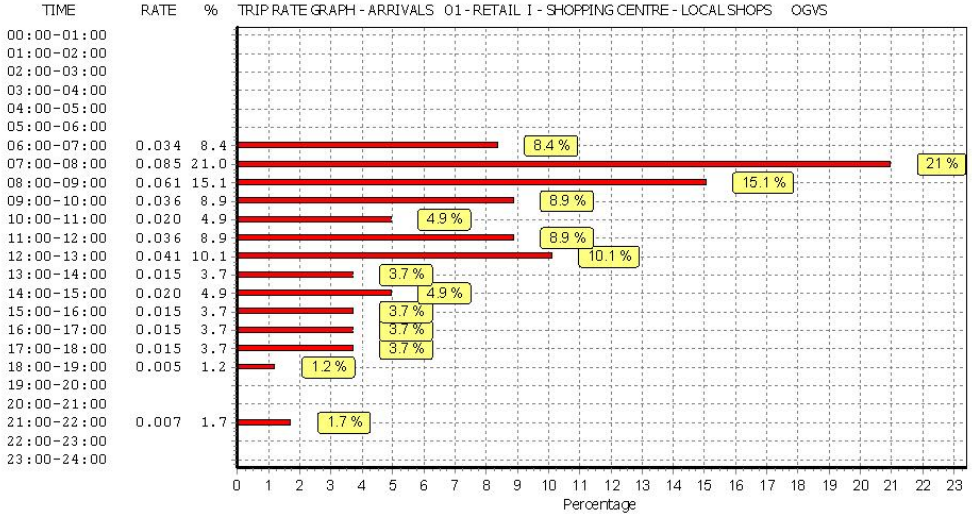
This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

TRIP RATE for Land Use 01 - RETAIL/I - SHOPPING CENTRE - LOCAL SHOPS
OGVS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

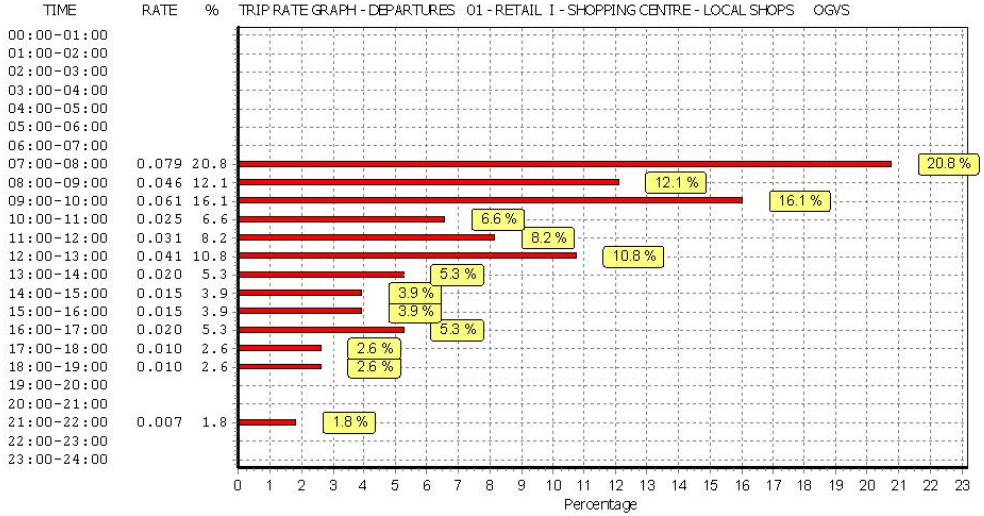
	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	2	1485	0.034	2	1485	0.000	2	1485	0.034
07:00 - 08:00	12	1380	0.085	12	1380	0.079	12	1380	0.164
08:00 - 09:00	13	1509	0.061	13	1509	0.046	13	1509	0.107
09:00 - 10:00	13	1509	0.036	13	1509	0.061	13	1509	0.097
10:00 - 11:00	13	1509	0.020	13	1509	0.025	13	1509	0.045
11:00 - 12:00	13	1509	0.036	13	1509	0.031	13	1509	0.067
12:00 - 13:00	13	1509	0.041	13	1509	0.041	13	1509	0.082
13:00 - 14:00	13	1509	0.015	13	1509	0.020	13	1509	0.035
14:00 - 15:00	13	1509	0.020	13	1509	0.015	13	1509	0.035
15:00 - 16:00	13	1509	0.015	13	1509	0.015	13	1509	0.030
16:00 - 17:00	13	1509	0.015	13	1509	0.020	13	1509	0.035
17:00 - 18:00	13	1509	0.015	13	1509	0.010	13	1509	0.025
18:00 - 19:00	13	1509	0.005	13	1509	0.010	13	1509	0.015
19:00 - 20:00	13	1509	0.000	13	1509	0.000	13	1509	0.000
20:00 - 21:00	13	1509	0.000	13	1509	0.000	13	1509	0.000
21:00 - 22:00	11	1354	0.007	11	1354	0.007	11	1354	0.014
22:00 - 23:00	2	1278	0.000	2	1278	0.000	2	1278	0.000
23:00 - 24:00	1	1230	0.000	1	1230	0.000	1	1230	0.000
Total Rates:			0.405			0.380			0.785

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.

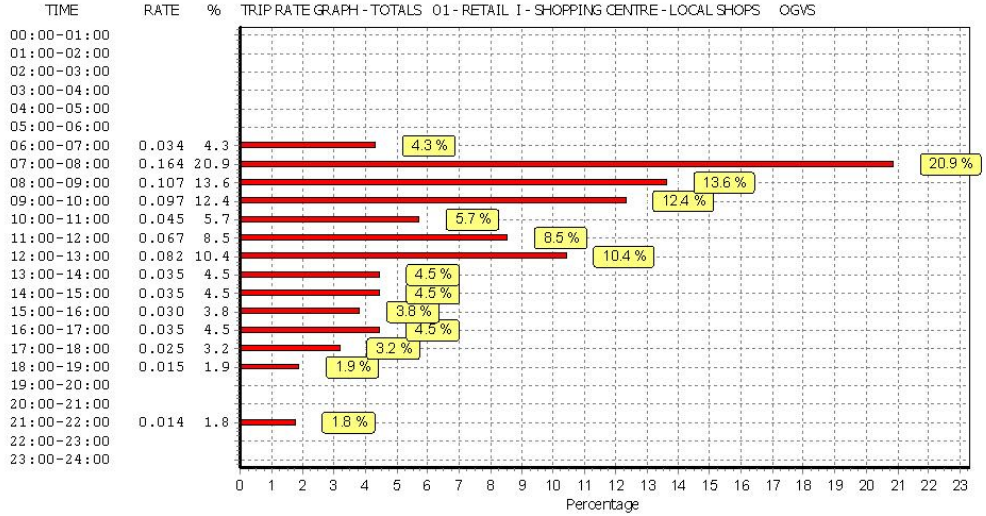
*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected 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.*



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



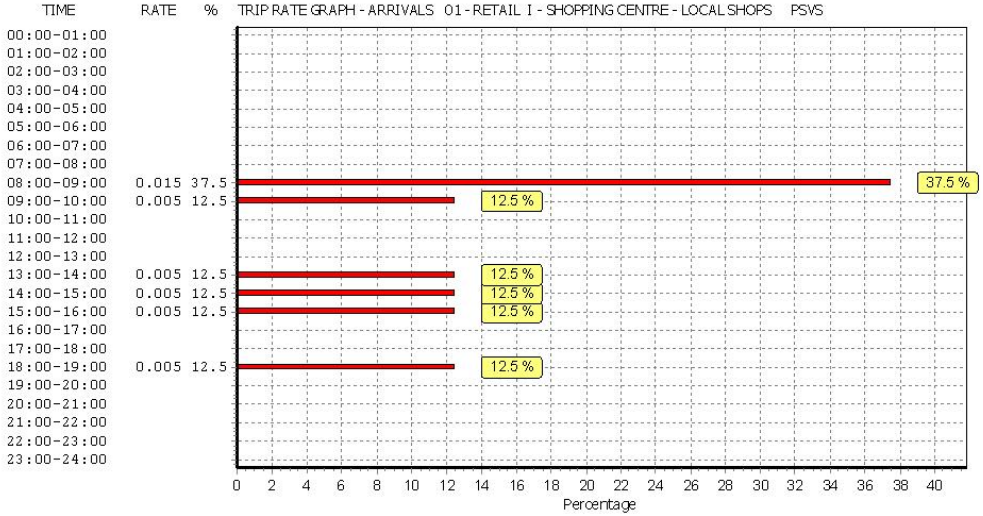
This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

TRIP RATE for Land Use 01 - RETAIL/I - SHOPPING CENTRE - LOCAL SHOPS
PSVS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

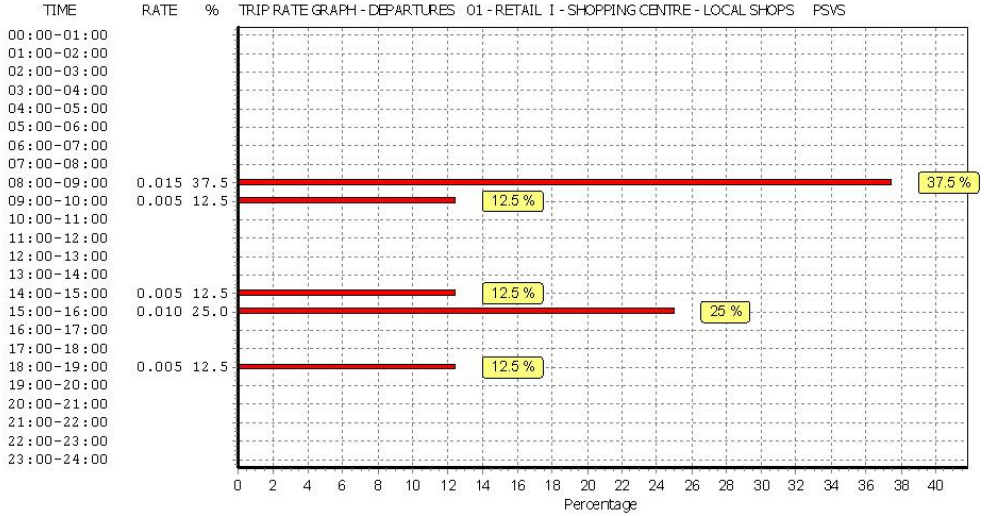
	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	2	1485	0.000	2	1485	0.000	2	1485	0.000
07:00 - 08:00	12	1380	0.000	12	1380	0.000	12	1380	0.000
08:00 - 09:00	13	1509	0.015	13	1509	0.015	13	1509	0.030
09:00 - 10:00	13	1509	0.005	13	1509	0.005	13	1509	0.010
10:00 - 11:00	13	1509	0.000	13	1509	0.000	13	1509	0.000
11:00 - 12:00	13	1509	0.000	13	1509	0.000	13	1509	0.000
12:00 - 13:00	13	1509	0.000	13	1509	0.000	13	1509	0.000
13:00 - 14:00	13	1509	0.005	13	1509	0.000	13	1509	0.005
14:00 - 15:00	13	1509	0.005	13	1509	0.005	13	1509	0.010
15:00 - 16:00	13	1509	0.005	13	1509	0.010	13	1509	0.015
16:00 - 17:00	13	1509	0.000	13	1509	0.000	13	1509	0.000
17:00 - 18:00	13	1509	0.000	13	1509	0.000	13	1509	0.000
18:00 - 19:00	13	1509	0.005	13	1509	0.005	13	1509	0.010
19:00 - 20:00	13	1509	0.000	13	1509	0.000	13	1509	0.000
20:00 - 21:00	13	1509	0.000	13	1509	0.000	13	1509	0.000
21:00 - 22:00	11	1354	0.000	11	1354	0.000	11	1354	0.000
22:00 - 23:00	2	1278	0.000	2	1278	0.000	2	1278	0.000
23:00 - 24:00	1	1230	0.000	1	1230	0.000	1	1230	0.000
Total Rates:			0.040			0.040			0.080

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

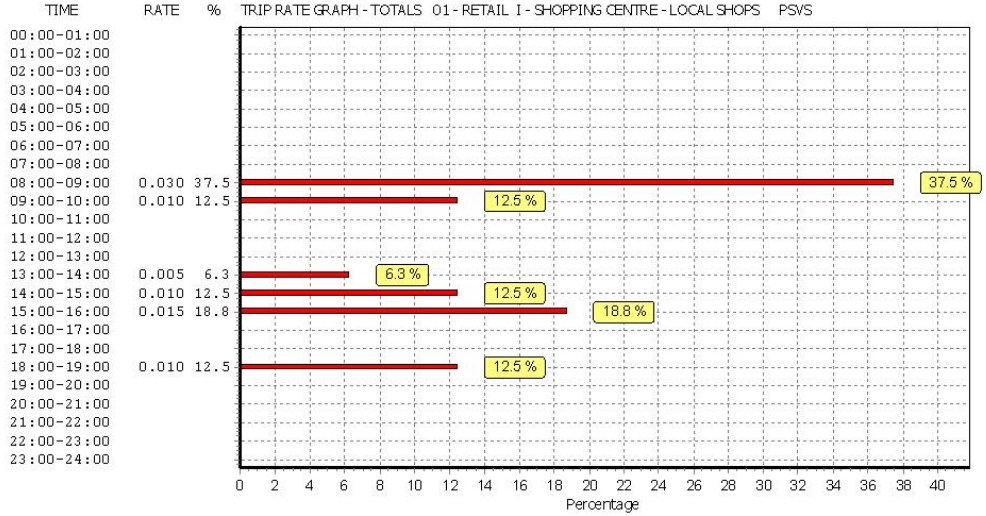
*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected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



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

TRIP RATE for Land Use 01 - RETAIL/I - SHOPPING CENTRE - LOCAL SHOPS
CYCLISTS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

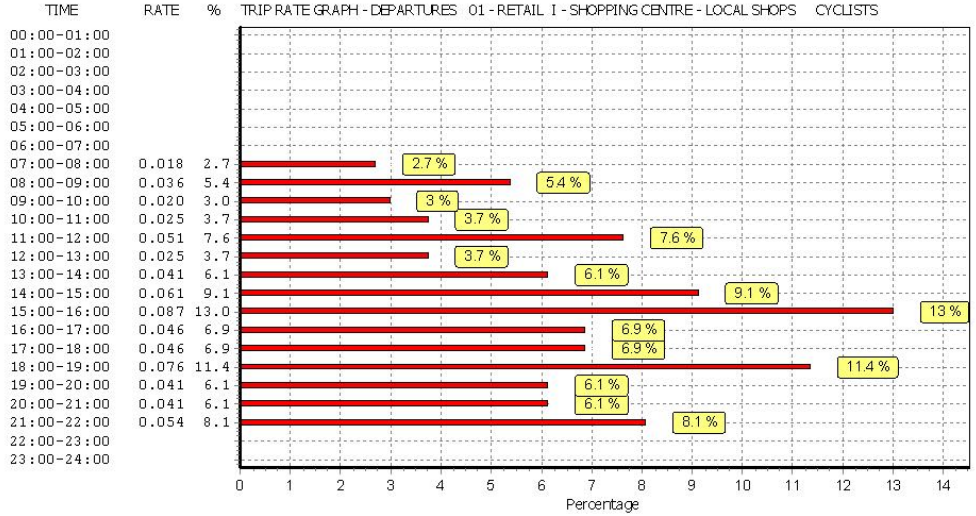
	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	2	1485	0.034	2	1485	0.000	2	1485	0.034
07:00 - 08:00	12	1380	0.024	12	1380	0.018	12	1380	0.042
08:00 - 09:00	13	1509	0.036	13	1509	0.036	13	1509	0.072
09:00 - 10:00	13	1509	0.036	13	1509	0.020	13	1509	0.056
10:00 - 11:00	13	1509	0.025	13	1509	0.025	13	1509	0.050
11:00 - 12:00	13	1509	0.041	13	1509	0.051	13	1509	0.092
12:00 - 13:00	13	1509	0.031	13	1509	0.025	13	1509	0.056
13:00 - 14:00	13	1509	0.041	13	1509	0.041	13	1509	0.082
14:00 - 15:00	13	1509	0.071	13	1509	0.061	13	1509	0.132
15:00 - 16:00	13	1509	0.071	13	1509	0.087	13	1509	0.158
16:00 - 17:00	13	1509	0.041	13	1509	0.046	13	1509	0.087
17:00 - 18:00	13	1509	0.056	13	1509	0.046	13	1509	0.102
18:00 - 19:00	13	1509	0.082	13	1509	0.076	13	1509	0.158
19:00 - 20:00	13	1509	0.046	13	1509	0.041	13	1509	0.087
20:00 - 21:00	13	1509	0.056	13	1509	0.041	13	1509	0.097
21:00 - 22:00	11	1354	0.040	11	1354	0.054	11	1354	0.094
22:00 - 23:00	2	1278	0.039	2	1278	0.000	2	1278	0.039
23:00 - 24:00	1	1230	0.000	1	1230	0.000	1	1230	0.000
Total Rates:			0.770			0.668			1.438

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

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



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

TRIP RATE for Land Use 01 - RETAIL/I - SHOPPING CENTRE - LOCAL SHOPS
CARS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

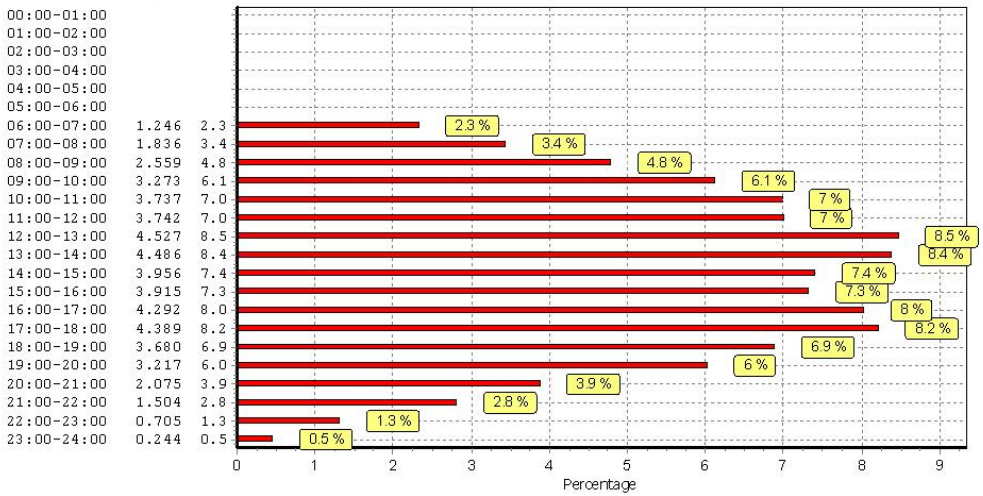
	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	2	1485	1.246	2	1485	1.044	2	1485	2.290
07:00 - 08:00	12	1380	1.836	12	1380	1.752	12	1380	3.588
08:00 - 09:00	13	1509	2.559	13	1509	2.146	13	1509	4.705
09:00 - 10:00	13	1509	3.273	13	1509	2.962	13	1509	6.235
10:00 - 11:00	13	1509	3.737	13	1509	3.477	13	1509	7.214
11:00 - 12:00	13	1509	3.742	13	1509	3.614	13	1509	7.356
12:00 - 13:00	13	1509	4.527	13	1509	4.491	13	1509	9.018
13:00 - 14:00	13	1509	4.486	13	1509	4.598	13	1509	9.084
14:00 - 15:00	13	1509	3.956	13	1509	3.997	13	1509	7.953
15:00 - 16:00	13	1509	3.915	13	1509	4.109	13	1509	8.024
16:00 - 17:00	13	1509	4.292	13	1509	4.063	13	1509	8.355
17:00 - 18:00	13	1509	4.389	13	1509	4.618	13	1509	9.007
18:00 - 19:00	13	1509	3.680	13	1509	3.951	13	1509	7.631
19:00 - 20:00	13	1509	3.217	13	1509	3.298	13	1509	6.515
20:00 - 21:00	13	1509	2.075	13	1509	2.350	13	1509	4.425
21:00 - 22:00	11	1354	1.504	11	1354	1.646	11	1354	3.150
22:00 - 23:00	2	1278	0.705	2	1278	0.665	2	1278	1.370
23:00 - 24:00	1	1230	0.244	1	1230	0.650	1	1230	0.894
Total Rates:			53.383			53.431			106.814

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

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

TRIP RATE GRAPH - ARRIVALS 01 - RETAIL I - SHOPPING CENTRE - LOCAL SHOPS CARS

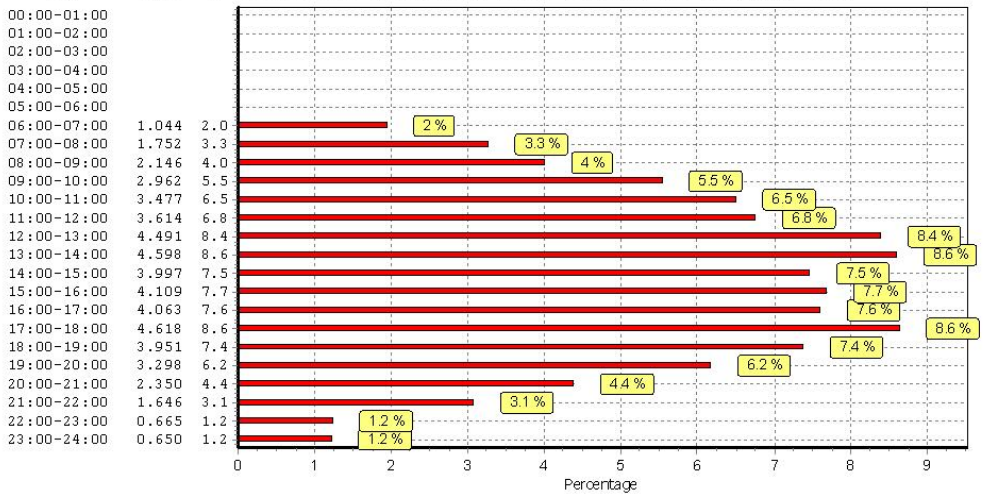
TIME	RATE	%
00:00-01:00		
01:00-02:00		
02:00-03:00		
03:00-04:00		
04:00-05:00		
05:00-06:00		
06:00-07:00	1.246	2.3
07:00-08:00	1.836	3.4
08:00-09:00	2.559	4.8
09:00-10:00	3.273	6.1
10:00-11:00	3.737	7.0
11:00-12:00	3.742	7.0
12:00-13:00	4.527	8.5
13:00-14:00	4.486	8.4
14:00-15:00	3.956	7.4
15:00-16:00	3.915	7.3
16:00-17:00	4.292	8.0
17:00-18:00	4.389	8.2
18:00-19:00	3.680	6.9
19:00-20:00	3.217	6.0
20:00-21:00	2.075	3.9
21:00-22:00	1.504	2.8
22:00-23:00	0.705	1.3
23:00-24:00	0.244	0.5



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

TRIP RATE GRAPH - DEPARTURES 01 - RETAIL I - SHOPPING CENTRE - LOCAL SHOPS CARS

TIME	RATE	%
00:00-01:00		
01:00-02:00		
02:00-03:00		
03:00-04:00		
04:00-05:00		
05:00-06:00		
06:00-07:00	1.044	2.0
07:00-08:00	1.752	3.3
08:00-09:00	2.146	4.0
09:00-10:00	2.962	5.5
10:00-11:00	3.477	6.5
11:00-12:00	3.614	6.8
12:00-13:00	4.491	8.4
13:00-14:00	4.598	8.6
14:00-15:00	3.997	7.5
15:00-16:00	4.109	7.7
16:00-17:00	4.063	7.6
17:00-18:00	4.618	8.6
18:00-19:00	3.951	7.4
19:00-20:00	3.298	6.2
20:00-21:00	2.350	4.4
21:00-22:00	1.646	3.1
22:00-23:00	0.665	1.2
23:00-24:00	0.650	1.2



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

TRIP RATE for Land Use 01 - RETAIL/I - SHOPPING CENTRE - LOCAL SHOPS
LGVS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

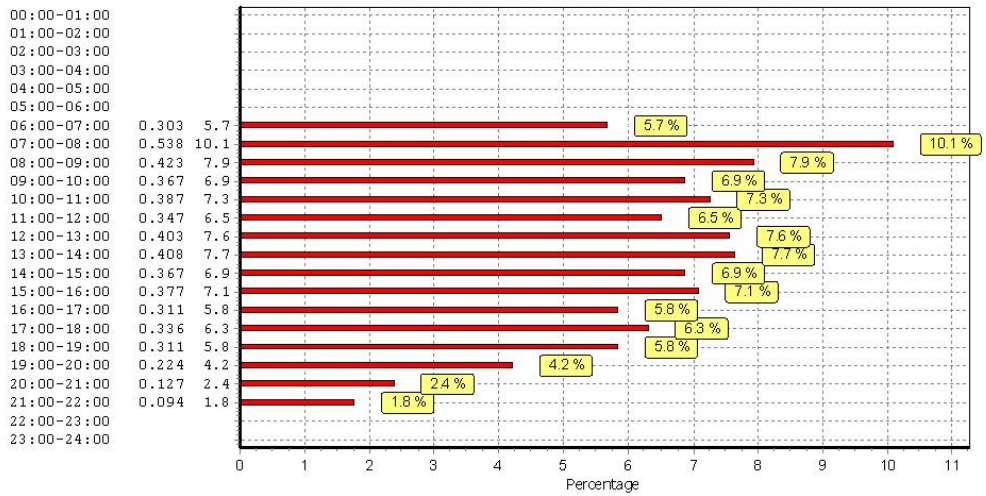
	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	2	1485	0.303	2	1485	0.269	2	1485	0.572
07:00 - 08:00	12	1380	0.538	12	1380	0.507	12	1380	1.045
08:00 - 09:00	13	1509	0.423	13	1509	0.418	13	1509	0.841
09:00 - 10:00	13	1509	0.367	13	1509	0.306	13	1509	0.673
10:00 - 11:00	13	1509	0.387	13	1509	0.403	13	1509	0.790
11:00 - 12:00	13	1509	0.347	13	1509	0.377	13	1509	0.724
12:00 - 13:00	13	1509	0.403	13	1509	0.367	13	1509	0.770
13:00 - 14:00	13	1509	0.408	13	1509	0.398	13	1509	0.806
14:00 - 15:00	13	1509	0.367	13	1509	0.393	13	1509	0.760
15:00 - 16:00	13	1509	0.377	13	1509	0.372	13	1509	0.749
16:00 - 17:00	13	1509	0.311	13	1509	0.321	13	1509	0.632
17:00 - 18:00	13	1509	0.336	13	1509	0.372	13	1509	0.708
18:00 - 19:00	13	1509	0.311	13	1509	0.250	13	1509	0.561
19:00 - 20:00	13	1509	0.224	13	1509	0.234	13	1509	0.458
20:00 - 21:00	13	1509	0.127	13	1509	0.158	13	1509	0.285
21:00 - 22:00	11	1354	0.094	11	1354	0.134	11	1354	0.228
22:00 - 23:00	2	1278	0.000	2	1278	0.039	2	1278	0.039
23:00 - 24:00	1	1230	0.000	1	1230	0.000	1	1230	0.000
Total Rates:			5.323			5.318			10.641

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

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

TRIP RATE GRAPH - ARRIVALS 01 - RETAIL I - SHOPPING CENTRE - LOCAL SHOPS LGVS

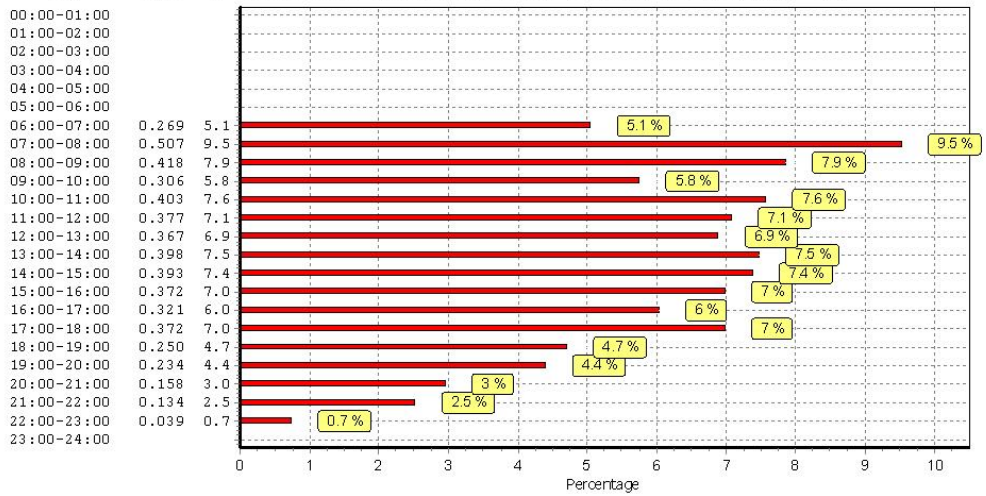
TIME	RATE	%
00:00-01:00		
01:00-02:00		
02:00-03:00		
03:00-04:00		
04:00-05:00		
05:00-06:00		
06:00-07:00	0.303	5.7
07:00-08:00	0.538	10.1
08:00-09:00	0.423	7.9
09:00-10:00	0.367	6.9
10:00-11:00	0.387	7.3
11:00-12:00	0.347	6.5
12:00-13:00	0.403	7.6
13:00-14:00	0.408	7.7
14:00-15:00	0.367	6.9
15:00-16:00	0.377	7.1
16:00-17:00	0.311	5.8
17:00-18:00	0.336	6.3
18:00-19:00	0.311	5.8
19:00-20:00	0.224	4.2
20:00-21:00	0.127	2.4
21:00-22:00	0.094	1.8
22:00-23:00		
23:00-24:00		



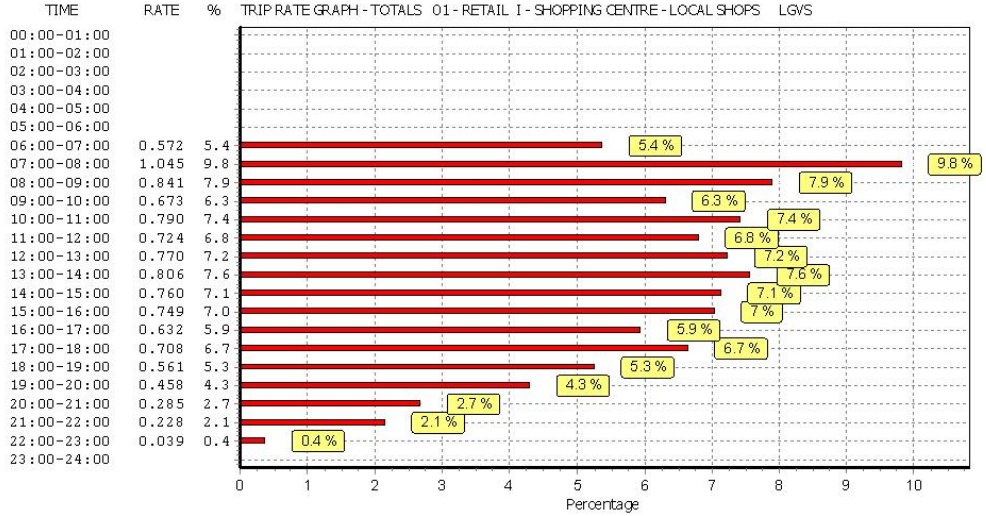
This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

TRIP RATE GRAPH - DEPARTURES 01 - RETAIL I - SHOPPING CENTRE - LOCAL SHOPS LGVS

TIME	RATE	%
00:00-01:00		
01:00-02:00		
02:00-03:00		
03:00-04:00		
04:00-05:00		
05:00-06:00		
06:00-07:00	0.269	5.1
07:00-08:00	0.507	9.5
08:00-09:00	0.418	7.9
09:00-10:00	0.306	5.8
10:00-11:00	0.403	7.6
11:00-12:00	0.377	7.1
12:00-13:00	0.367	6.9
13:00-14:00	0.398	7.5
14:00-15:00	0.393	7.4
15:00-16:00	0.372	7.0
16:00-17:00	0.321	6.0
17:00-18:00	0.372	7.0
18:00-19:00	0.250	4.7
19:00-20:00	0.234	4.4
20:00-21:00	0.158	3.0
21:00-22:00	0.134	2.5
22:00-23:00	0.039	0.7
23:00-24:00		



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



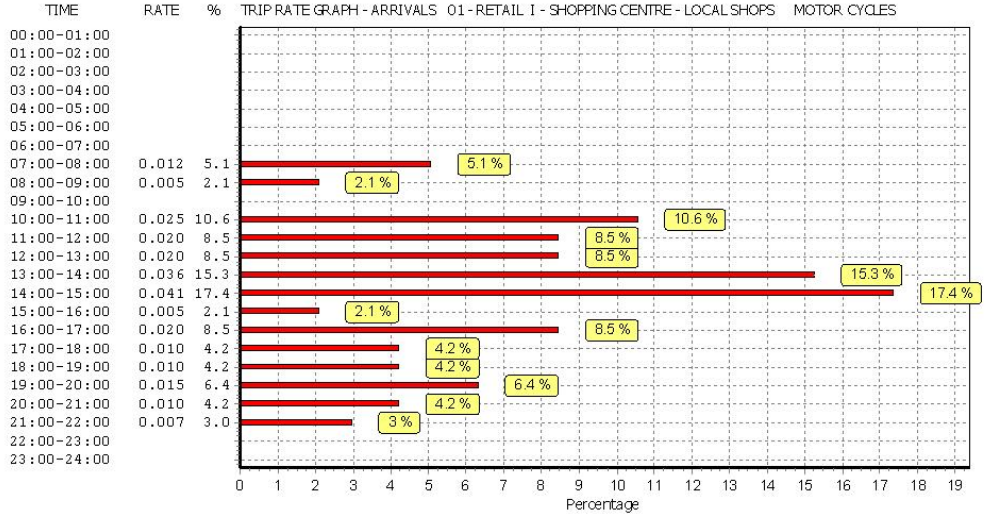
This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

TRIP RATE for Land Use 01 - RETAIL/I - SHOPPING CENTRE - LOCAL SHOPS
MOTOR CYCLES
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

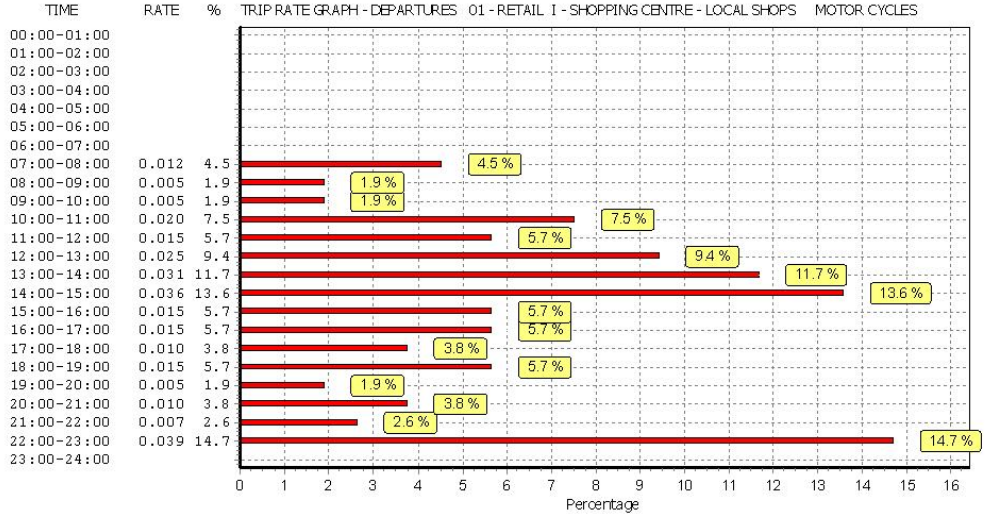
	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	2	1485	0.000	2	1485	0.000	2	1485	0.000
07:00 - 08:00	12	1380	0.012	12	1380	0.012	12	1380	0.024
08:00 - 09:00	13	1509	0.005	13	1509	0.005	13	1509	0.010
09:00 - 10:00	13	1509	0.000	13	1509	0.005	13	1509	0.005
10:00 - 11:00	13	1509	0.025	13	1509	0.020	13	1509	0.045
11:00 - 12:00	13	1509	0.020	13	1509	0.015	13	1509	0.035
12:00 - 13:00	13	1509	0.020	13	1509	0.025	13	1509	0.045
13:00 - 14:00	13	1509	0.036	13	1509	0.031	13	1509	0.067
14:00 - 15:00	13	1509	0.041	13	1509	0.036	13	1509	0.077
15:00 - 16:00	13	1509	0.005	13	1509	0.015	13	1509	0.020
16:00 - 17:00	13	1509	0.020	13	1509	0.015	13	1509	0.035
17:00 - 18:00	13	1509	0.010	13	1509	0.010	13	1509	0.020
18:00 - 19:00	13	1509	0.010	13	1509	0.015	13	1509	0.025
19:00 - 20:00	13	1509	0.015	13	1509	0.005	13	1509	0.020
20:00 - 21:00	13	1509	0.010	13	1509	0.010	13	1509	0.020
21:00 - 22:00	11	1354	0.007	11	1354	0.007	11	1354	0.014
22:00 - 23:00	2	1278	0.000	2	1278	0.039	2	1278	0.039
23:00 - 24:00	1	1230	0.000	1	1230	0.000	1	1230	0.000
Total Rates:			0.236			0.265			0.501

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.

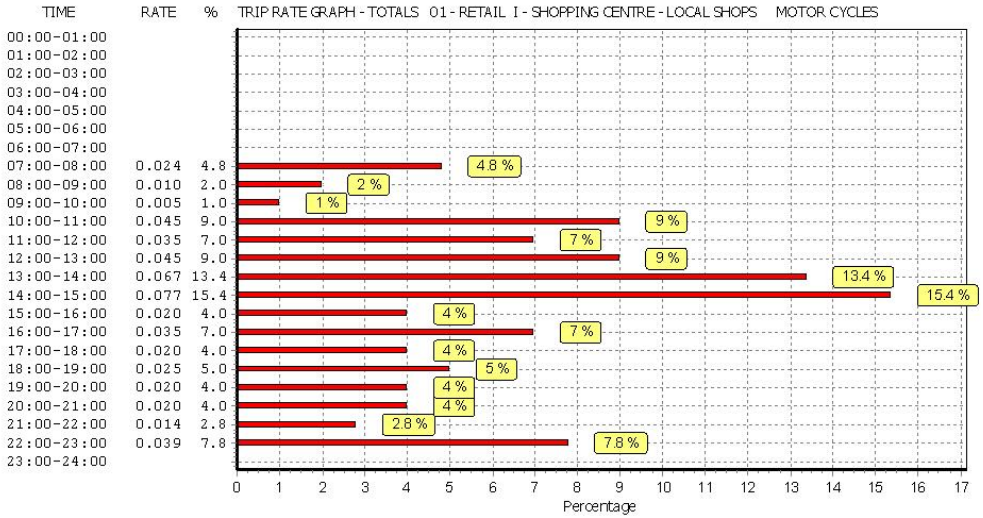
*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected 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.*



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

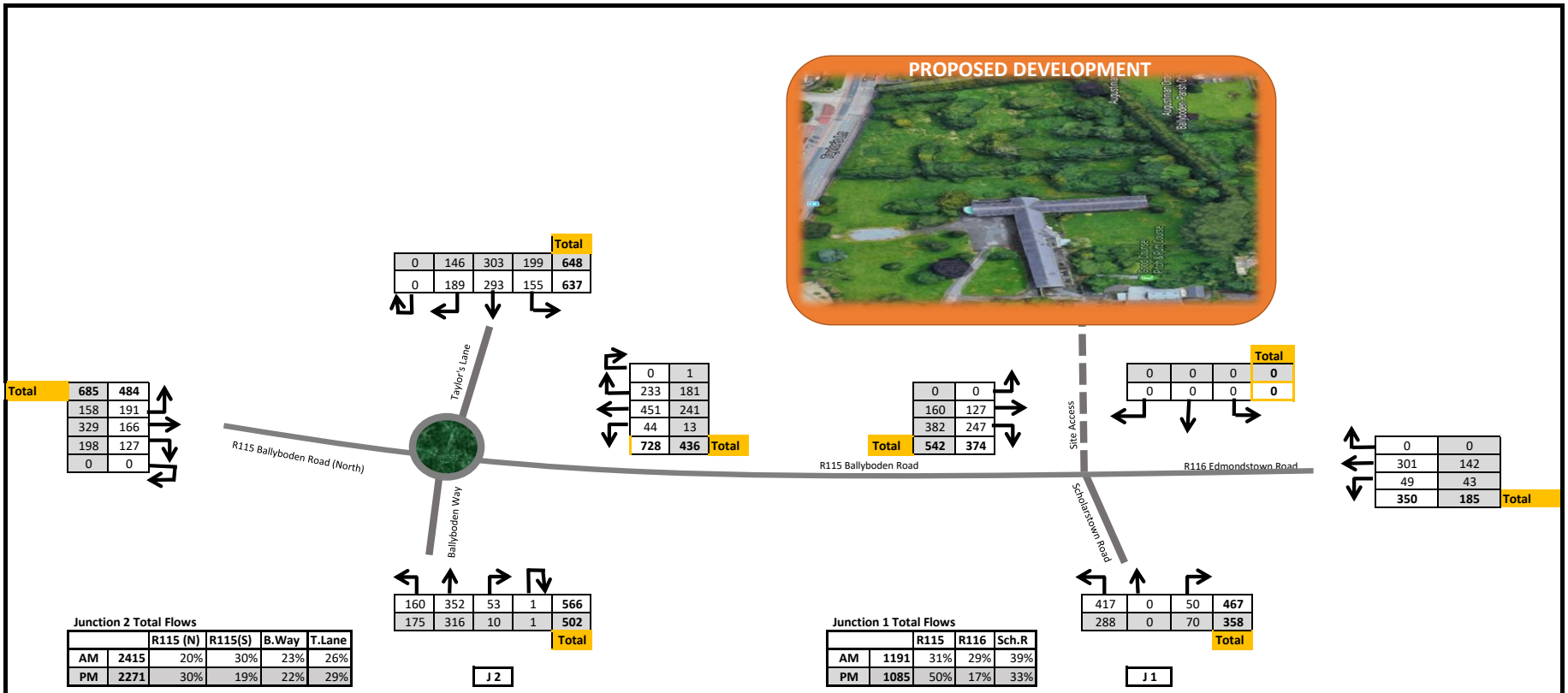


This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

Appendix B : Traffic Flow Diagrams



Junction 2 Total Flows

		R115 (N)	R115(S)	B.Way	T.Lane
AM	2415	20%	30%	23%	26%
PM	2271	30%	19%	22%	29%

Junction 1 Total Flows

		R115	R116	Sch.R
AM	1191	31%	29%	39%
PM	1085	50%	17%	33%

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website: www.dbfl.ie

Project :
Proposed Residential Development at Taylor's Lane, Ballyboden, Dublin 16

DRG. Title :
Network Traffic Flows - Vehicles
2022 Base Scenario

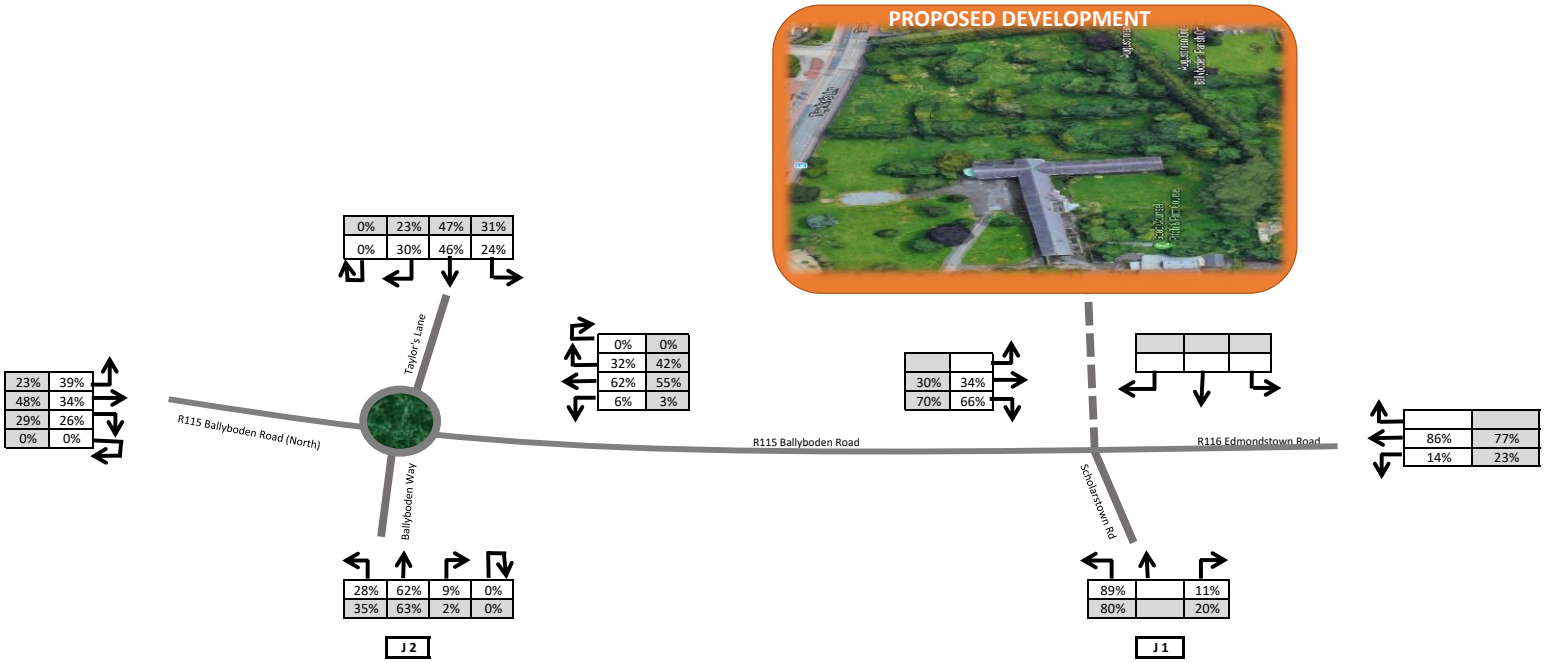
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- AM Peak Hour (08:00 to 09:00)
- PM Peak Hour (17:00 to 18:00)

Dwn:	Ckd:	Date:
RB	MK	10/03/2023

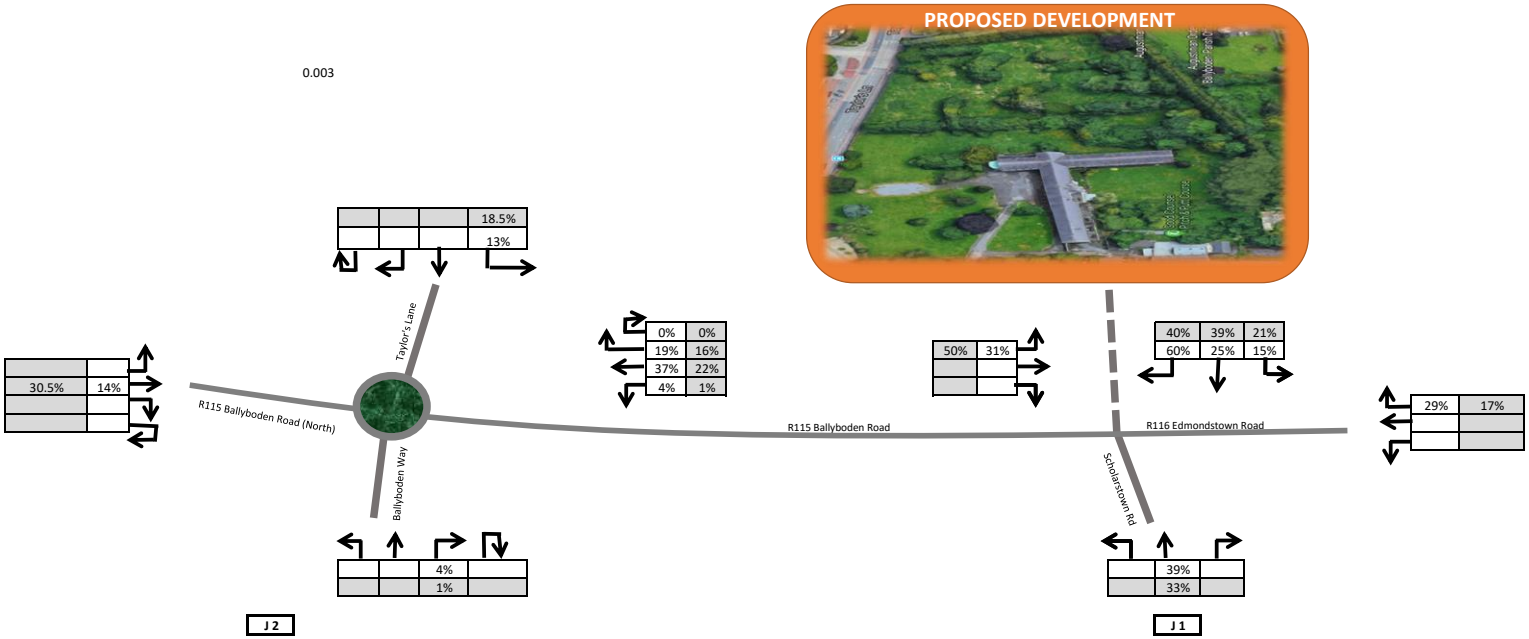
Ref: p190068\calcs\excel\Traffic\ Traffic Model01

Figure: 1

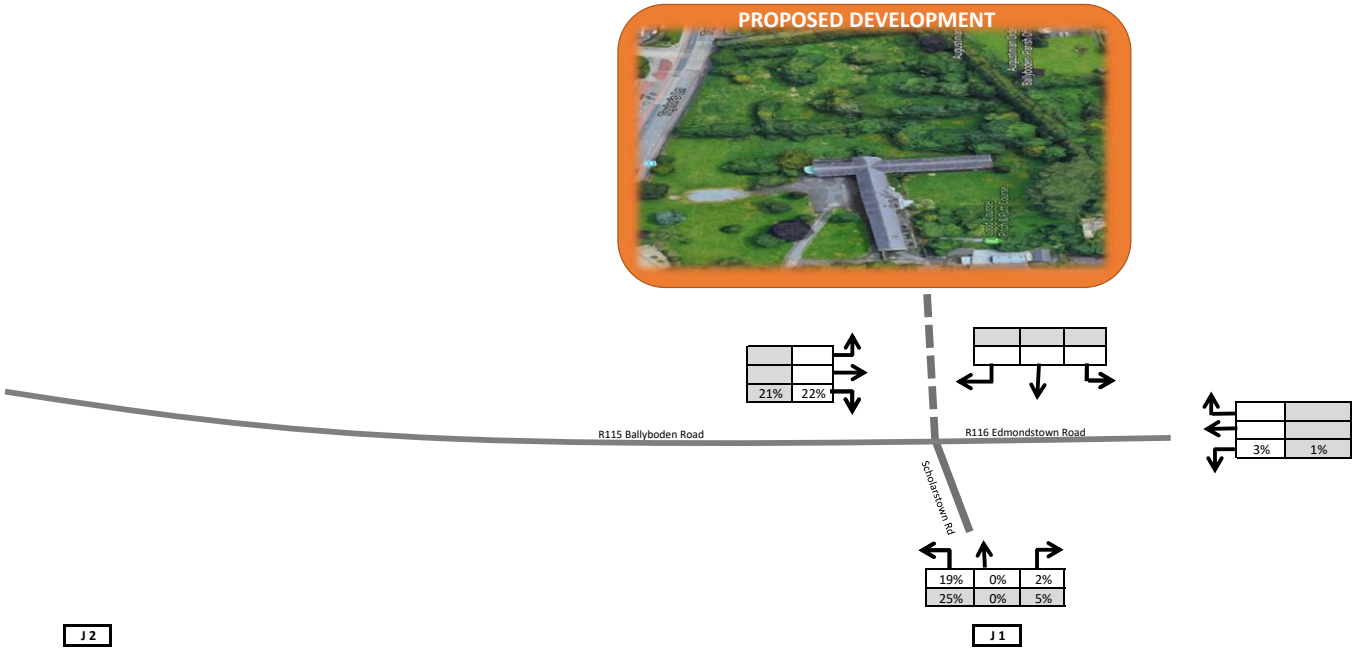
Rev: -



DBFL Consulting Engineers		**Project :** Proposed Residential Development at Taylor's Lane, Ballyboden, Dublin 16	**Key:** AM Peak Hour (08:00 to 09:00); PM Peak Hour (17:00 to 18:00)	**Dwn:** RB	**Ckd:** MK
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Galway Office: Odean House, Eyre Square, Galway **phone:** +353 091 33 55 99	**Waterford Office:** Maritana Gate, Suite 8b The Atrium, Canada St, Waterford **phone:** +353 51 309 500	**DRG. Title :** Network Traffic Flows - Vehicles Base Flow Turning Percentages		**Ref:** p190068\calcs\excel\Traffic\ Traffic Model01	
email: info@dbfl.ie	**website:** www.dbfl.ie			**Figure:** 2	**Rev:** -



DBFL Consulting Engineers	**Project :** Proposed Residential Development at Taylor's Lane, Ballyboden, Dublin 16	**Key:** AM Peak Hour (08:00 to 09:00); PM Peak Hour (17:00 to 18:00)	**Dwn:** RB	**Ckd:** MK	**Date:** 10/03/2023
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email: info@dbfl.ie	**website:** www.dbfl.ie				



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

Project :
Proposed Residential Development at Taylor's Lane, Ballyboden, Dublin 16

DRG. Title :
Network Traffic Flows - Vehicles
% Distribution - Committed Development 1

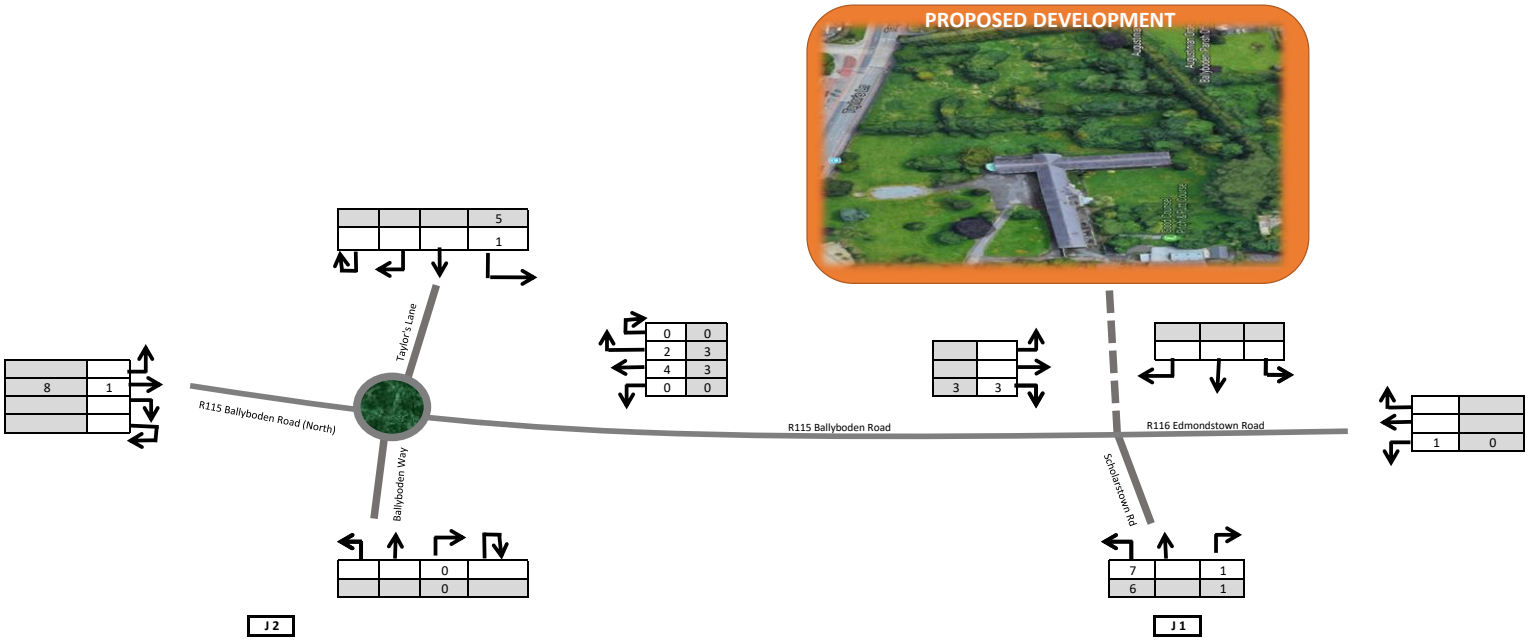
Key:
AM Peak Hour (08:00 to 09:00)
PM Peak Hour (17:00 to 18:00)

Dwn:	Ckd:	Date:
RB	MK	10/03/2023

Ref: p190068\calcs\excel\Traffic\ Traffic Model01

Figure: 4a

Rev: -



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Project :
Proposed Residential Development at Taylor's Lane, Ballyboden, Dublin 16

DRG. Title :
Network Traffic Flows - Vehicles
Committed Development 1

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

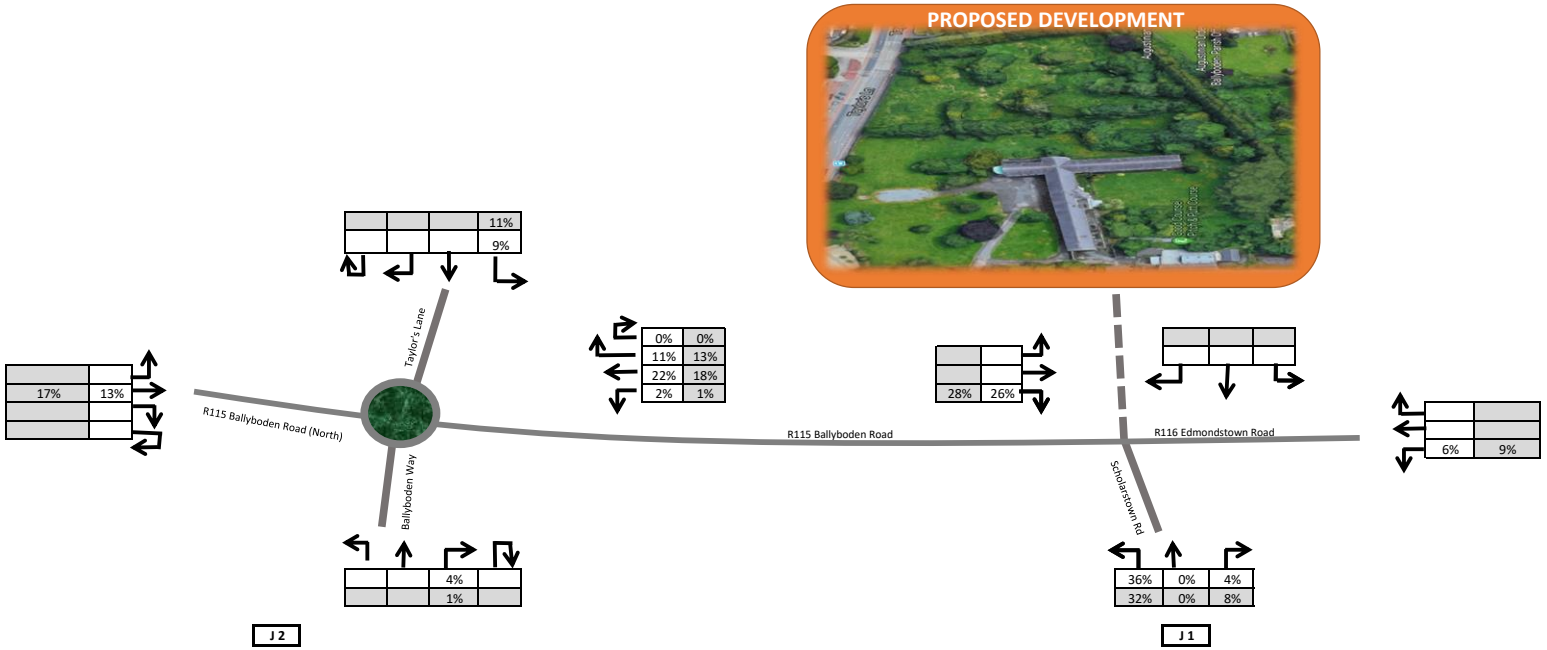
AM		PM	
Arr	Dep	Arr	Dep
16	37	44	25

Dwn:	Ckd:	Date:
RB	MK	10/03/2023

Ref: p190068\calcs\excel\Traffic\ Traffic Model01

Figure: 4b

Rev: -



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website: www.dbfl.ie

Project :
Proposed Residential Development at Taylor's Lane, Ballyboden, Dublin 16

DRG. Title :
Network Traffic Flows - Vehicles
% Distribution - Committed Development 2

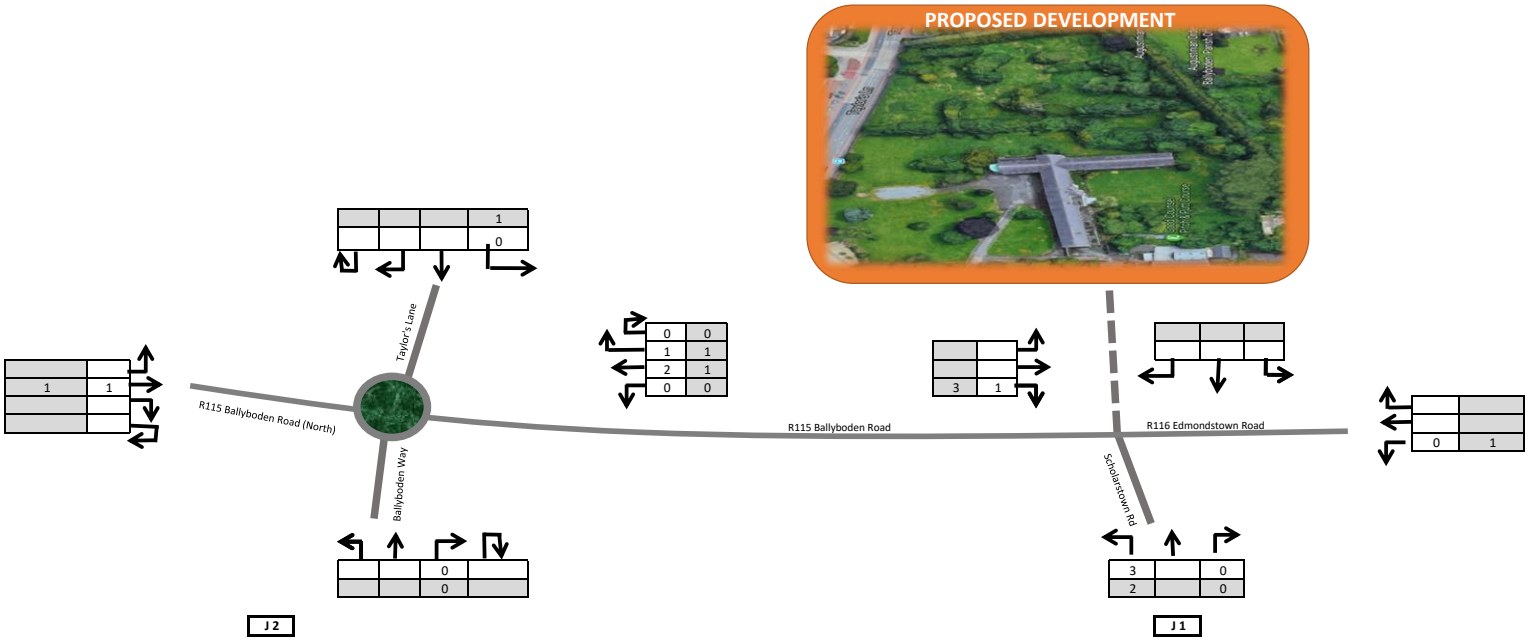
Key:
- AM Peak Hour (08:00 to 09:00)
- PM Peak Hour (17:00 to 18:00)

Dwn:	Ckd:	Date:
RB	MK	10/03/2023

Ref: p190068\calcs\excel\Traffic\ Traffic Model01

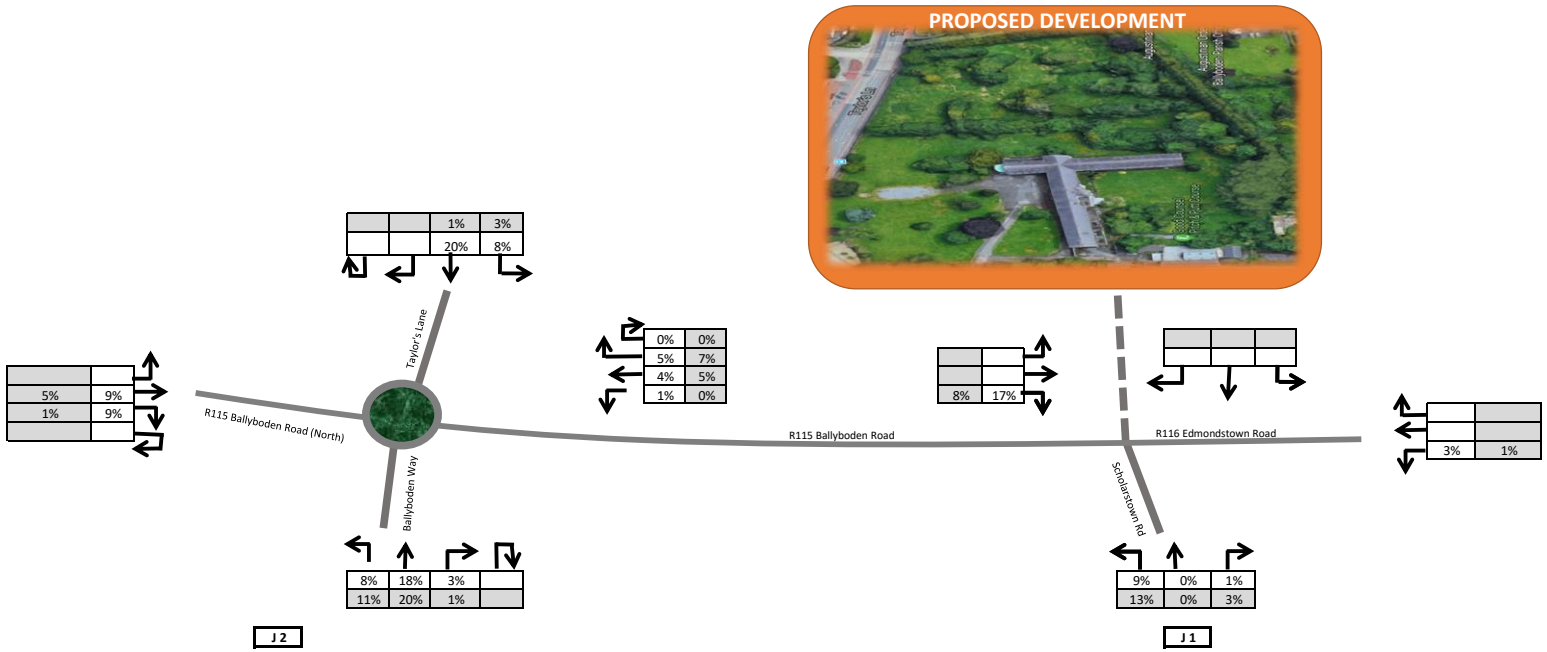
Figure: 5a

Rev: -

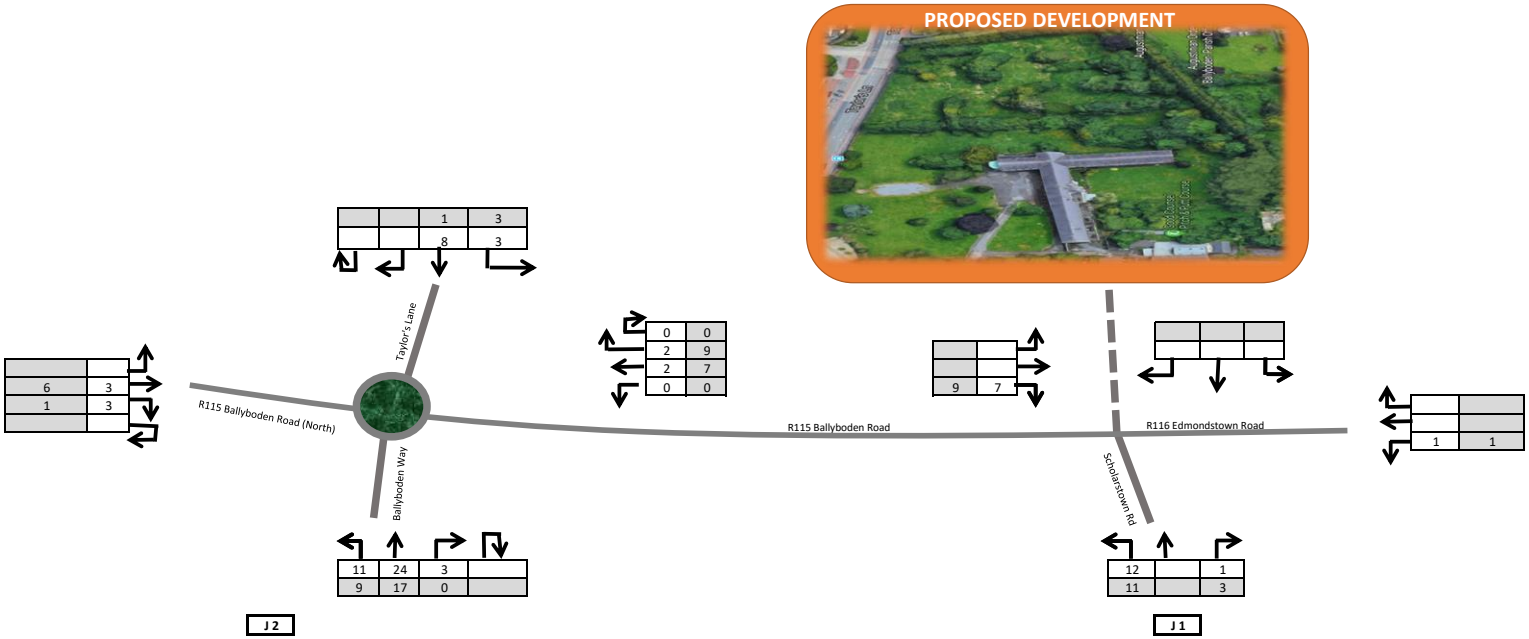


DBFL Consulting Engineers	**Project :** Proposed Residential Development at Taylor's Lane, Ballyboden, Dublin 16	**Key:** AM Peak Hour (08:00 to 09:00); PM Peak Hour (16:00 to 17:00)	**Dwn:** RB; **Ckd:** MK; **Date:** 10/03/2023
Dublin Office: Ormond House, Upper Ormond Quay, Dublin 7 **phone:** +353 1 400 4000	**Cork Office:** 14 South Mall, Centre, Cork **phone:** +353 21 202 4538		**Ref:** p190068\calcs\excel\Traffic\ Traffic Model01
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email: info@dbfl.ie	**website:** www.dbfl.ie		

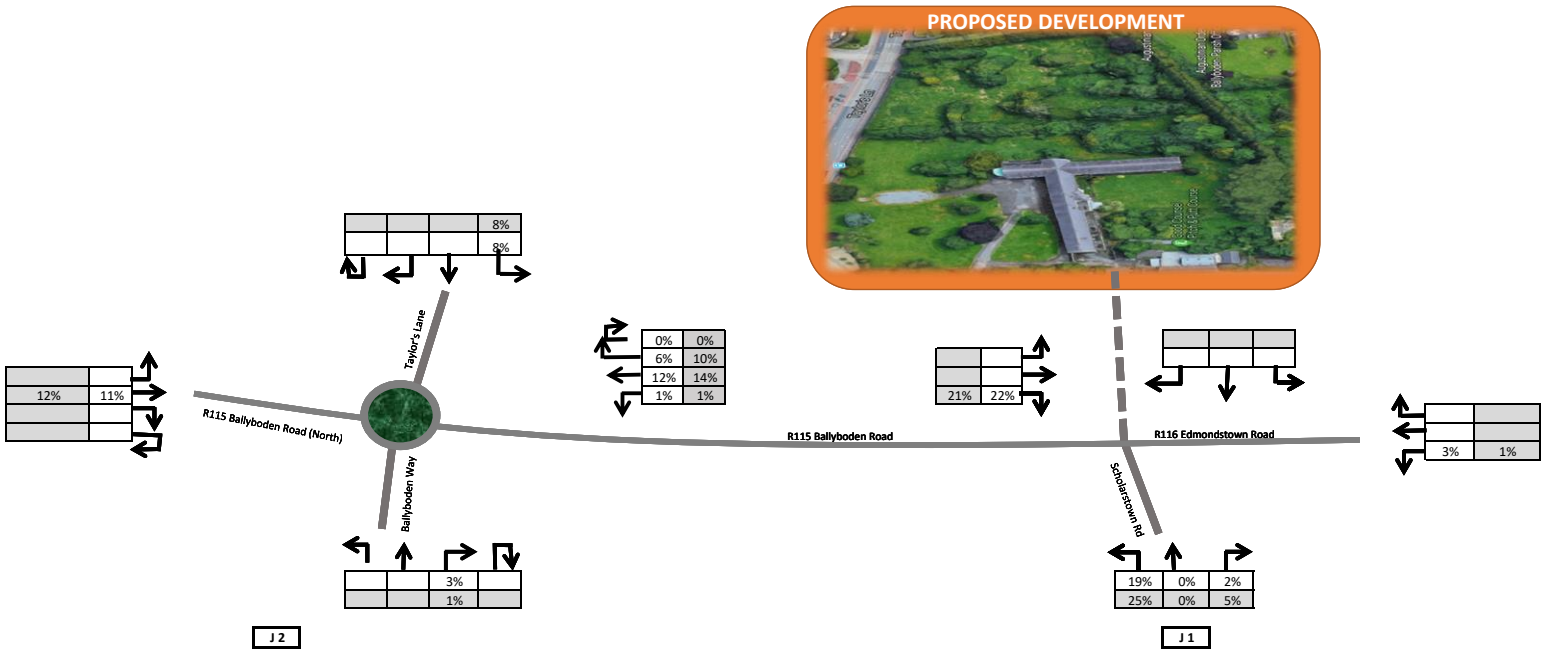
AM		PM	
Arr	Dep	Arr	Dep
4	9	9	6



DBFL Consulting Engineers		**Project :** Proposed Residential Development at Taylor's Lane, Ballyboden, Dublin 16	**Key:** AM Peak Hour (08:00 to 09:00); PM Peak Hour (17:00 to 18:00)	**Dwn:** RB	**Ckd:** MK	**Date:** 10/03/2023
Dublin Office: Ormond House, Upper Ormond Quay, Dublin 7 **phone:** +353 1 400 4000	**Cork Office:** 14 South Mall, Centre, Cork **phone:** +353 21 202 4538			**Ref:** p190068\calcs\excel\Traffic\ Traffic Model01		
Galway Office: Odean House, Eyre Square, Galway **phone:** +353 091 33 55 99	**Waterford Office:** Maritana Gate, Suite 8b The Atrium, Canada St, Waterford **phone:** +353 51 309 500	**DRG. Title :** Network Traffic Flows - Vehicles % Distribution - Committed Development 3		**Figure:** 6a	**Rev:** -	
email: info@dbfl.ie	**website:** www.dbfl.ie					



DBFL Consulting Engineers		**Project :** Proposed Residential Development at Taylor's Lane, Ballyboden, Dublin 16	**Key:** AM Peak Hour (08:00 to 09:00); PM Peak Hour (17:00 to 18:00)	**Dwn:** RB	**Ckd:** MK	**Date:** 10/03/2023	
Dublin Office: Ormond House, Upper Ormond Quay, Dublin 7 **phone:** +353 1 400 4000	**Cork Office:** 14 South Mall, Centre, Cork **phone:** +353 21 202 4538					**Ref:** p190068\calcs\excel\Traffic\ Traffic Model01	
Galway Office: Odean House, Eyre Square, Galway **phone:** +353 091 33 55 99	**Waterford Office:** Maritana Gate, Suite 8b The Atrium, Canada St, Waterford **phone:** +353 51 309 500	**DRG. Title :** Network Traffic Flows - Vehicles Committed Development 3	AM: Arr 40, Dep 130; PM: Arr 123, Dep 85			**Figure:** 6b	**Rev:** -
email: info@dbfl.ie	**website:** www.dbfl.ie						



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Project :
Proposed Residential Development at Taylor's Lane, Ballyboden, Dublin 16

DRG. Title :
Network Traffic Flows - Vehicles
% Distribution - Committed Development 4

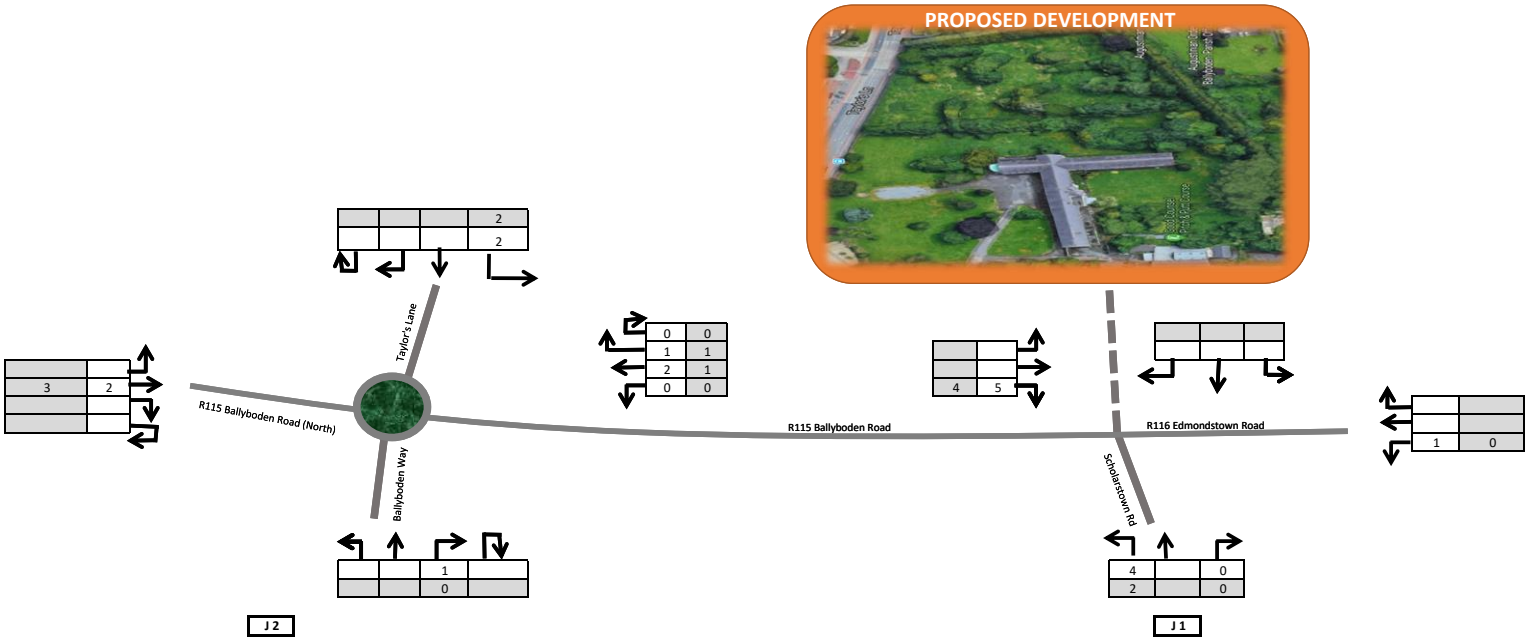
Key:
AM Peak Hour (08:00 to 09:00)
PM Peak Hour (17:00 to 18:00)

Dwn:	Ckd:	Date:
RB	MK	10/03/2023

Ref: p190068\calcs\excel\Traffic\ Traffic Model01

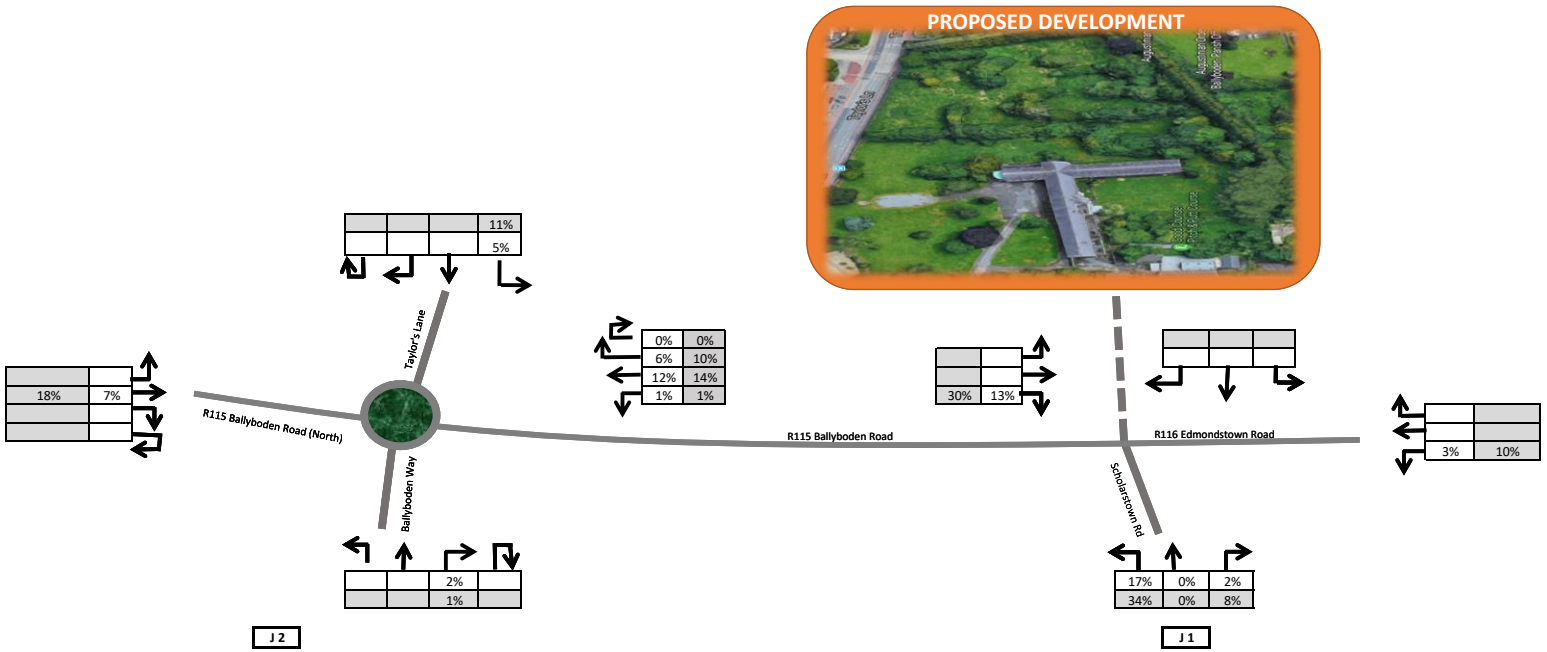
Figure: 7a

Rev: -



DBFL Consulting Engineers	**Project :** Proposed Residential Development at Taylor's Lane, Ballyboden, Dublin 16	**Key:** AM Peak Hour (08:00 to 09:00); PM Peak Hour (17:00 to 18:00)	**Dwn:** RB; **Ckd:** MK; **Date:** 10/03/2023
Dublin Office: Ormond House, Upper Ormond Quay, Dublin 7 **phone:** +353 1 400 4000	**Cork Office:** 14 South Mall, Centre, Cork **phone:** +353 21 202 4538		**Ref:** p190068\calcs\excel\Traffic\ Traffic Model01
Galway Office: Odean House, Eyre Square, Galway **phone:** +353 091 33 55 99	**Waterford Office:** Maritana Gate, Suite 8b The Atrium, Canada St, Waterford **phone:** +353 51 309 500	**DRG. Title :** Network Traffic Flows - Vehicles Committed Development 4	**Figure:** 7b; **Rev:** -
email: info@dbfl.ie	**website:** www.dbfl.ie		

AM		PM	
Arr	Dep	Arr	Dep
5	21	21	9



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

Project :
Proposed Residential Development at Taylor's Lane, Ballyboden, Dublin 16

DRG. Title :
Network Traffic Flows - Vehicles
% Distribution - Committed Development 5

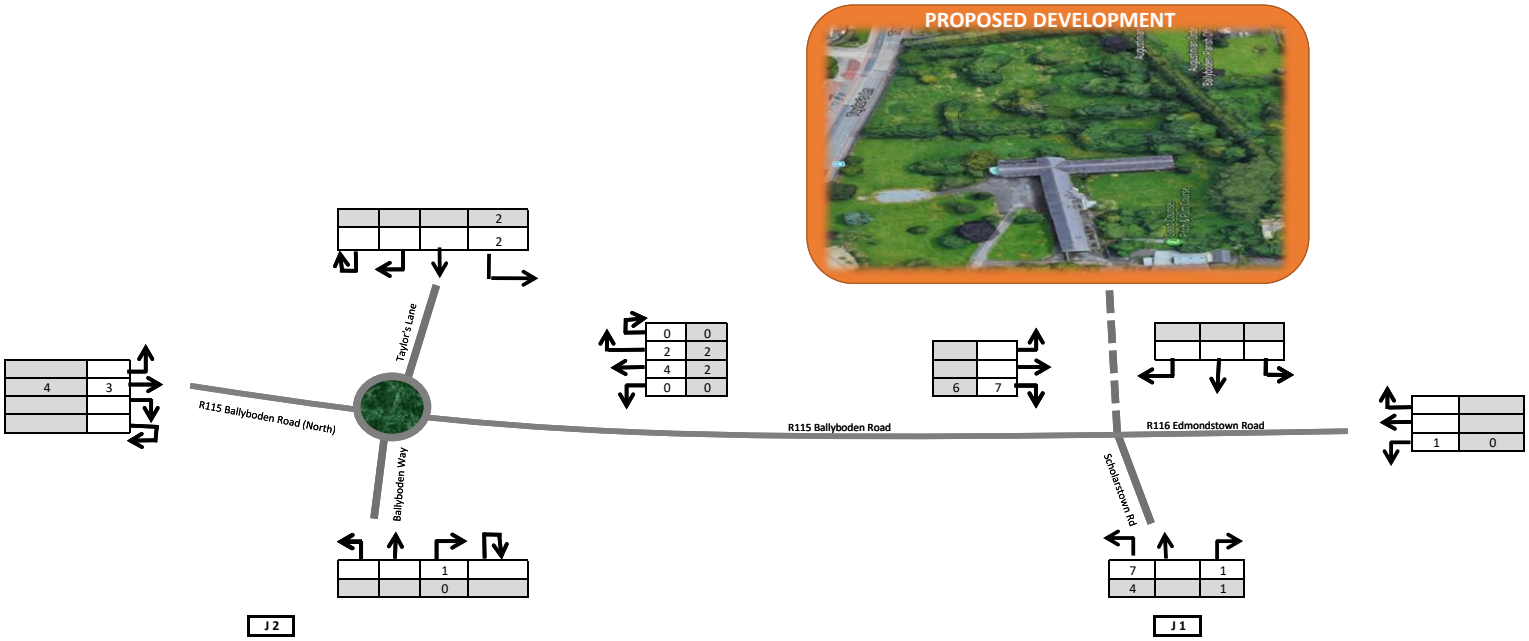
Key:
- AM Peak Hour (08:00 to 09:00)
- PM Peak Hour (17:00 to 18:00)

Dwn:	Ckd:	Date:
RB	MK	10/03/2023

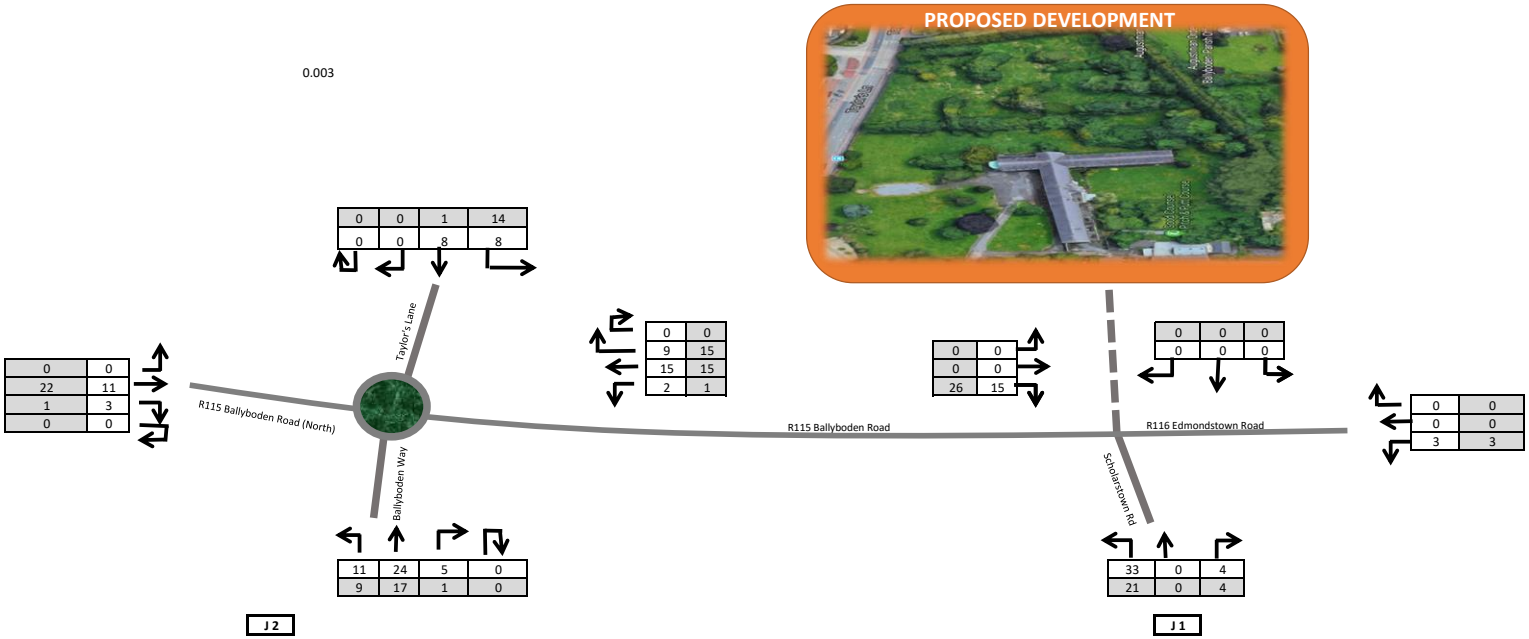
Ref: p190068\calcs\excel\Traffic\ Traffic Model01

Figure: 8a

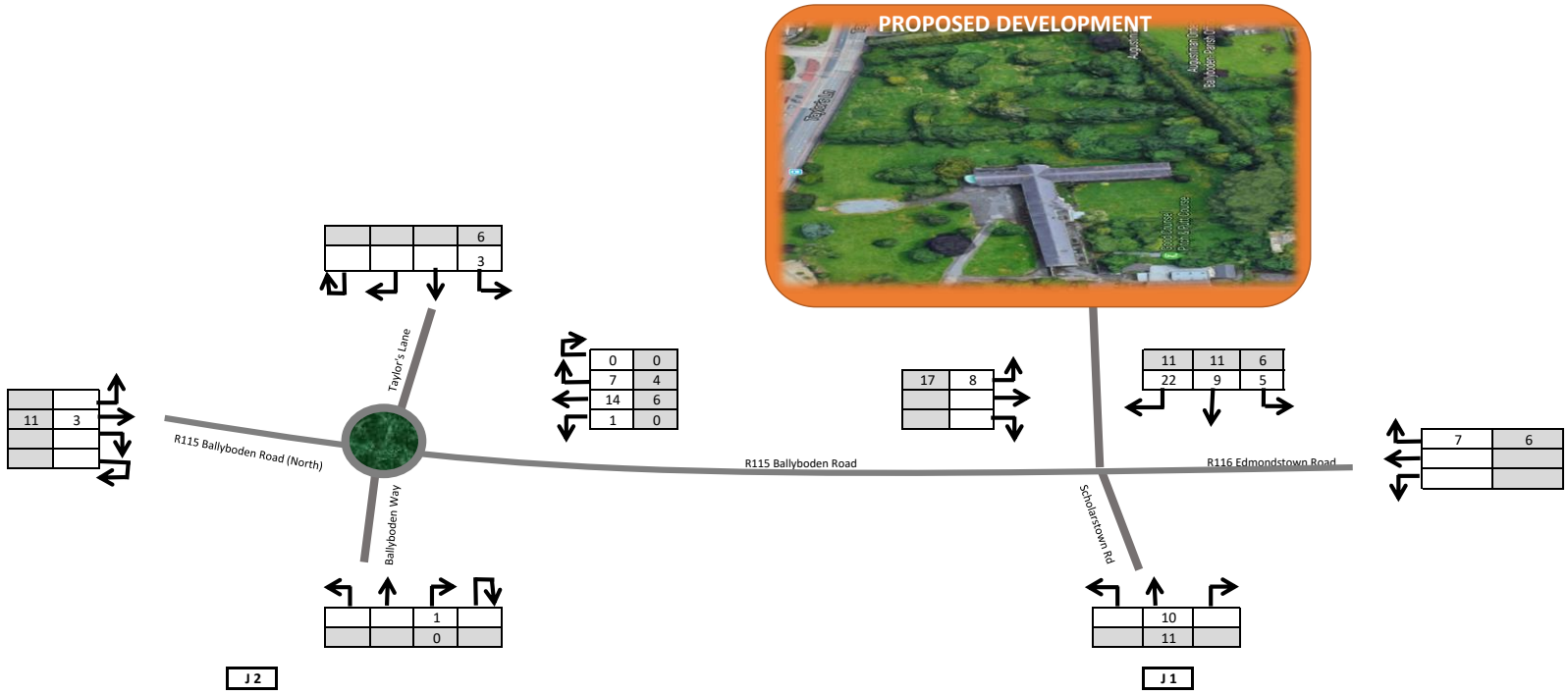
Rev: -



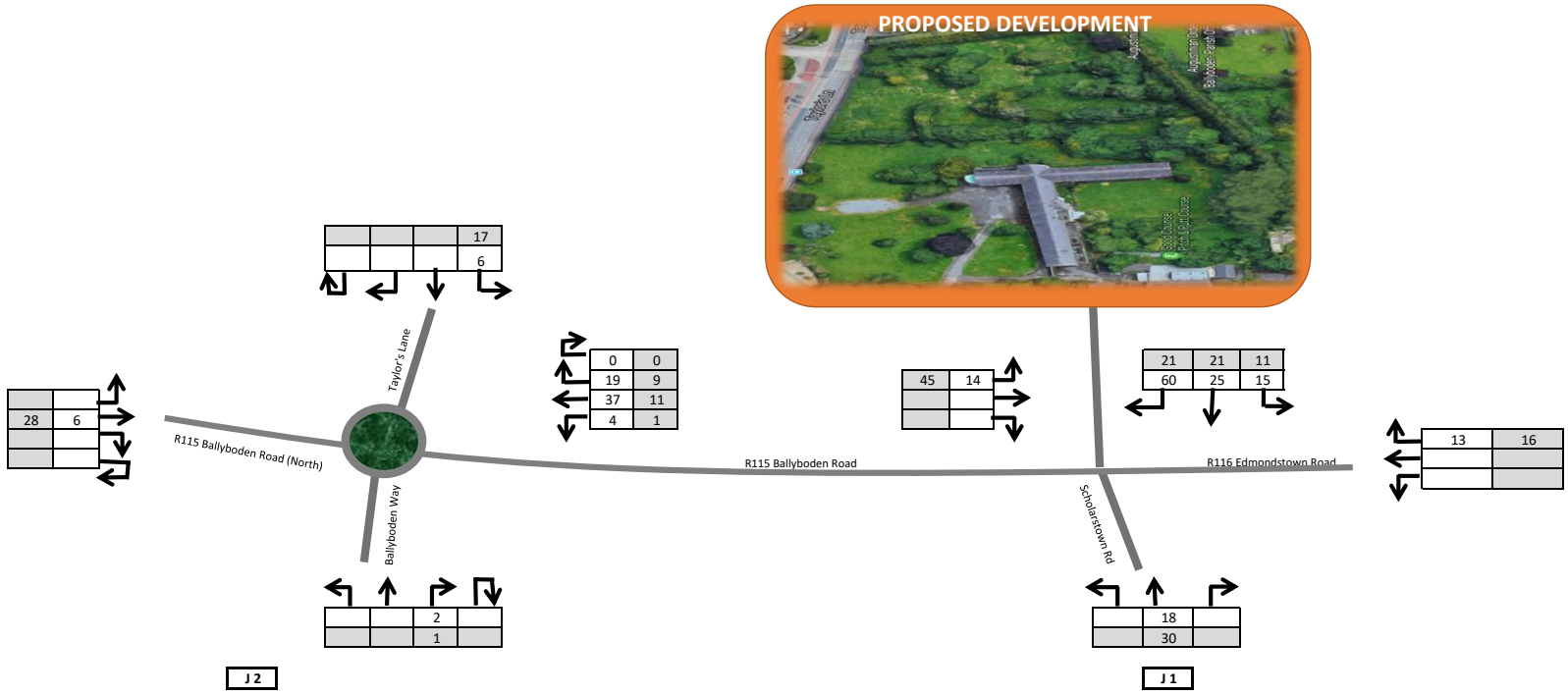
DBFL Consulting Engineers		**Project :** Proposed Residential Development at Taylor's Lane, Ballyboden, Dublin 16	**Key:** AM Peak Hour (08:00 to 09:00); PM Peak Hour (17:00 to 18:00)	**Dwn:** RB	**Ckd:** MK	**Date:** 10/03/2023
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Galway Office: Odean House, Eyre Square, Galway **phone:** +353 091 33 55 99	**Waterford Office:** Maritana Gate, Suite 8b The Atrium, Canada St, Waterford **phone:** +353 51 309 500	**DRG. Title :** Network Traffic Flows - Vehicles Committed Development 5	AM: Arr 14, Dep 35; PM: Arr 30, Dep 16			**Figure:** 8b
email: info@dbfl.ie	**website:** www.dbfl.ie					**Rev:** -



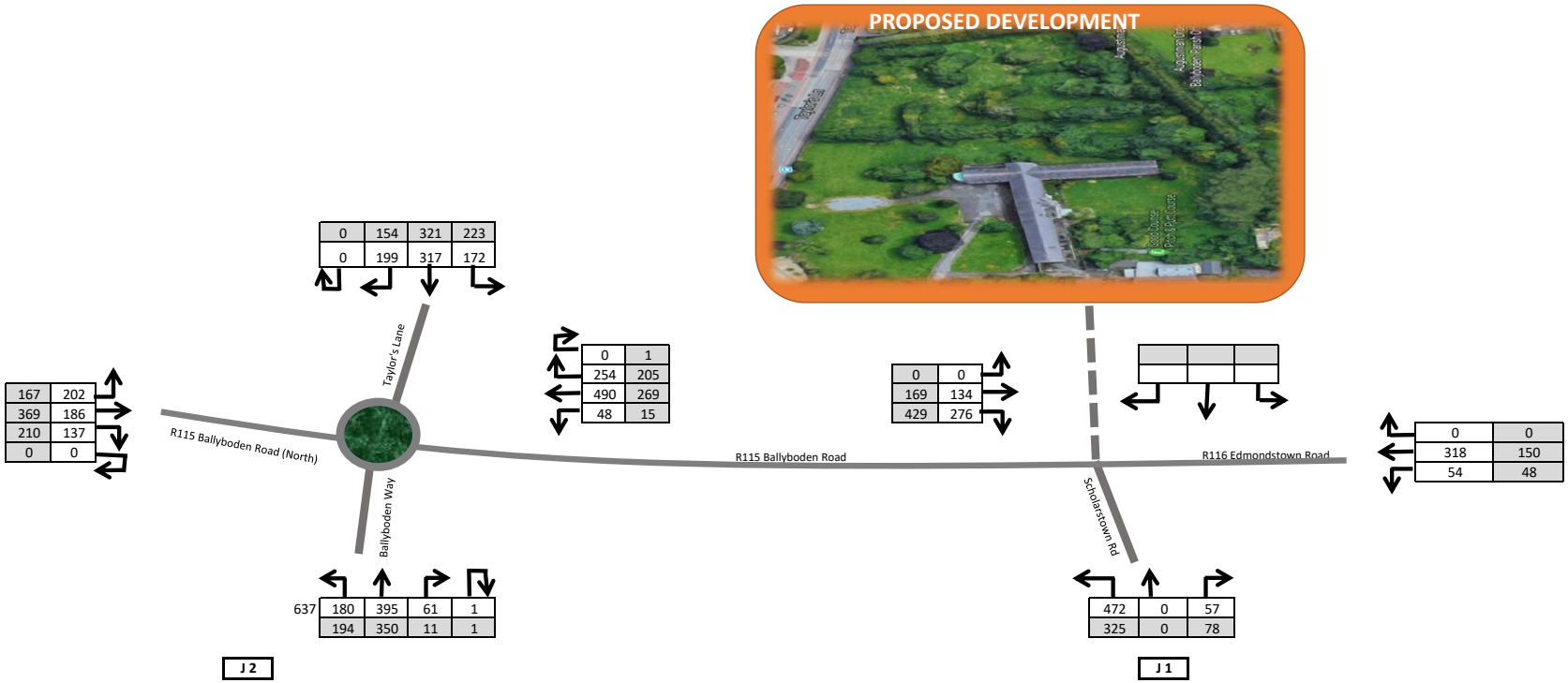
DBFL Consulting Engineers		**Project :** Proposed Residential Development at Taylor's Lane, Ballyboden, Dublin 16	**Key:** AM Peak Hour (08:00 to 09:00); PM Peak Hour (17:00 to 18:00)	**Dwn:** RB / **Ckd:** MK / **Date:** 10/03/2023	
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Galway Office: Odean House, Eyre Square, Galway **phone:** +353 091 33 55 99	**Waterford Office:** Maritana Gate, Suite 8b The Atrium, Canada St, Waterford **phone:** +353 51 309 500	**DRG. Title :** Network Traffic Flows - Vehicles Committed Developments - All		**Figure:** 9	**Rev:** -
email: info@dbfl.ie	**website:** www.dbfl.ie				



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Galway Office: Odean House, Eyre Square, Galway **phone:** +353 091 33 55 99	**Waterford Office:** Maritana Gate, Suite 8b The Atrium, Canada St, Waterford **phone:** +353 51 309 500	**DRG. Title :** Network Traffic Flows - Vehicles Proposed Dev. Trips - Phase 1		**Ref:** p190068\calcs\excel\Traffic\ Traffic Model01	
email: info@dbfl.ie	**website:** www.dbfl.ie			**Figure:** 10a	**Rev:** -



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Galway Office: Odean House, Eyre Square, Galway **phone:** +353 091 33 55 99	**Waterford Office:** Maritana Gate, Suite 8b The Atrium, Canada St, Waterford **phone:** +353 51 309 500	**DRG. Title :** Network Traffic Flows - Vehicles Proposed Dev. Trips - Phase 2		**Figure:** 10b	**Rev:** -	
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Project :
Proposed Residential Development at Taylor's Lane, Ballyboden, Dublin 16

DRG. Title :
Network Traffic Flows - Vehicles
2025 Do Nothing Scenario

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

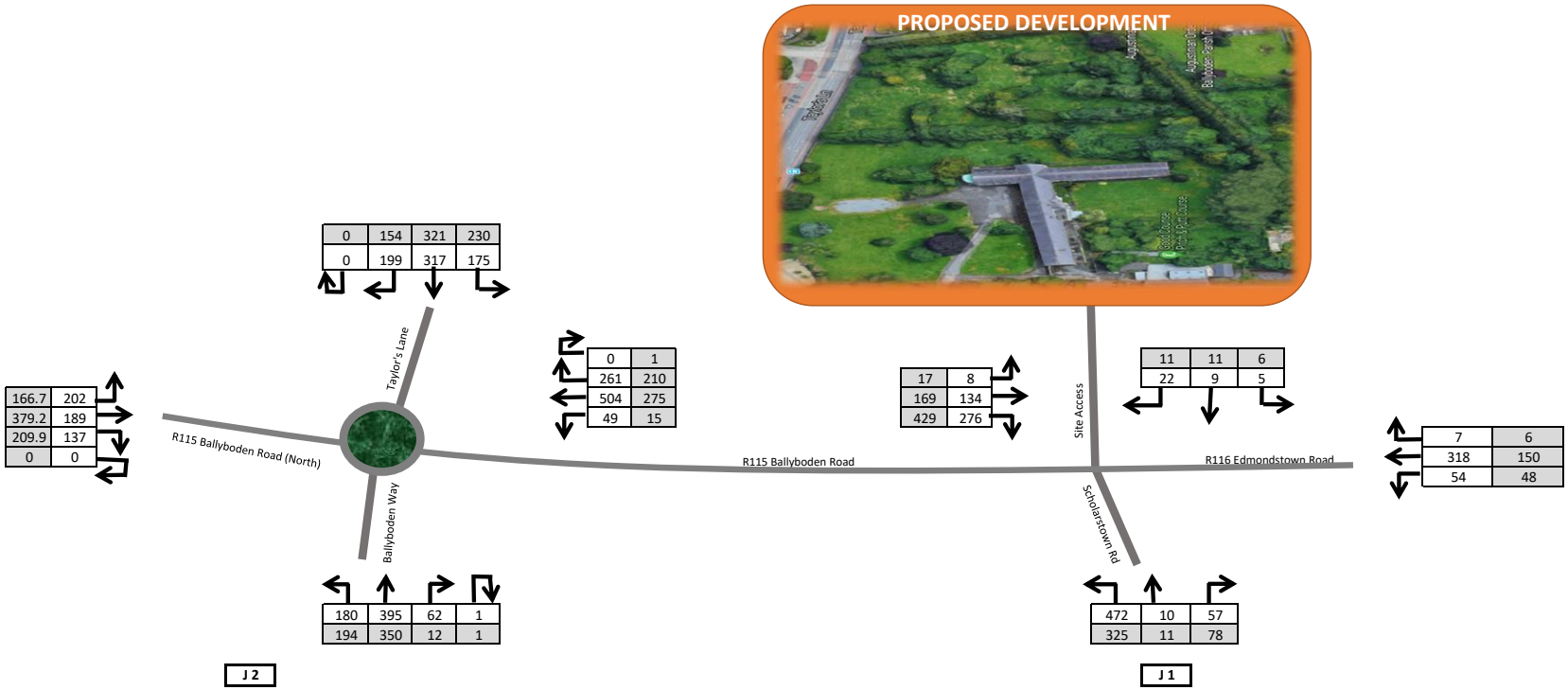
Growth Rate 1.0550

Dwn:	Ckd:	Date:
RB	MK	10/03/2023

Ref: p190068\calcs\excel\Traffic\ Traffic Model01

Figure: 11

Rev: -



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Project :
Proposed Residential Development at Taylor's Lane, Ballyboden, Dublin 16

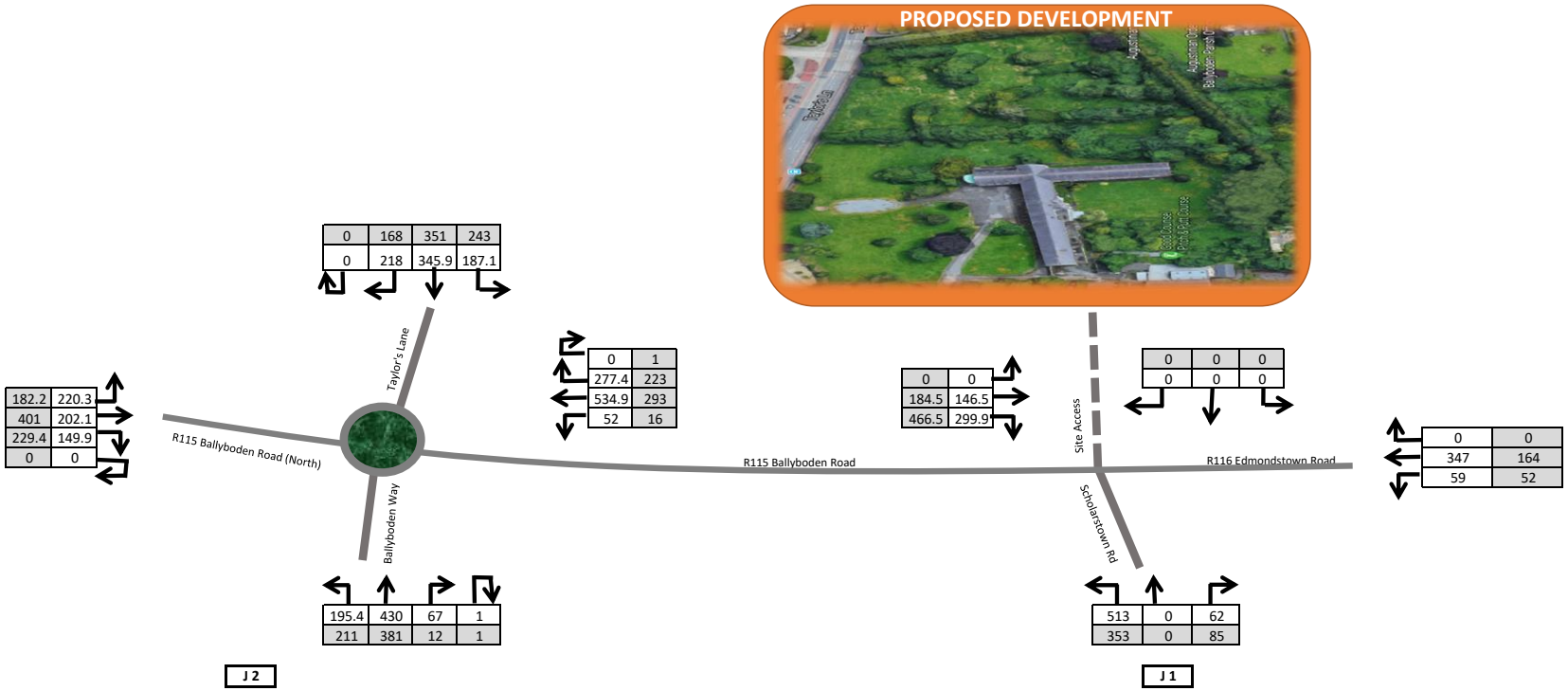
DRG. Title :
Network Traffic Flows - Vehicles
2025 Do Something Scenario

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

Dwn:	Ckd:	Date:
RB	MK	10/03/2023

Ref:
p190068\calcs\excel\Traffic\ Traffic Model01

Figure:	Rev:
12	-



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Project :
Proposed Residential Development at Taylor's Lane, Ballyboden, Dublin 16

DRG. Title :
Network Traffic Flows - Vehicles
2030 Do Nothing Scenario

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

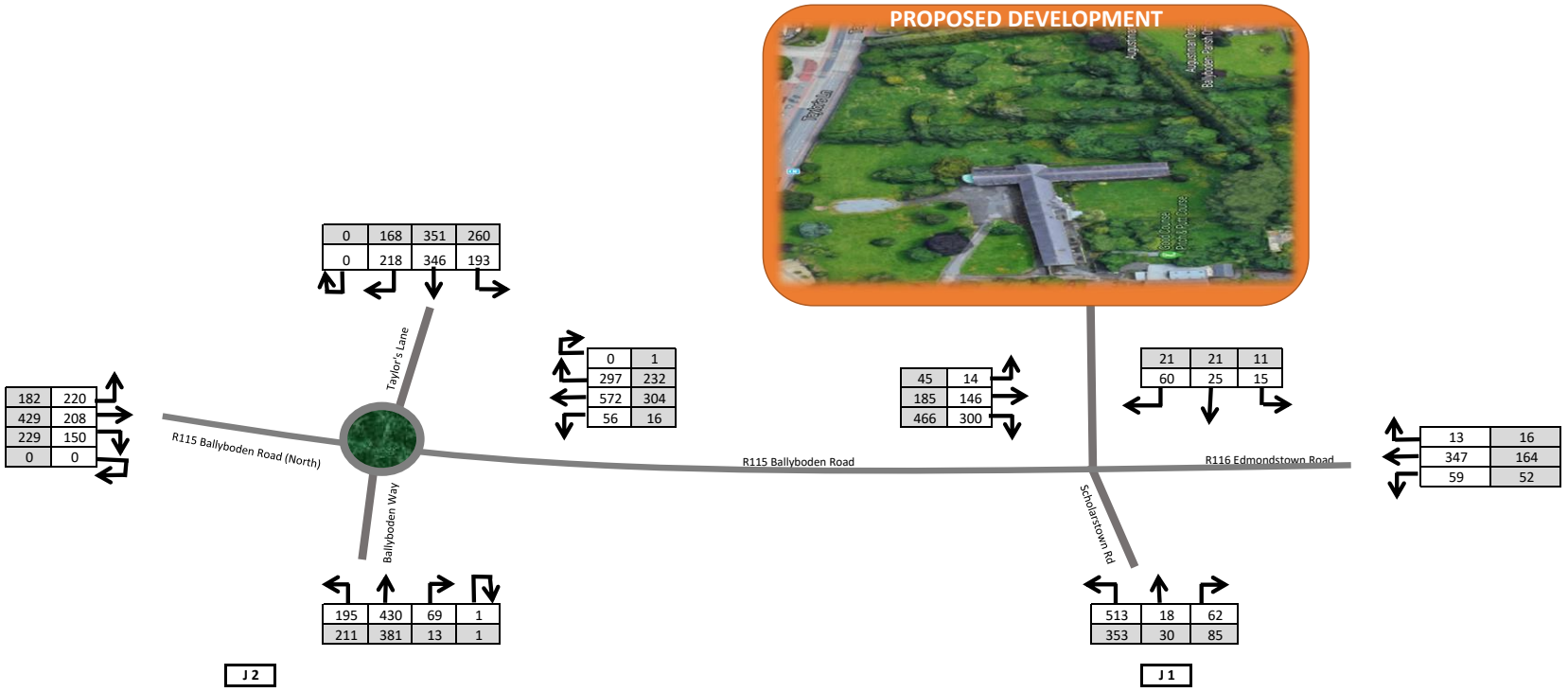
Growth Rate 1.1534

Dwn:	Ckd:	Date:
RB	MK	10/03/2023

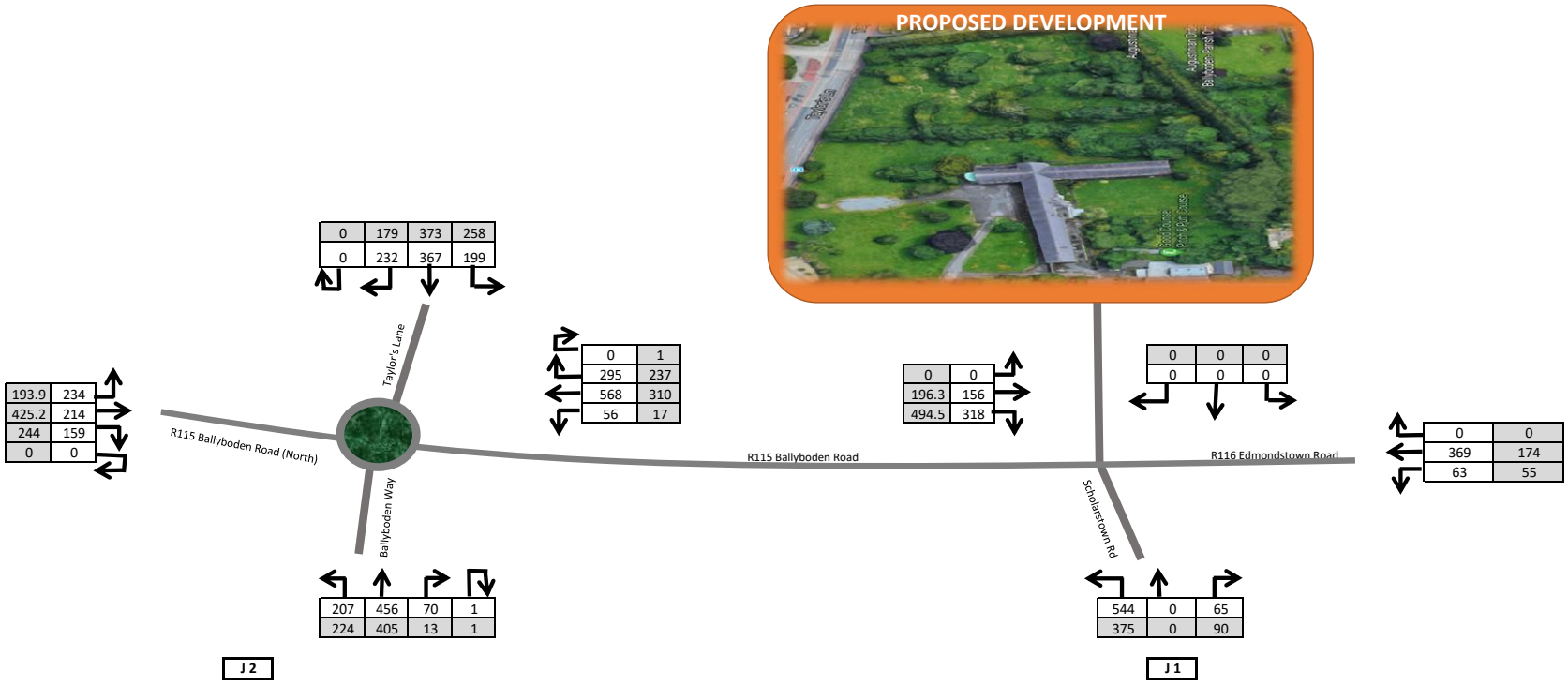
Ref: p190068\calcs\excel\Traffic\ Traffic Model01

Figure: 13

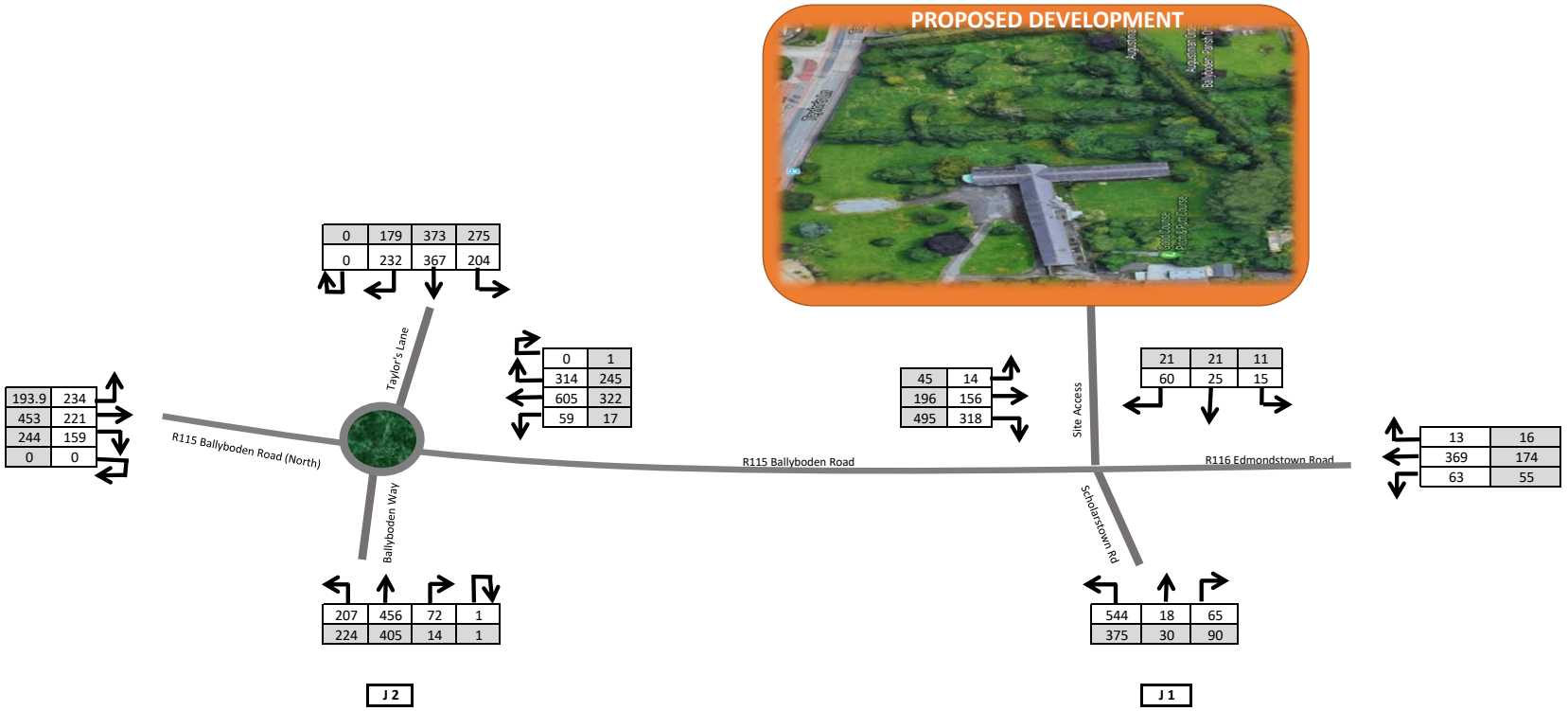
Rev: -



DBFL Consulting Engineers	**Project :** Proposed Residential Development at Taylor's Lane, Ballyboden, Dublin 16	**Key:** AM Peak Hour (08:00 to 09:00); PM Peak Hour (17:00 to 18:00)	**Dwn:** RB; **Ckd:** MK; **Date:** 10/03/2023
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Galway Office: Odean House, Eyre Square, Galway **phone:** +353 091 33 55 99	**Waterford Office:** Maritana Gate, Suite 8b The Atrium, Canada St, Waterford **phone:** +353 51 309 500	**DRG. Title :** Network Traffic Flows - Vehicles 2030 Do Something Scenario	**Figure:** 14; **Rev:** -
email: info@dbfl.ie	**website:** www.dbfl.ie		



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Dublin Office: Ormond House, Upper Ormond Quay, Dublin 7 **phone:** +353 1 400 4000	**Cork Office:** 14 South Mall, Centre, Cork **phone:** +353 21 202 4538			**Ref:** p190068\calcs\excel\Traffic\ Traffic Model01		
Galway Office: Odean House, Eyre Square, Galway **phone:** +353 091 33 55 99	**Waterford Office:** Maritana Gate, Suite 8b The Atrium, Canada St, Waterford **phone:** +353 51 309 500	**DRG. Title :** Network Traffic Flows - Vehicles 2040 Do Nothing Scenario	**Growth Rate** 1.2269	**Figure:** 15	**Rev:** -	
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email: info@dbfl.ie
website: www.dbfl.ie

Project :
Proposed Residential Development at Taylor's Lane, Ballyboden, Dublin 16

DRG. Title :
Network Traffic Flows - Vehicles
2040 Do Something Scenario

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

Dwn:	Ckd:	Date:
RB	MK	10/03/2023

Ref: p190068\calcs\excel\Traffic\ Traffic Model01

Figure: 16

Rev: -

Appendix C : TRANSYT Outputs

TRANSYT 15

Version: 15.5.3.7
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+44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk

The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution

Filename: 190068 Double Lane Entries- Base 2022.t15
Path: G:\2019\p190068\calcs\Traffic\2022 Resubmission\TRANSYT
Report generation date: 08/03/2023 11:31:45

»A1 - 2022 Base AM : D1 - 2022 Base AM* :
»A2 - 2022 Base PM : D2 - 2022 Base PM* :

File summary

File description

File title	Residential Development, Taylors Lane
Location	Ballyboden Rd/Edmondstown Rd/Scholarstown Rd/Site Access
Site number	
UTCRegion	
Driving side	Left
Date	01/03/2023
Version	
Status	Preliminary
Identifier	RB
Client	
Jobnumber	190068
Enumerator	HEADOFFICE\browner
Description	Do Something - Double Lane Entries

Model and Results

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

Units

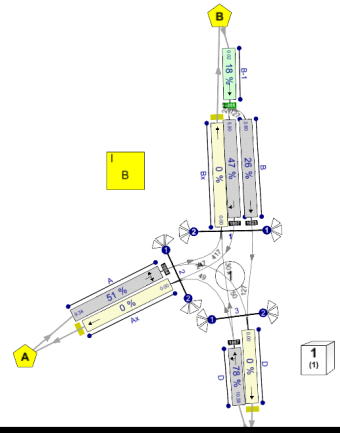
Cost units	Speed units	Distance units	Fuel economy units	Fuel rate units	Mass units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
£	kph	m	mpg	l/h	kg	PCU	PCU	perHour	s	-Hour	perHour

Sorting

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

Generated on 08/03/2023 11:31:53 using TRANSYT 15 (15.5.3.7)

Network Diagrams



A1 - 2022 Base AM
D1 - 2022 Base AM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
1	08/03/2023 11:31:39	08/03/2023 11:31:39	08:00	100	167.23	10.89	78.11	D/1	0	0	D/1	B-1/1	D/

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2022 Base AM		D1	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2022 Base AM				08:00	

Network Options

Network timings

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

Signals options

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

Advanced

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

Traffic options

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

Advanced

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

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Normal Traffic parameters

Dispersion type	Dispersion coefficient	Travel time coefficient
Default	35	80

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

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

Tram parameters

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

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

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

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
1	(untitled)	

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
A	(untitled)		1
Ax	(untitled)		
B	(untitled)		1
B Filter	(untitled)		1
Bx	(untitled)		
D	(untitled)		1
Dx	(untitled)		
B-1	(untitled)		1

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
A	1	Scholarstown Rd			200.00	✓	Sum of lanes	2004	✓		Normal	
Ax	1	(untitled)			100.00						Normal	
B	2	Ballyboden Rd N			20.00	✓	Sum of lanes	1823	✓		Normal	
B Filter	2	Ballyboden Rd N			20.00	✓	Sum of lanes	1957	✓		Normal	
Bx	1	(untitled)			100.00						Normal	
D	1	Edmonstown Road			300.00	✓	Sum of lanes	1867	✓		Normal	
Dx	1	(untitled)			100.00						Normal	
B-1	1	(untitled)			10.00	✓	Sum of lanes	2055			Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Surface condition	Site quality factor	Gradient (%)	Width (m)	Use connector turning radius	Proportion that turn (%)	Turning radius (m)	Nearside lane	Saturation flow (PCU/hr)
A	1	1	(untitled)		✓	N/A	N/A	0	4.50		67	10.00		2004
Ax	1	1	(untitled)											
B	2	1	(untitled)		✓	N/A	N/A	0	3.00		67	20.00	✓	1823
B Filter	2	1	(untitled)		✓	N/A	N/A	0	3.00		67	20.00		1957
Bx	1	1	(untitled)											
D	1	1	(untitled)		✓	N/A	N/A	0	3.00		67	10.00		1867
Dx	1	1	(untitled)											
B-1	1	1	(untitled)		✓	N/A	N/A	0	3.00		0	6.00		2055

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
A	1	NetworkDefault	100	100	100		42.00		
Ax	1	NetworkDefault	100	100	100		0.00		
B	2	NetworkDefault	100	100	100		19.00		
B Filter	2	NetworkDefault	100	100	100		3.00		
Bx	1	NetworkDefault	100	100	100		0.00		
D	1	NetworkDefault	100	100	100		50.00		
Dx	1	NetworkDefault	100	100	100		0.00		
B-1	1	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
(ALL)	(ALL)	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100

Normal traffic - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	(ALL)	100	100

Normal traffic - Advanced

Arm	Traffic Stream	Dispersion type for Normal Traffic
(ALL)	(ALL)	NetworkDefault

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Flows

Arm	Traffic Stream	Total Flow (PCU/hr)	Normal Flow (PCU/hr)
A	1	467	467
Ax	1	296	296
B	2	127	127
B Filter	2	247	247
Bx	1	718	718
D	1	350	350
Dx	1	177	177
B-1	1	374	374

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled
A	1	1	A	
B	2	1	B	
B Filter	2	1	B	
D	1	1	D	

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
A	1	24.00	30.00
D	1	36.00	30.00
B-1	1	1.20	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	1	1	D/1	Ax/1	12.00	30.00	✓	Nearside	37.21
B	2	1	B-1/1	B/2	2.40	30.00	✓	Straight	Straight Movement
B Filter	2	1	B-1/1	B Filter/2	2.40	30.00	✓	Straight	Straight Movement
Bx	1	1	D/1	Bx/1	12.00	30.00	✓	Straight	Straight Movement
Dx	1	1	A/1	Dx/1	12.00	30.00	✓	Offside	67.90
Ax	1	2	B Filter/2	Ax/1	12.00	30.00	✓	Offside	81.96
Bx	1	2	A/1	Bx/1	12.00	30.00	✓	Nearside	55.47
Dx	1	2	B/2	Dx/1	12.00	30.00	✓	Straight	Straight Movement

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
1	(untitled)				Farside	9.00	6.00	5.40
2	(untitled)				Farside	10.50	7.00	5.40
3	(untitled)				Farside	9.50	6.33	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	E	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(ALL)	11000

Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	100	100		0.00		

Local OD Matrix - Local Matrix: B

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
B	(untitled)	✓	✓	Path Equalisation			✓			✓	1.25		

Normal Input Flows (PCU/hr)

		To		
		A	B	D
From	A	0	417	50
	B	247	0	127
	D	49	301	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
B	A	Parnwell Lodge	A/1	Ax/1	#FFFF00
	B	Bridge Street (W)	B-1/1	Bx/1	#0000FF
	D	Bridge Street (E)	D/1	Dx/1	#00FF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
B	8		D	A	D/1, Ax/1	Normal	49
	9		D	B	D/1, Bx/1	Normal	301
	11		A	D	A/1, Dx/1	Normal	50
	12		A	B	A/1, Bx/1	Normal	417
	14		B	D	B-1/1, B/2, Dx/1	Normal	127
	15		B	A	B-1/1, B Filter/2, Ax/1	Normal	247

Signal Timings

Network Default: 100s cycle time; 100 steps

Controller Stream 1

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)
1	(untitled)		3	NetworkDefault	100

Controller Stream 1 - Properties

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
1	Unspecified						Absolute

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Controller Stream 1 - Optimisation

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
1	✓	✓	Offsets And Green Splits	✓	

Phases

Controller Stream	Phase	Name	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type	Blackout Time (s)
1	A	(untitled)	7	300	0	0	Traffic	
	B	(untitled)	7	300	0	0	Traffic	
	D	(untitled)	7	300	0	0	Traffic	
	E	(untitled)	6	300	0	0	Pedestrian	0

Library Stages

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)
1	1	A	1
	2	B, D	1
	3	E	7
	4	A	1
	5	B	3
	7	D	1

Stage Sequences

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends
1	3	(untitled)	Single	1, 3, 2, 5	38, 51, 85, 88

Intergreen Matrix for Controller Stream 1

		To				
		A	B	D	E	
From	A		5	5	6	
	B	5			8	
	D	6			7	
	E	11	11	11		

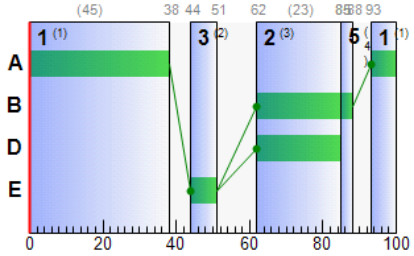
Banned Stage transitions for Controller Stream 1

		To						
		1	2	3	4	5	7	
From	1							
	2							
	3							
	4							
	5							
	7							

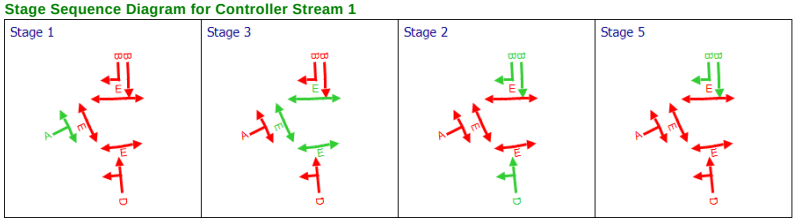
Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
A	1	1	1	A	93	38	45
B	2	1	1	B	62	88	26
B Filter	2	1	1	B	62	88	26
D	1	1	1	D	62	85	23

Phase Timings Diagram for Controller Stream 1



Stage Sequence Diagram for Controller Stream 1



Resultant penalties

Time Segment	Controller stream	Phase min max penalty (£ per hr)	Intergreen broken penalty (£ per hr)	Stage constraint broken penalty (£ per hr)	Cost of controller stream penalties (£ per hr)
08:00-09:00	1	0.00	0.00	0.00	0.00

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (PCU)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	A	1	51	78	467	2004	45	21.01	9.34	22.24	38.71	4.12	42.82
	Ax	1	0	Unrestricted	296	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	B	2	26	249	127	1823	26	29.93	2.80	14.72	14.99	1.24	16.23
	B Filter	2	47	93	247	1957	26	33.48	5.90	196.63	32.62	2.62	35.24
	Bx	1	0	Unrestricted	718	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	D	1	78	15	350	1867	23	49.29	10.38	20.76	68.05	4.60	72.65
	Dx	1	0	Unrestricted	177	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	B-1	1	18	395	374	2055	100	0.19	0.02	1.16	0.29	0.00	0.29

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Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Calculated sat flow (PCU/hr)	Calculated capacity (PCU/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))	Effe gre (cy
08:00-09:00	A	1	467	467	0		2004	922	51		78	0.00	45	
	Ax	1	296	296	0		Unrestricted	Unrestricted	0		Unrestricted	1.39	100	1
	B	2	127	127	0		1823	492	26		249	0.00	26	
	B Filter	2	247	247	0		1957	528	47		93	0.00	26	
	Bx	1	718	718	0		Unrestricted	Unrestricted	0		Unrestricted	0.72	100	1
	D	1	350	350	0		1867	448	78		15	0.00	23	
	Dx	1	177	177	0		Unrestricted	Unrestricted	0		Unrestricted	0.91	100	1
	B-1	1	374	374	0		2055	2055	18		395	0.00	100	1

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	A	1	24.00	21.01	2.47	0.26	38.71	38.71	70.31	319.08	9.28	4.12	4.12
	Ax	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	B	2	2.40	29.93	1.01	0.04	14.99	14.99	78.05	97.51	1.61	1.24	1.24
	B Filter	2	2.40	33.48	2.09	0.20	32.62	32.62	84.64	201.76	7.30	2.62	2.62
	Bx	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	D	1	36.00	49.29	3.46	1.34	68.05	68.05	104.82	320.37	46.48	4.60	4.60
	Dx	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	B-1	1	1.20	0.19	0.00	0.02	0.29	0.29	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (PCU)	Mean max queue (PCU)	Max queue storage (PCU)	Utilised storage (%)	Average storage excess queue (PCU)	Average limit excess queue (PCU)	Excess queue penalty (£ per hr)	Max end of green queue (PCU)	Max end of red queue (PCU)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))	Estimated blocking
08:00-09:00	A	1	0.00	9.34	42.00	22.24	0.00	0.00	0.00	0.26	7.26	0.00	0.00	0.00	
	Ax	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			67.00	0.00	67.00	
	B	2	0.00	2.80	19.00	14.72	0.00	0.00	0.00	0.04	2.62	0.00	0.00	0.00	
	B Filter	2	0.00	5.90	3.00	196.63	0.63	0.00	0.00	0.20	5.21	0.00	0.00	0.00	
	Bx	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			16.00	0.00	16.00	
	D	1	0.00	10.38	50.00	20.76	0.00	0.00	0.00	1.34	8.72	0.00	0.00	0.00	
	Dx	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			43.00	0.00	43.00	
	B-1	1	0.00	0.02	1.74	1.16	0.00	0.00	0.00			0.00	43.00	43.00	

Traffic Stream Results: Journey times

Time Segment	Arm	Traffic Stream	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	A	1	93.40	5.84	16.00	45.01
	Ax	1	29.60	0.99	30.00	12.00
	B	2	2.54	1.14	2.23	32.33
	B Filter	2	4.94	2.46	2.01	35.88
	Bx	1	71.80	2.39	30.00	12.00
	D	1	105.00	8.29	12.66	85.29
	Dx	1	17.70	0.59	30.00	12.00
	B-1	1	3.74	0.14	25.81	1.39

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Mean Max Queue EoTS (PCU)	Max End of Green Queue EoTS (PCU)	Max End of Red Queue EoTS (PCU)	PCU Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	A	1	0.00	0.00	✓	9.34	0.26	7.26	1.00	0.00	42.82	42.82
	Ax	1	0.00	0.00	✓	0.00			1.00	0.00	0.00	0.00
	B	2	0.00	0.00	✓	2.80	0.04	2.62	1.00	0.00	16.23	16.23
	B Filter	2	0.00	0.00	✓	5.90	0.20	5.21	1.00	0.00	35.24	35.24
	Bx	1	0.00	0.00	✓	0.00			1.00	0.00	0.00	0.00
	D	1	0.00	0.00	✓	10.41	1.36	8.75	1.00	0.00	72.65	72.65
	Dx	1	0.00	0.00	✓	0.00			1.00	0.00	0.00	0.00
	B-1	1	0.00	0.00	✓	0.02			1.00	0.00	0.29	0.29

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s (per cycle))	Eff gr (c
08:00-09:00	(ALL)	(ALL)	0	0	0		11000	770	0		Unrestricted	0.00	7	

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Uniform delay (Ped-hr/hr)	Random plus oversat delay (Ped-hr/hr)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)
08:00-09:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Average storage excess queue (Ped)	Average limit excess queue (Ped)	Excess queue penalty (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Journey times

Time Segment	Crossing	Side	Distance travelled (Ped-km/hr)	Time spent (Ped-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	(ALL)	(ALL)	0.00	0.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00	0.00

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Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
1	08/03/2023 11:31:39	08/03/2023 11:31:39	08:00	100	167.23	10.89	78.11	D/1	0	0	D/1	B-1/1	D/

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	78	0	2756	520	14.23	154.65	12.58	167.23

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	0	0	42	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))	Effective green (s (per cycle))
08:00-09:00	2756	2756	0		78		15	562	566

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	14.31	14.23	9.03	1.86	154.65	154.65	36.41	938.72	64.67	12.58	12.58

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
08:00-09:00	328.72	21.85	15.05

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: B

		To		
		A	B	D
From	A	0.0	57.0	57.0
	B	49.3	0.0	45.7
	D	97.3	97.3	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (PCU/hr)	Normal journey time (s)	Calculated Total Flow (PCU/hr)	Avg journey time (s)
8	D	A	49	97.29	49	97.29
9	D	B	301	97.29	301	97.29
11	A	D	50	57.01	50	57.01
12	A	B	417	57.01	417	57.01
14	B	D	127	45.72	127	45.72
15	B	A	247	49.27	247	49.27

Final Prediction Table

Traffic Stream Results

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			Q
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mea max queu (PCU
A	1	Scholarstown Rd	1	1	A	467	2004	45	0.00	51	78	45.01	21.01	70.31	9.34
Ax	1	(untitled)				296	Unrestricted	100	67.00	0	Unrestricted	12.00	0.00	0.00	0.00
B	2	Ballyboden Rd N	1	1	B	127	1823	26	0.00	26	249	32.33	29.93	78.05	2.80
B Filter	2	Ballyboden Rd N	1	1	B	247 <	1957	26	0.00	47	93	35.88	33.48	84.64	5.90
Bx	1	(untitled)				718	Unrestricted	100	16.00	0	Unrestricted	12.00	0.00	0.00	0.00
D	1	Edmonstown Road	1	1	D	350	1867	23	0.00	78	15	85.29	49.29	104.82	10.3
Dx	1	(untitled)				177	Unrestricted	100	43.00	0	Unrestricted	12.00	0.00	0.00	0.00
B-1	1	(untitled)	1			374	2055	100	43.00	18	395	1.39	0.19	0.00	0.02

Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE			PER PED		QUEUES	WEIGHTS	P
Pedestrian	Side	Name	Traffic node	Controller stream	Phase	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Degree of saturation (%)	Practical reserve capacity	JourneyTime (s)	Mean Delay per Ped (s)	Mean max queue (Ped)	Delay weighting (%)	(
(ALL)	(ALL)	(untitled)		1	E	0	11000	7	0	Unrestricted	0.00	0.00	0.00	100	

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	328.72	21.85	15.05	9.03	1.86	154.65	12.58	0.00	167.23
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	328.72	21.85	15.05	9.03	1.86	154.65	12.58	0.00	167.23

< = adjusted flow warning (upstream links/traffic streams are over-saturated)

** = Traffic Stream - Normal, Bus or Tram Stop or Delay weighting has been set to a value other than 100%*

^ = Traffic Stream - Normal, Bus or Tram Stop or Delay Path weighting has been set to a value other than 100%

+ = average link/traffic stream excess queue is greater than 0

P.I. = PERFORMANCE INDEX

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A2 - 2022 Base PM
D2 - 2022 Base PM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
2	08/03/2023 11:31:39	08/03/2023 11:31:40	17:00	120	130.76	8.53	63.05	A/1	0	0	A/1	B-1/1	A/

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2022 Base PM		D2	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2022 Base PM				17:00	

Network Options

Network timings

Network cycle time (s)	Restrict to SCOOT cycle times	Time segment length (min)	Number of time segments	Modelled time period (min)
120		60	1	60

Signals options

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

Advanced

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

Traffic options

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

Advanced

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

Normal Traffic parameters

Dispersion type	Dispersion coefficient	Travel time coefficient
Default	35	80

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

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

Tram parameters

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

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

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

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
1	(untitled)	

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
A	(untitled)		1
Ax	(untitled)		
B	(untitled)		1
B Filter	(untitled)		1
Bx	(untitled)		
D	(untitled)		1
Dx	(untitled)		
B-1	(untitled)		1

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Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
A	1	Scholarstown Rd			200.00	✓	Sum of lanes	2004	✓		Normal	
Ax	1	(untitled)			100.00						Normal	
B	2	Ballyboden Rd N			20.00	✓	Sum of lanes	1823	✓		Normal	
B Filter	2	Ballyboden Rd N			20.00	✓	Sum of lanes	1957	✓		Normal	
Bx	1	(untitled)			100.00						Normal	
D	1	Edmonstown Road			300.00	✓	Sum of lanes	1867	✓		Normal	
Dx	1	(untitled)			100.00						Normal	
B-1	1	(untitled)			10.00	✓	Sum of lanes	2055			Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Surface condition	Site quality factor	Gradient (%)	Width (m)	Use connector turning radius	Proportion that turn (%)	Turning radius (m)	Nearside lane	Saturation flow (PCU/hr)
A	1	1	(untitled)		✓	N/A	N/A	0	4.50		67	10.00		2004
Ax	1	1	(untitled)											
B	2	1	(untitled)		✓	N/A	N/A	0	3.00		67	20.00	✓	1823
B Filter	2	1	(untitled)		✓	N/A	N/A	0	3.00		67	20.00		1957
Bx	1	1	(untitled)											
D	1	1	(untitled)		✓	N/A	N/A	0	3.00		67	10.00		1867
Dx	1	1	(untitled)											
B-1	1	1	(untitled)		✓	N/A	N/A	0	3.00		0	6.00		2055

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
A	1	NetworkDefault	100	100	100		0.00		
Ax	1	NetworkDefault	100	100	100		0.00		
B	2	NetworkDefault	100	100	100		0.00		
B Filter	2	NetworkDefault	100	100	100		3.00		
Bx	1	NetworkDefault	100	100	100		0.00		
D	1	NetworkDefault	100	100	100		0.00		
Dx	1	NetworkDefault	100	100	100		0.00		
B-1	1	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
(ALL)	(ALL)	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	120

Normal traffic - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	(ALL)	100	100

Normal traffic - Advanced

Arm	Traffic Stream	Dispersion type for Normal Traffic
(ALL)	(ALL)	NetworkDefault

Flows

Arm	Traffic Stream	Total Flow (PCU/hr)	Normal Flow (PCU/hr)
A	1	358	358
Ax	1	425	425
B	2	160	160
B Filter	2	382	382
Bx	1	430	430
D	1	185	185
Dx	1	230	230
B-1	1	542	542

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled
A	1	1	A	
B	2	1	B	
B Filter	2	1	B	
D	1	1	D	

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
A	1	24.00	30.00
D	1	36.00	30.00
B-1	1	1.20	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	1	1	D/1	Ax/1	12.00	30.00	✓	Nearside	37.21
B	2	1	B-1/1	B/2	2.40	30.00	✓	Straight	Straight Movement
B Filter	2	1	B-1/1	B Filter/2	2.40	30.00	✓	Straight	Straight Movement
Bx	1	1	D/1	Bx/1	12.00	30.00	✓	Straight	Straight Movement
Dx	1	1	A/1	Dx/1	12.00	30.00	✓	Offside	67.90
Ax	1	2	B Filter/2	Ax/1	12.00	30.00	✓	Offside	81.96
Bx	1	2	A/1	Bx/1	12.00	30.00	✓	Nearside	55.47
Dx	1	2	B/2	Dx/1	12.00	30.00	✓	Straight	Straight Movement

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
1	(untitled)				Farside	9.00	6.00	5.40
2	(untitled)				Farside	10.50	7.00	5.40
3	(untitled)				Farside	9.50	6.33	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	E	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(ALL)	11000

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Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	100	100		0.00		

Local OD Matrix - Local Matrix: B

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
B	(untitled)	✓	✓	Path Equalisation			✓			✓	1.25		

Normal Input Flows (PCU/hr)

		To		
		A	B	D
From	A	0	288	70
	B	382	0	160
	D	43	142	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
B	A	Parnwell Lodge	A/1	Ax/1	#FFFF00
	B	Bridge Street (W)	B-1/1	Bx/1	#0000FF
	D	Bridge Street (E)	D/1	Dx/1	#00FF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
B	8		D	A	D/1, Ax/1	Normal	43
	9		D	B	D/1, Bx/1	Normal	142
	11		A	D	A/1, Dx/1	Normal	70
	12		A	B	A/1, Bx/1	Normal	288
	14		B	D	B-1/1, B/2, Dx/1	Normal	160
	15		B	A	B-1/1, B Filter/2, Ax/1	Normal	382

Signal Timings

Network Default: 120s cycle time; 120 steps

Controller Stream 1

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)
1	(untitled)		8	NetworkDefault	120

Controller Stream 1 - Properties

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
1	Unspecified						Absolute

Controller Stream 1 - Optimisation

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
1	✓	✓	Offsets And Green Splits	✓	

Phases

Controller Stream	Phase	Name	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type	Blackout Time (s)
1	A	(untitled)	7	300	0	0	Traffic	
	B	(untitled)	7	300	0	0	Traffic	
	D	(untitled)	7	300	0	0	Traffic	
	E	(untitled)	6	300	0	0	Pedestrian	0

Library Stages

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)
1	1	A	1
	2	B, D	1
	3	E	7
	4	B	3

Stage Sequences

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends
1	8	(untitled)	Single	1, 2, 4, 3	26, 84, 87, 102

Intergreen Matrix for Controller Stream 1

		To			
		A	B	D	E
From	A		5	5	6
	B	5			8
	D	6			7
	E	11	11	11	

Banned Stage transitions for Controller Stream 1

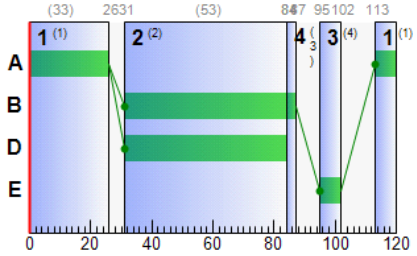
		To			
		1	2	3	4
From	1				
	2				
	3				
	4				

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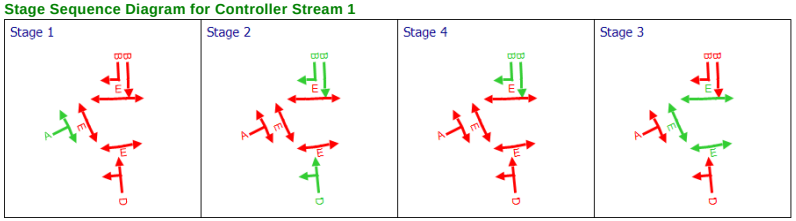
Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
A	1	1	1	A	113	26	33
B	2	1	1	B	31	87	56
B Filter	2	1	1	B	31	87	56
D	1	1	1	D	31	84	53

Phase Timings Diagram for Controller Stream 1



Stage Sequence Diagram for Controller Stream 1



Resultant penalties

Time Segment	Controller stream	Phase min max penalty (£ per hr)	Intergreen broken penalty (£ per hr)	Stage constraint broken penalty (£ per hr)	Cost of controller stream penalties (£ per hr)
17:00-18:00	1	0.00	0.00	0.00	0.00

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (PCU)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	A	1	63	43	358	2004	33	42.87	10.87	31.26	60.54	4.04	64.58
	Ax	1	0	Unrestricted	425	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	B	2	18	387	160	1823	56	18.60	3.09	88.77	11.74	1.13	12.87
	B Filter	2	41	119	382	1957	56	21.90	8.42	280.66	33.00	3.10	36.10
	Bx	1	0	Unrestricted	430	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	D	1	22	309	185	1867	53	20.76	3.78	7.25	15.15	1.40	16.54
	Dx	1	0	Unrestricted	230	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	B-1	1	26	241	542	2055	120	0.31	0.05	2.72	0.67	0.00	0.67

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Calculated sat flow (PCU/hr)	Calculated capacity (PCU/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))	Effe gre (cy
17:00-18:00	A	1	358	358	0		2004	568	63		43	0.00	33	
	Ax	1	425	425	0		Unrestricted	Unrestricted	0		Unrestricted	1.00	120	1
	B	2	160	160	0		1823	866	18		387	0.00	56	
	B Filter	2	382	382	0		1957	930	41		119	0.00	56	
	Bx	1	430	430	0		Unrestricted	Unrestricted	0		Unrestricted	0.94	120	1
	D	1	185	185	0		1867	840	22		309	0.00	53	
	Dx	1	230	230	0		Unrestricted	Unrestricted	0		Unrestricted	0.74	120	1
	B-1	1	542	542	0		2055	2055	26		241	0.00	120	1

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	A	1	24.00	42.87	3.73	0.53	60.54	60.54	89.94	306.21	15.78	4.04	4.04
	Ax	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	B	2	2.40	18.60	0.81	0.02	11.74	11.74	56.36	89.56	0.63	1.13	1.13
	B Filter	2	2.40	21.90	2.18	0.14	33.00	33.00	64.73	242.97	4.28	3.10	3.10
	Bx	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	D	1	36.00	20.76	1.04	0.03	15.15	15.15	60.14	110.33	0.93	1.40	1.40
	Dx	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	B-1	1	1.20	0.31	0.00	0.05	0.67	0.67	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (PCU)	Mean max queue (PCU)	Max queue storage (PCU)	Utilised storage (%)	Average storage excess queue (PCU)	Average limit excess queue (PCU)	Excess queue penalty (£ per hr)	Max end of green queue (PCU)	Max end of red queue (PCU)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))	Estimated blocking
17:00-18:00	A	1	0.00	10.87	34.78	31.26	0.00	0.00	0.00	0.53	9.08	0.00	0.00	0.00	
	Ax	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			56.00	0.00	56.00	
	B	2	0.00	3.09	3.48	88.77	0.00	0.00	0.00	0.02	2.82	0.00	0.00	0.00	
	B Filter	2	0.00	8.42	3.00	280.66	1.18	0.00	0.00	0.14	6.83	0.00	0.00	0.00	
	Bx	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			25.00	0.00	25.00	
	D	1	0.00	3.78	52.17	7.25	0.00	0.00	0.00	0.03	3.42	0.00	0.00	0.00	
	Dx	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			26.00	0.00	26.00	
	B-1	1	0.00	0.05	1.74	2.72	0.00	0.00	0.00			0.00	52.00	52.00	

Traffic Stream Results: Journey times

Time Segment	Arm	Traffic Stream	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
17:00-18:00	A	1	71.60	6.65	10.77	66.87
	Ax	1	42.50	1.42	30.00	12.00
	B	2	3.20	0.93	3.43	21.00
	B Filter	2	7.64	2.58	2.96	24.30
	Bx	1	43.00	1.43	30.00	12.00
	D	1	55.50	2.92	19.03	56.76
	Dx	1	23.00	0.77	30.00	12.00
	B-1	1	5.42	0.23	23.78	1.51

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Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Mean Max Queue EoTS (PCU)	Max End of Green Queue EoTS (PCU)	Max End of Red Queue EoTS (PCU)	PCU Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
17:00-18:00	A	1	0.00	0.00	✓	10.88	0.53	9.09	1.00	0.00	64.58	64.58
	Ax	1	0.00	0.00	✓	0.00			1.00	0.00	0.00	0.00
	B	2	0.00	0.00	✓	3.09	0.02	2.82	1.00	0.00	12.87	12.87
	B Filter	2	0.00	0.00	✓	8.42	0.14	6.83	1.00	0.00	36.10	36.10
	Bx	1	0.00	0.00	✓	0.00			1.00	0.00	0.00	0.00
	D	1	0.00	0.00	✓	3.78	0.03	3.42	1.00	0.00	16.54	16.54
	Dx	1	0.00	0.00	✓	0.00			1.00	0.00	0.00	0.00
	B-1	1	0.00	0.00	✓	0.05			1.00	0.00	0.67	0.67

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
17:00-18:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s (per cycle))	Eff gr (c
17:00-18:00	(ALL)	(ALL)	0	0	0		11000	642	0		Unrestricted	0.00	7	

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Uniform delay (Ped-hr/hr)	Random plus oversat delay (Ped-hr/hr)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)
17:00-18:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Average storage excess queue (Ped)	Average limit excess queue (Ped)	Excess queue penalty (£ per hr)
17:00-18:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Journey times

Time Segment	Crossing	Side	Distance travelled (Ped-km/hr)	Time spent (Ped-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
17:00-18:00	(ALL)	(ALL)	0.00	0.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
17:00-18:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
2	08/03/2023 11:31:39	08/03/2023 11:31:40	17:00	120	130.76	8.53	63.05	A/1	0	0	A/1	B-1/1	A/

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	63	0	2712	678	11.32	121.10	9.66	130.76

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
17:00-18:00	0	0	42	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))	Effective green (s (per cycle))
17:00-18:00	2712	2712	0		63		43	720	724

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	11.14	11.32	7.75	0.77	121.10	121.10	28.42	749.06	21.62	9.66	9.66

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
17:00-18:00	251.86	16.92	14.88

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: B

		To		
		A	B	D
From	A	0.0	78.9	78.9
	B	37.8	0.0	34.5
	D	68.8	68.8	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (PCU/hr)	Normal journey time (s)	Calculated Total Flow (PCU/hr)	Avg journey time (s)
8	D	A	43	68.76	43	68.76
9	D	B	142	68.76	142	68.76
11	A	D	70	78.87	70	78.87
12	A	B	288	78.87	288	78.87
14	B	D	160	34.52	160	34.52
15	B	A	382	37.81	382	37.81

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Final Prediction Table

Traffic Stream Results

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QU
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (PCU)
A	1	Scholarstown Rd	1	1	A	358	2004	33	0.00	63	43	66.87	42.87	89.94	10.87
Ax	1	(untitled)				425	Unrestricted	120	56.00	0	Unrestricted	12.00	0.00	0.00	0.00
B	2	Ballyboden Rd N	1	1	B	160	1823	56	0.00	18	387	21.00	18.60	56.36	3.09
B Filter	2	Ballyboden Rd N	1	1	B	382 <	1957	56	0.00	41	119	24.30	21.90	64.73	8.42 +
Bx	1	(untitled)				430	Unrestricted	120	25.00	0	Unrestricted	12.00	0.00	0.00	0.00
D	1	Edmonstown Road	1	1	D	185	1867	53	0.00	22	309	56.76	20.76	60.14	3.78
Dx	1	(untitled)				230	Unrestricted	120	26.00	0	Unrestricted	12.00	0.00	0.00	0.00
B-1	1	(untitled)	1			542	2055	120	52.00	26	241	1.51	0.31	0.00	0.05

Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE			PER PED		QUEUES	WEIGHTS	P
Pedestrian	Side	Name	Traffic node	Controller stream	Phase	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Degree of saturation (%)	Practical reserve capacity	JourneyTime (s)	Mean Delay per Ped (s)	Mean max queue (Ped)	Delay weighting (%)	(
(ALL)	(ALL)	(untitled)		1	E	0	11000	7	0	Unrestricted	0.00	0.00	0.00	100	

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	251.86	16.92	14.88	7.75	0.77	121.10	9.66	0.00	130.76
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	251.86	16.92	14.88	7.75	0.77	121.10	9.66	0.00	130.76

< = adjusted flow warning (upstream links/traffic streams are over-saturated)

** = Traffic Stream - Normal, Bus or Tram Stop or Delay weighting has been set to a value other than 100%*

^ = Traffic Stream - Normal, Bus or Tram Stop or Delay Path weighting has been set to a value other than 100%

+ = average link/traffic stream excess queue is greater than 0

P.I. = PERFORMANCE INDEX

TRANSYT 15

Version: 15.5.3.7
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The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution

Filename: 190068 Double Lane Entries -Do Nothing.t15
Path: G:\2019\p190068\calcs\Traffic\2022 Resubmission\TRANSYT
Report generation date: 24/03/2023 09:33:30

»A1 - 2025 DN AM : D1 - 2025 DN AM* :
»A2 - 2025 DN PM : D2 - 2025 DN PM* :
»A3 - 2030 DN AM : D3 - 2030 DN AM* :
»A4 - 2030 DN PM : D4 - 2030 DN PM* :
»A5 - 2040 DN AM : D5 - 2040 DN AM* :
»A6 - 2040 DN PM : D6 - 2040 DN PM* :

File summary

File description

File title	Residential Development, Taylors Lane
Location	Ballyboden Rd/Edmondstown Rd/Scholarstown Rd/Site Access
Site number	
UTCRegion	
Driving side	Left
Date	03/03/2023
Version	
Status	Preliminary
Identifier	RB
Client	
Jobnumber	190068
Enumerator	HEADOFFICE\browner
Description	Do Something - Double Lane Entries

Model and Results

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

Units

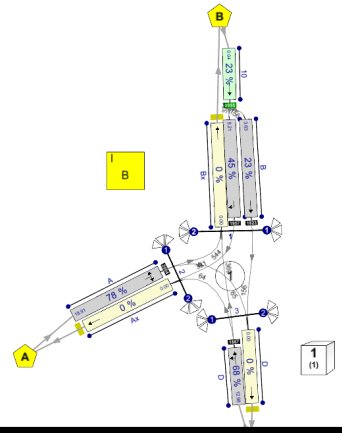
Cost units	Speed units	Distance units	Fuel economy units	Fuel rate units	Mass units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
£	kph	m	mpg	l/h	kg	PCU	PCU	perHour	s	-Hour	perHour

Sorting

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

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Network Diagrams



A1 - 2025 DN AM
D1 - 2025 DN AM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
1	24/03/2023 09:33:20	24/03/2023 09:33:20	08:00	100	177.64	11.53	73.33	A/1	0	0	A/1	10/1	A/

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2025 DN AM		D1	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2025 DN AM				08:00	

Network Options

Network timings

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

Signals options

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

Advanced

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

Traffic options

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

Advanced

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

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Normal Traffic parameters

Dispersion type	Dispersion coefficient	Travel time coefficient
Default	35	80

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

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

Tram parameters

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

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

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

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
1	(untitled)	

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
A	(untitled)		1
Ax	(untitled)		
B	(untitled)		1
BSlip	(untitled)		1
Bx	(untitled)		
D	(untitled)		1
Dx	(untitled)		
10	(untitled)		1

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
A	1	Scholarstown Rd			200.00	✓	Sum of lanes	2004	✓		Normal	
Ax	1	(untitled)			100.00						Normal	
B	2	Ballyboden Rd N			20.00	✓	Sum of lanes	1823	✓		Normal	
BSlip	2	Ballyboden Rd N			60.00	✓	Sum of lanes	1957	✓		Normal	
Bx	1	(untitled)			100.00						Normal	
D	1	Edmonstown Road			300.00	✓	Sum of lanes	1867	✓		Normal	
Dx	1	(untitled)			100.00						Normal	
10	1	(untitled)			10.00	✓	Sum of lanes	2055			Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Surface condition	Site quality factor	Gradient (%)	Width (m)	Use connector turning radius	Proportion that turn (%)	Turning radius (m)	Nearside lane	Saturation flow (PCU/hr)
A	1	1	(untitled)		✓	N/A	N/A	0	4.50		67	10.00		2004
Ax	1	1	(untitled)											
B	2	1	(untitled)		✓	N/A	N/A	0	3.00		67	20.00	✓	1823
BSlip	2	1	(untitled)		✓	N/A	N/A	0	3.00		67	20.00		1957
Bx	1	1	(untitled)											
D	1	1	(untitled)		✓	N/A	N/A	0	3.00		67	10.00		1867
Dx	1	1	(untitled)											
10	1	1	(untitled)		✓	N/A	N/A	0	3.00		0	6.00		2055

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
(ALL)	(ALL)	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100

Normal traffic - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	(ALL)	100	100

Normal traffic - Advanced

Arm	Traffic Stream	Dispersion type for Normal Traffic
(ALL)	(ALL)	NetworkDefault

Flows

Arm	Traffic Stream	Total Flow (PCU/hr)	Normal Flow (PCU/hr)
A	1	529	529
Ax	1	333	333
B	2	134	134
BSlip	2	278	278
Bx	1	790	790
D	1	373	373
Dx	1	191	191
10	1	412	412

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Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled
A	1	1	A	
B	2	1	B	
BSlip	2	1	B	
D	1	1	D	

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
A	1	24.00	30.00
D	1	36.00	30.00
10	1	1.20	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	1	1	D/1	Ax/1	12.00	30.00	✓	Nearside	37.46
B	2	1	10/1	B/2	2.40	30.00	✓	Straight	Straight Movement
BSlip	2	1	10/1	BSlip/2	7.20	30.00	✓	Straight	Straight Movement
Bx	1	1	D/1	Bx/1	12.00	30.00	✓	Straight	Straight Movement
Dx	1	1	A/1	Dx/1	12.00	30.00	✓	Offside	67.90
Ax	1	2	BSlip/2	Ax/1	12.00	30.00	✓	Offside	81.96
Bx	1	2	A/1	Bx/1	12.00	30.00	✓	Nearside	55.47
Dx	1	2	B/2	Dx/1	12.00	30.00	✓	Straight	Straight Movement

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
1	(untitled)				Farside	9.00	6.00	5.40
2	(untitled)				Farside	10.50	7.00	5.40
3	(untitled)				Farside	9.50	6.33	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	E	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(ALL)	11000

Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	100	100		0.00		

Local OD Matrix - Local Matrix: B

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
B	(untitled)	✓	✓	Path Equalisation			✓			✓	1.25		

Normal Input Flows (PCU/hr)

		To		
		A	B	D
From	A	0	472	57
	B	278	0	134
	D	55	318	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
B	A	Parnwell Lodge	A/1	Ax/1	#FFFF00
	B	Bridge Street (W)	10/1	Bx/1	#0000FF
	D	Bridge Street (E)	D/1	Dx/1	#00FF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
B	8		D	A	D/1, Ax/1	Normal	55
	9		D	B	D/1, Bx/1	Normal	318
	11		A	D	A/1, Dx/1	Normal	57
	12		A	B	A/1, Bx/1	Normal	472
	14		B	D	10/1, B/2, Dx/1	Normal	134
	15		B	A	10/1, BSlip/2, Ax/1	Normal	278

Signal Timings

Network Default: 100s cycle time; 100 steps

Controller Stream 1

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)
1	(untitled)		8	NetworkDefault	100

Controller Stream 1 - Properties

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
1	Unspecified						Absolute

Controller Stream 1 - Optimisation

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
1	✓	✓	Offsets And Green Splits	✓	

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Phases

Controller Stream	Phase	Name	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type	Blackout Time (s)
1	A	(untitled)	7	300	0	0	Traffic	
	B	(untitled)	7	300	0	0	Traffic	
	D	(untitled)	7	300	0	0	Traffic	
	E	(untitled)	6	300	0	0	Pedestrian	0

Library Stages

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)
1	1	A	1
	2	B, D	1
	3	E	7
	5	B	3

Stage Sequences

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends
1	8	(untitled)	Single	1, 2, 5, 3	33, 69, 72, 87

Intergreen Matrix for Controller Stream 1

		To				
		A	B	D	E	
From	A		5	5	6	
	B	5			8	
	D	6			7	
	E	11	11	11		

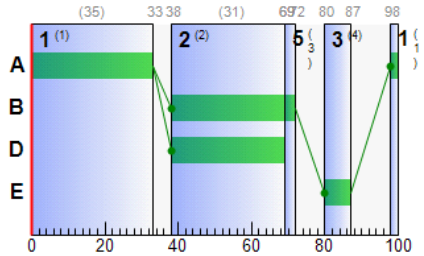
Banned Stage transitions for Controller Stream 1

		To				
		1	2	3	5	
From	1					
	2					
	3					
	5					

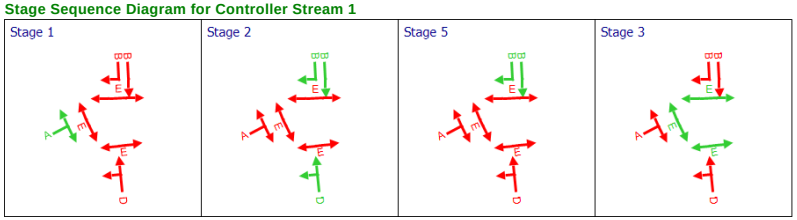
Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
A	1	1	1	A	98	33	35
B	2	1	1	B	38	72	34
BSlip	2	1	1	B	38	72	34
D	1	1	1	D	38	69	31

Phase Timings Diagram for Controller Stream 1



Stage Sequence Diagram for Controller Stream 1



Resultant penalties

Time Segment	Controller stream	Phase min max penalty (£ per hr)	Intergreen broken penalty (£ per hr)	Stage constraint broken penalty (£ per hr)	Cost of controller stream penalties (£ per hr)
08:00-09:00	1	0.00	0.00	0.00	0.00

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (PCU)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	A	1	73	23	529	2004	35	34.56	13.63	39.18	72.12	6.05	78.17
	Ax	1	0	Unrestricted	333	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	B	2	21	329	134	1823	34	23.56	2.63	75.71	12.45	1.16	13.62
	BSlip	2	41	122	278	1957	34	26.42	5.93	56.83	28.97	2.63	31.60
	Bx	1	0	Unrestricted	790	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	D	1	62	44	373	1867	31	33.85	9.22	17.67	49.80	4.10	53.90
	Dx	1	0	Unrestricted	191	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	10	1	20	349	412	2055	100	0.22	0.03	1.44	0.36	0.00	0.36

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Calculated sat flow (PCU/hr)	Calculated capacity (PCU/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))	Eff gre (cy
08:00-09:00	A	1	529	529	0		2004	721	73		23	0.00	35	
	Ax	1	333	333	0		Unrestricted	Unrestricted	0		Unrestricted	1.24	100	
	B	2	134	134	0		1823	638	21		329	0.00	34	
	BSlip	2	278	278	0		1957	685	41		122	0.00	34	
	Bx	1	790	790	0		Unrestricted	Unrestricted	0		Unrestricted	0.74	100	
	D	1	373	373	0		1867	597	62		44	0.00	31	
	Dx	1	191	191	0		Unrestricted	Unrestricted	0		Unrestricted	0.78	100	
	10	1	412	412	0		2055	2055	20		349	0.00	100	

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Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	A	1	24.00	34.56	4.09	0.99	72.12	72.12	91.16	447.18	35.05	6.05	6.05
	Ax	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	B	2	2.40	23.56	0.85	0.03	12.45	12.45	69.27	91.82	1.00	1.16	1.16
	BSlip	2	7.20	26.42	1.90	0.14	28.97	28.97	75.51	204.96	4.96	2.63	2.63
	Bx	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	D	1	36.00	33.85	2.99	0.51	49.80	49.80	87.58	308.42	18.26	4.10	4.10
	Dx	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	10	1	1.20	0.22	0.00	0.03	0.36	0.36	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (PCU)	Mean max queue (PCU)	Max queue storage (PCU)	Utilised storage (%)	Average storage excess queue (PCU)	Average limit excess queue (PCU)	Excess queue penalty (£ per hr)	Max end of green queue (PCU)	Max end of red queue (PCU)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))	Estimated blocking
08:00-09:00	A	1	0.00	13.63	34.78	39.18	0.00	0.00	0.00	0.99	10.39	0.00	0.00	0.00	
	Ax	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			59.00	0.00	59.00	
	B	2	0.00	2.63	3.48	75.71	0.00	0.00	0.00	0.03	2.45	0.00	0.00	0.00	
	BSlip	2	0.00	5.93	10.43	56.83	0.00	0.00	0.00	0.14	5.16	0.00	0.00	0.00	
	Bx	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			22.00	0.00	22.00	
	D	1	0.00	9.22	52.17	17.67	0.00	0.00	0.00	0.51	7.56	0.00	0.00	0.00	
	Dx	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			27.00	0.00	27.00	
	10	1	0.00	0.03	1.74	1.44	0.00	0.00	0.00			0.00	0.00	0.00	

Traffic Stream Results: Journey times

Time Segment	Arm	Traffic Stream	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	A	1	105.80	8.61	12.29	58.56
	Ax	1	33.30	1.11	30.00	12.00
	B	2	2.68	0.97	2.77	25.96
	BSlip	2	16.68	2.60	6.43	33.62
	Bx	1	79.00	2.63	30.00	12.00
	D	1	111.90	7.24	15.46	69.85
	Dx	1	19.10	0.64	30.00	12.00
	10	1	4.12	0.16	25.36	1.42

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Mean Max Queue EoTS (PCU)	Max End of Green Queue EoTS (PCU)	Max End of Red Queue EoTS (PCU)	PCU Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	A	1	0.00	0.00	✓	13.64	1.00	10.40	1.00	0.00	78.17	78.17
	Ax	1	0.00	0.00	✓	0.00			1.00	0.00	0.00	0.00
	B	2	0.00	0.00	✓	2.63	0.03	2.45	1.00	0.00	13.62	13.62
	BSlip	2	0.00	0.00	✓	5.93	0.14	5.16	1.00	0.00	31.60	31.60
	Bx	1	0.00	0.00	✓	0.00			1.00	0.00	0.00	0.00
	D	1	0.00	0.00	✓	9.22	0.52	7.56	1.00	0.00	53.90	53.90
	Dx	1	0.00	0.00	✓	0.00			1.00	0.00	0.00	0.00
	10	1	0.00	0.00	✓	0.03			1.00	0.00	0.36	0.36

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s (per cycle))	Eff gr (c
08:00-09:00	(ALL)	(ALL)	0	0	0		11000	770	0		Unrestricted	0.00	7	

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Uniform delay (Ped-hr/hr)	Random plus oversat delay (Ped-hr/hr)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)
08:00-09:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Average storage excess queue (Ped)	Average limit excess queue (Ped)	Excess queue penalty (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Journey times

Time Segment	Crossing	Side	Distance travelled (Ped-km/hr)	Time spent (Ped-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	(ALL)	(ALL)	0.00	0.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
1	24/03/2023 09:33:20	24/03/2023 09:33:20	08:00	100	177.64	11.53	73.33	A/1	0	0	A/1	10/1	A/

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	73	0	3040	534	13.65	163.70	13.94	177.64

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	0	0	42	0.00	0.00	0.00

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Network Results: Flows and signals

Time Segment	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))	Effective green (s (per cycle))
08:00-09:00	3040	3040	0		73		23	576	580

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	14.71	13.65	9.83	1.69	163.70	163.70	36.57	1052.38	59.27	13.94	13.94

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
08:00-09:00	372.58	23.95	15.56

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: B

		To		
		A	B	D
From	A	0.0	70.6	70.6
	B	47.0	0.0	39.4
	D	81.8	81.8	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (PCU/hr)	Normal journey time (s)	Calculated Total Flow (PCU/hr)	Avg journey time (s)
8	D	A	55	81.85	55	81.85
9	D	B	318	81.85	318	81.85
11	A	D	57	70.56	57	70.56
12	A	B	472	70.56	472	70.56
14	B	D	134	39.38	134	39.38
15	B	A	278	47.04	278	47.04

Final Prediction Table

Traffic Stream Results

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QU
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queu (PCU)
A	1	Scholarstown Rd	1	1	A	529	2004	35	0.00	73	23	58.56	34.56	91.16	13.63
Ax	1	(untitled)				333	Unrestricted	100	59.00	0	Unrestricted	12.00	0.00	0.00	0.00
B	2	Ballyboden Rd N	1	1	B	134	1823	34	0.00	21	329	25.96	23.56	69.27	2.63
BSlip	2	Ballyboden Rd N	1	1	B	278	1957	34	0.00	41	122	33.62	26.42	75.51	5.93
Bx	1	(untitled)				790	Unrestricted	100	22.00	0	Unrestricted	12.00	0.00	0.00	0.00
D	1	Edmonstown Road	1	1	D	373	1867	31	0.00	62	44	69.85	33.85	87.58	9.22
Dx	1	(untitled)				191	Unrestricted	100	27.00	0	Unrestricted	12.00	0.00	0.00	0.00
10	1	(untitled)	1			412	2055	100	0.00	20	349	1.42	0.22	0.00	0.03

Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE			PER PED		QUEUES	WEIGHTS	P
Pedestrian	Side	Name	Traffic node	Controller stream	Phase	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Degree of saturation (%)	Practical reserve capacity	JourneyTime (s)	Mean Delay per Ped (s)	Mean max queue (Ped)	Delay weighting (%)	(
(ALL)	(ALL)	(untitled)		1	E	0	11000	7	0	Unrestricted	0.00	0.00	0.00	100	

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	372.58	23.95	15.56	9.83	1.69	163.70	13.94	0.00	177.64
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	372.58	23.95	15.56	9.83	1.69	163.70	13.94	0.00	177.64

< = adjusted flow warning (upstream links/traffic streams are over-saturated)

** = Traffic Stream - Normal, Bus or Tram Stop or Delay weighting has been set to a value other than 100%*

^ = Traffic Stream - Normal, Bus or Tram Stop or Delay Path weighting has been set to a value other than 100%

+ = average link/traffic stream excess queue is greater than 0

P.I. = PERFORMANCE INDEX

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A2 - 2025 DN PM
D2 - 2025 DN PM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit over PR
2	24/03/2023 09:33:20	24/03/2023 09:33:21	17:00	120	152.53	9.96	65.71	A/1	0	0	A/1	10/1	A/

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2025 DN PM		D2	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2025 DN PM				17:00	

Network Options

Network timings

Network cycle time (s)	Restrict to SCOOT cycle times	Time segment length (min)	Number of time segments	Modelled time period (min)
120		60	1	60

Signals options

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

Advanced

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

Traffic options

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

Advanced

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

Normal Traffic parameters

Dispersion type	Dispersion coefficient	Travel time coefficient
Default	35	80

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

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

Tram parameters

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

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

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

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
1	(untitled)	

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
A	(untitled)		1
Ax	(untitled)		
B	(untitled)		1
BSlip	(untitled)		1
Bx	(untitled)		
D	(untitled)		1
Dx	(untitled)		
10	(untitled)		1

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Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
A	1	Scholarstown Rd			200.00	✓	Sum of lanes	2004	✓		Normal	
Ax	1	(untitled)			100.00						Normal	
B	2	Ballyboden Rd N			20.00	✓	Sum of lanes	1823	✓		Normal	
BSlip	2	Ballyboden Rd N			60.00	✓	Sum of lanes	1957	✓		Normal	
Bx	1	(untitled)			100.00						Normal	
D	1	Edmonstown Road			300.00	✓	Sum of lanes	1867	✓		Normal	
Dx	1	(untitled)			100.00						Normal	
10	1	(untitled)			10.00	✓	Sum of lanes	2055			Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Surface condition	Site quality factor	Gradient (%)	Width (m)	Use connector turning radius	Proportion that turn (%)	Turning radius (m)	Nearside lane	Saturation flow (PCU/hr)
A	1	1	(untitled)		✓	N/A	N/A	0	4.50		67	10.00		2004
Ax	1	1	(untitled)											
B	2	1	(untitled)		✓	N/A	N/A	0	3.00		67	20.00	✓	1823
BSlip	2	1	(untitled)		✓	N/A	N/A	0	3.00		67	20.00		1957
Bx	1	1	(untitled)											
D	1	1	(untitled)		✓	N/A	N/A	0	3.00		67	10.00		1867
Dx	1	1	(untitled)											
10	1	1	(untitled)		✓	N/A	N/A	0	3.00		0	6.00		2055

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
(ALL)	(ALL)	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	120

Normal traffic - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	(ALL)	100	100

Normal traffic - Advanced

Arm	Traffic Stream	Dispersion type for Normal Traffic
(ALL)	(ALL)	NetworkDefault

Flows

Arm	Traffic Stream	Total Flow (PCU/hr)	Normal Flow (PCU/hr)
A	1	406	406
Ax	1	476	476
B	2	169	169
BSlip	2	426	426
Bx	1	477	477
D	1	200	200
Dx	1	248	248
10	1	595	595

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled
A	1	1	A	
B	2	1	B	
BSlip	2	1	B	
D	1	1	D	

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
A	1	24.00	30.00
D	1	36.00	30.00
10	1	1.20	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	1	1	D/1	Ax/1	12.00	30.00	✓	Nearside	37.46
B	2	1	10/1	B/2	2.40	30.00	✓	Straight	Straight Movement
BSlip	2	1	10/1	BSlip/2	7.20	30.00	✓	Straight	Straight Movement
Bx	1	1	D/1	Bx/1	12.00	30.00	✓	Straight	Straight Movement
Dx	1	1	A/1	Dx/1	12.00	30.00	✓	Offside	67.90
Ax	1	2	BSlip/2	Ax/1	12.00	30.00	✓	Offside	81.96
Bx	1	2	A/1	Bx/1	12.00	30.00	✓	Nearside	55.47
Dx	1	2	B/2	Dx/1	12.00	30.00	✓	Straight	Straight Movement

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
1	(untitled)				Farside	9.00	6.00	5.40
2	(untitled)				Farside	10.50	7.00	5.40
3	(untitled)				Farside	9.50	6.33	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	E	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(ALL)	11000

Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	100	100		0.00		

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Local OD Matrix - Local Matrix: B

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
B	(untitled)	✓	✓	Path Equalisation			✓			✓	1.25		

Normal Input Flows (PCU/hr)

		To		
		A	B	D
From	A	0	327	79
	B	426	0	169
	D	50	150	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
B	A	Parnwell Lodge	A/1	Ax/1	#FFFF00
	B	Bridge Street (W)	10/1	Bx/1	#0000FF
	D	Bridge Street (E)	D/1	Dx/1	#00FF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
B	8		D	A	D/1, Ax/1	Normal	50
	9		D	B	D/1, Bx/1	Normal	150
	11		A	D	A/1, Dx/1	Normal	79
	12		A	B	A/1, Bx/1	Normal	327
	14		B	D	10/1, B/2, Dx/1	Normal	169
	15		B	A	10/1, BSlip/2, Ax/1	Normal	426

Signal Timings

Network Default: 120s cycle time; 120 steps

Controller Stream 1

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)
1	(untitled)		8	NetworkDefault	120

Controller Stream 1 - Properties

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
1	Unspecified						Absolute

Controller Stream 1 - Optimisation

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
1	✓	✓	Offsets And Green Splits	✓	

Phases

Controller Stream	Phase	Name	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type	Blackout Time (s)
1	A	(untitled)	7	300	0	0	Traffic	
	B	(untitled)	7	300	0	0	Traffic	
	D	(untitled)	7	300	0	0	Traffic	
	E	(untitled)	6	300	0	0	Pedestrian	0

Library Stages

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)
1	1	A	1
	2	B, D	1
	3	E	7
	4	B	3

Stage Sequences

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends
1	8	(untitled)	Single	1, 2, 4, 3	29, 84, 87, 102

Intergreen Matrix for Controller Stream 1

		To			
		A	B	D	E
From	A		5	5	6
	B	5			8
	D	6			7
	E	11	11	11	

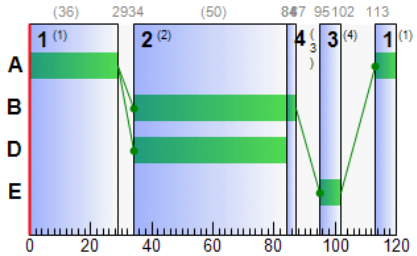
Banned Stage transitions for Controller Stream 1

		To			
		1	2	3	4
From	1				
	2				
	3				
	4				

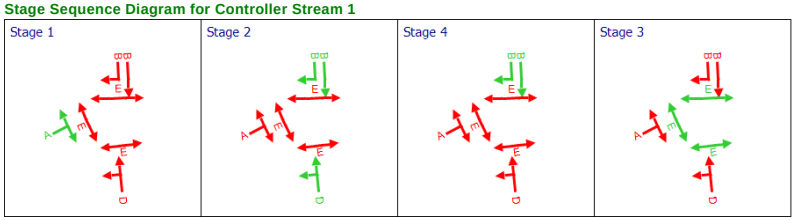
Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
A	1	1	1	A	113	29	36
B	2	1	1	B	34	87	53
BSlip	2	1	1	B	34	87	53
D	1	1	1	D	34	84	50

Phase Timings Diagram for Controller Stream 1



Stage Sequence Diagram for Controller Stream 1



Resultant penalties

Time Segment	Controller stream	Phase min max penalty (£ per hr)	Intergreen broken penalty (£ per hr)	Stage constraint broken penalty (£ per hr)	Cost of controller stream penalties (£ per hr)
17:00-18:00	1	0.00	0.00	0.00	0.00

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (PCU)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	A	1	66	37	406	2004	36	41.51	12.35	35.51	66.48	4.55	71.04
	Ax	1	0	Unrestricted	476	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	B	2	21	337	169	1823	53	20.58	3.41	97.94	13.72	1.26	14.98
	BSlip	2	48	86	426	1957	53	25.11	10.17	97.42	42.20	3.75	45.95
	Bx	1	0	Unrestricted	477	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	D	1	25	257	200	1867	50	22.99	4.32	8.28	18.14	1.59	19.73
	Dx	1	0	Unrestricted	248	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	10	1	29	211	595	2055	120	0.36	0.06	3.39	0.84	0.00	0.84

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Calculated sat flow (PCU/hr)	Calculated capacity (PCU/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))	Eff gre (cy
17:00-18:00	A	1	406	406	0		2004	618	66		37	0.00	36	
	Ax	1	476	476	0		Unrestricted	Unrestricted	0		Unrestricted	1.05	120	
	B	2	169	169	0		1823	820	21		337	0.00	53	
	BSlip	2	426	426	0		1957	881	48		86	0.00	53	
	Bx	1	477	477	0		Unrestricted	Unrestricted	0		Unrestricted	0.92	120	
	D	1	200	200	0		1867	793	25		257	0.00	50	
	Dx	1	248	248	0		Unrestricted	Unrestricted	0		Unrestricted	0.74	120	
	10	1	595	595	0		2055	2055	29		211	0.00	120	

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	A	1	24.00	41.51	4.06	0.62	66.48	66.48	89.46	344.75	18.45	4.55	4.55
	Ax	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	B	2	2.40	20.58	0.94	0.03	13.72	13.72	59.48	99.71	0.80	1.26	1.26
	BSlip	2	7.20	25.11	2.75	0.23	42.20	42.20	70.20	292.29	6.75	3.75	3.75
	Bx	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	D	1	36.00	22.99	1.23	0.04	18.14	18.14	63.60	125.94	1.27	1.59	1.59
	Dx	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	10	1	1.20	0.36	0.00	0.06	0.84	0.84	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (PCU)	Mean max queue (PCU)	Max queue storage (PCU)	Utilised storage (%)	Average storage excess queue (PCU)	Average limit excess queue (PCU)	Excess queue penalty (£ per hr)	Max end of green queue (PCU)	Max end of red queue (PCU)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))	Estimated blocking
17:00-18:00	A	1	0.00	12.35	34.78	35.51	0.00	0.00	0.00	0.62	9.98	0.00	0.00	0.00	
	Ax	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			59.00	0.00	59.00	
	B	2	0.00	3.41	3.48	97.94	0.00	0.00	0.00	0.03	3.13	0.00	0.00	0.00	
	BSlip	2	0.00	10.17	10.43	97.42	0.00	0.00	0.00	0.23	8.04	0.00	0.00	0.00	
	Bx	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			25.00	0.00	25.00	
	D	1	0.00	4.32	52.17	8.28	0.00	0.00	0.00	0.04	3.88	0.00	0.00	0.00	
	Dx	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			25.00	0.00	25.00	
	10	1	0.00	0.06	1.74	3.39	0.00	0.00	0.00			0.00	0.00	0.00	

Traffic Stream Results: Journey times

Time Segment	Arm	Traffic Stream	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
17:00-18:00	A	1	81.20	7.39	10.99	65.51
	Ax	1	47.60	1.59	30.00	12.00
	B	2	3.38	1.08	3.13	22.98
	BSlip	2	25.56	3.82	6.68	32.31
	Bx	1	47.70	1.59	30.00	12.00
	D	1	60.00	3.28	18.31	58.99
	Dx	1	24.80	0.83	30.00	12.00
	10	1	5.95	0.26	23.12	1.56

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Mean Max Queue EoTS (PCU)	Max End of Green Queue EoTS (PCU)	Max End of Red Queue EoTS (PCU)	PCU Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
17:00-18:00	A	1	0.00	0.00	✓	12.35	0.63	9.99	1.00	0.00	71.04	71.04
	Ax	1	0.00	0.00	✓	0.00			1.00	0.00	0.00	0.00
	B	2	0.00	0.00	✓	3.41	0.03	3.13	1.00	0.00	14.98	14.98
	BSlip	2	0.00	0.00	✓	10.17	0.23	8.04	1.00	0.00	45.95	45.95
	Bx	1	0.00	0.00	✓	0.00			1.00	0.00	0.00	0.00
	D	1	0.00	0.00	✓	4.32	0.04	3.88	1.00	0.00	19.73	19.73
	Dx	1	0.00	0.00	✓	0.00			1.00	0.00	0.00	0.00
	10	1	0.00	0.00	✓	0.06			1.00	0.00	0.84	0.84

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Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
17:00-18:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s (per cycle))	Eff gr (c
17:00-18:00	(ALL)	(ALL)	0	0	0		11000	642	0		Unrestricted	0.00	7	

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Uniform delay (Ped-hr/hr)	Random plus oversat delay (Ped-hr/hr)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)
17:00-18:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Average storage excess queue (Ped)	Average limit excess queue (Ped)	Excess queue penalty (£ per hr)
17:00-18:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Journey times

Time Segment	Crossing	Side	Distance travelled (Ped-km/hr)	Time spent (Ped-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
17:00-18:00	(ALL)	(ALL)	0.00	0.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
17:00-18:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
2	24/03/2023 09:33:20	24/03/2023 09:33:21	17:00	120	152.53	9.96	65.71	A/1	0	0	A/1	10/1	A/

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	66	0	2997	672	11.96	141.37	11.16	152.53

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
17:00-18:00	0	0	42	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))	Effective green (s (per cycle))
17:00-18:00	2997	2997	0		66		37	714	718

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	11.86	11.96	8.98	0.98	141.37	141.37	29.69	862.69	27.27	11.16	11.16

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
17:00-18:00	296.19	19.83	14.94

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: B

From \ To	A	B	D
A	0.0	77.5	77.5
B	45.9	0.0	36.5
D	71.0	71.0	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (PCU/hr)	Normal journey time (s)	Calculated Total Flow (PCU/hr)	Avg journey time (s)
8	D	A	50	70.99	50	70.99
9	D	B	150	70.99	150	70.99
11	A	D	79	77.51	79	77.51
12	A	B	327	77.51	327	77.51
14	B	D	169	36.54	169	36.54
15	B	A	426	45.87	426	45.87

Final Prediction Table

Traffic Stream Results

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QU
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queu (PCU
A	1	Scholarstown Rd	1	1	A	406	2004	36	0.00	66	37	65.51	41.51	89.46	12.35
Ax	1	(untitled)				476	Unrestricted	120	59.00	0	Unrestricted	12.00	0.00	0.00	0.00
B	2	Ballyboden Rd N	1	1	B	169	1823	53	0.00	21	337	22.98	20.58	59.48	3.41
BSlip	2	Ballyboden Rd N	1	1	B	426	1957	53	0.00	48	86	32.31	25.11	70.20	10.17
Bx	1	(untitled)				477	Unrestricted	120	25.00	0	Unrestricted	12.00	0.00	0.00	0.00
D	1	Edmonstown Road	1	1	D	200	1867	50	0.00	25	257	58.99	22.99	63.60	4.32
Dx	1	(untitled)				248	Unrestricted	120	25.00	0	Unrestricted	12.00	0.00	0.00	0.00
10	1	(untitled)	1			595	2055	120	0.00	29	211	1.56	0.36	0.00	0.06

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Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE			PER PED		QUEUES	WEIGHTS	P
Pedestrian	Side	Name	Traffic node	Controller stream	Phase	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Degree of saturation (%)	Practical reserve capacity	JourneyTime (s)	Mean Delay per Ped (s)	Mean max queue (Ped)	Delay weighting (%)	(
(ALL)	(ALL)	(untitled)		1	E	0	11000	7	0	Unrestricted	0.00	0.00	0.00	100	

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	296.19	19.83	14.94	8.98	0.98	141.37	11.16	0.00	152.53
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	296.19	19.83	14.94	8.98	0.98	141.37	11.16	0.00	152.53

< = adjusted flow warning (upstream links/traffic streams are over-saturated)

** = Traffic Stream - Normal, Bus or Tram Stop or Delay weighting has been set to a value other than 100%*

^ = Traffic Stream - Normal, Bus or Tram Stop or Delay Path weighting has been set to a value other than 100%

+ = average link/traffic stream excess queue is greater than 0

P.I. = PERFORMANCE INDEX

A3 - 2030 DN AM
D3 - 2030 DN AM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
3	24/03/2023 09:33:21	24/03/2023 09:33:22	08:00	120	212.80	13.94	73.26	A/1	0	0	A/1	10/1	A/

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2030 DN AM		D3	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2030 DN AM				08:00	

Network Options

Network timings

Network cycle time (s)	Restrict to SCOOT cycle times	Time segment length (min)	Number of time segments	Modelled time period (min)
120		60	1	60

Signals options

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

Advanced

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

Traffic options

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

Advanced

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

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Normal Traffic parameters

Dispersion type	Dispersion coefficient	Travel time coefficient
Default	35	80

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

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

Tram parameters

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

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

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

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
1	(untitled)	

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
A	(untitled)		1
Ax	(untitled)		
B	(untitled)		1
BSlip	(untitled)		1
Bx	(untitled)		
D	(untitled)		1
Dx	(untitled)		
10	(untitled)		1

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
A	1	Scholarstown Rd			200.00	✓	Sum of lanes	2004	✓		Normal	
Ax	1	(untitled)			100.00						Normal	
B	2	Ballyboden Rd N			20.00	✓	Sum of lanes	1823	✓		Normal	
BSlip	2	Ballyboden Rd N			60.00	✓	Sum of lanes	1957	✓		Normal	
Bx	1	(untitled)			100.00						Normal	
D	1	Edmonstown Road			300.00	✓	Sum of lanes	1867	✓		Normal	
Dx	1	(untitled)			100.00						Normal	
10	1	(untitled)			10.00	✓	Sum of lanes	2055			Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Surface condition	Site quality factor	Gradient (%)	Width (m)	Use connector turning radius	Proportion that turn (%)	Turning radius (m)	Nearside lane	Saturation flow (PCU/hr)
A	1	1	(untitled)		✓	N/A	N/A	0	4.50		67	10.00		2004
Ax	1	1	(untitled)											
B	2	1	(untitled)		✓	N/A	N/A	0	3.00		67	20.00	✓	1823
BSlip	2	1	(untitled)		✓	N/A	N/A	0	3.00		67	20.00		1957
Bx	1	1	(untitled)											
D	1	1	(untitled)		✓	N/A	N/A	0	3.00		67	10.00		1867
Dx	1	1	(untitled)											
10	1	1	(untitled)		✓	N/A	N/A	0	3.00		0	6.00		2055

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
(ALL)	(ALL)	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	120

Normal traffic - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	(ALL)	100	100

Normal traffic - Advanced

Arm	Traffic Stream	Dispersion type for Normal Traffic
(ALL)	(ALL)	NetworkDefault

Flows

Arm	Traffic Stream	Total Flow (PCU/hr)	Normal Flow (PCU/hr)
A	1	575	575
Ax	1	362	362
B	2	146	146
BSlip	2	302	302
Bx	1	860	860
D	1	407	407
Dx	1	208	208
10	1	448	448

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Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled
A	1	1	A	
B	2	1	B	
BSlip	2	1	B	
D	1	1	D	

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
A	1	24.00	30.00
D	1	36.00	30.00
10	1	1.20	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	1	1	D/1	Ax/1	12.00	30.00	✓	Nearside	37.46
B	2	1	10/1	B/2	2.40	30.00	✓	Straight	Straight Movement
BSlip	2	1	10/1	BSlip/2	7.20	30.00	✓	Straight	Straight Movement
Bx	1	1	D/1	Bx/1	12.00	30.00	✓	Straight	Straight Movement
Dx	1	1	A/1	Dx/1	12.00	30.00	✓	Offside	67.90
Ax	1	2	BSlip/2	Ax/1	12.00	30.00	✓	Offside	81.96
Bx	1	2	A/1	Bx/1	12.00	30.00	✓	Nearside	55.47
Dx	1	2	B/2	Dx/1	12.00	30.00	✓	Straight	Straight Movement

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
1	(untitled)				Farside	9.00	6.00	5.40
2	(untitled)				Farside	10.50	7.00	5.40
3	(untitled)				Farside	9.50	6.33	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	E	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(ALL)	11000

Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	100	100		0.00		

Local OD Matrix - Local Matrix: B

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
B	(untitled)	✓	✓	Path Equalisation			✓			✓	1.25		

Normal Input Flows (PCU/hr)

		To		
		A	B	D
From	A	0	513	62
	B	302	0	146
	D	60	347	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
B	A	Parnwell Lodge	A/1	Ax/1	#FFFF00
	B	Bridge Street (W)	10/1	Bx/1	#0000FF
	D	Bridge Street (E)	D/1	Dx/1	#00FF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
B	8		D	A	D/1, Ax/1	Normal	60
	9		D	B	D/1, Bx/1	Normal	347
	11		A	D	A/1, Dx/1	Normal	62
	12		A	B	A/1, Bx/1	Normal	513
	14		B	D	10/1, B/2, Dx/1	Normal	146
	15		B	A	10/1, BSlip/2, Ax/1	Normal	302

Signal Timings

Network Default: 120s cycle time; 120 steps

Controller Stream 1

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)
1	(untitled)		8	NetworkDefault	120

Controller Stream 1 - Properties

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
1	Unspecified						Absolute

Controller Stream 1 - Optimisation

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
1	✓	✓	Offsets And Green Splits	✓	

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Phases

Controller Stream	Phase	Name	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type	Blackout Time (s)
1	A	(untitled)	7	300	0	0	Traffic	
	B	(untitled)	7	300	0	0	Traffic	
	D	(untitled)	7	300	0	0	Traffic	
	E	(untitled)	6	300	0	0	Pedestrian	0

Library Stages

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)
1	1	A	1
	2	B, D	1
	3	E	7
	4	B	3

Stage Sequences

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends
1	8	(untitled)	Single	1, 2, 4, 3	39, 84, 87, 102

Intergreen Matrix for Controller Stream 1

		To				
		A	B	D	E	
From	A		5	5	6	
	B	5			8	
	D	6			7	
	E	11	11	11		

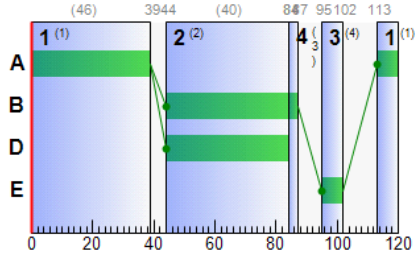
Banned Stage transitions for Controller Stream 1

		To				
		1	2	3	4	
From	1					
	2					
	3					
	4					

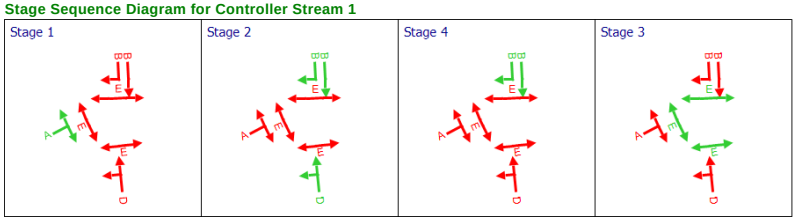
Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
A	1	1	1	A	113	39	46
B	2	1	1	B	44	87	43
BSlip	2	1	1	B	44	87	43
D	1	1	1	D	44	84	40

Phase Timings Diagram for Controller Stream 1



Stage Sequence Diagram for Controller Stream 1



Resultant penalties

Time Segment	Controller stream	Phase min max penalty (£ per hr)	Intergreen broken penalty (£ per hr)	Stage constraint broken penalty (£ per hr)	Cost of controller stream penalties (£ per hr)
08:00-09:00	1	0.00	0.00	0.00	0.00

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (PCU)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	A	1	73	23	575	2004	46	37.32	17.28	49.68	84.65	6.38	91.03
	Ax	1	0	Unrestricted	362	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	B	2	22	312	146	1823	43	26.93	3.36	96.49	15.51	1.24	16.75
	BSlip	2	42	114	302	1957	43	30.28	7.62	73.01	36.07	2.83	38.89
	Bx	1	0	Unrestricted	860	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	D	1	64	41	407	1867	40	38.18	11.86	22.74	61.29	4.40	65.69
	Dx	1	0	Unrestricted	208	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	10	1	22	313	448	2055	120	0.24	0.03	1.75	0.43	0.00	0.43

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Calculated sat flow (PCU/hr)	Calculated capacity (PCU/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))	Eff gre (cy
08:00-09:00	A	1	575	575	0		2004	785	73		23	0.00	46	
	Ax	1	362	362	0		Unrestricted	Unrestricted	0		Unrestricted	1.22	120	
	B	2	146	146	0		1823	668	22		312	0.00	43	
	BSlip	2	302	302	0		1957	718	42		114	0.00	43	
	Bx	1	860	860	0		Unrestricted	Unrestricted	0		Unrestricted	0.69	120	
	D	1	407	407	0		1867	638	64		41	0.00	40	
	Dx	1	208	208	0		Unrestricted	Unrestricted	0		Unrestricted	0.76	120	
	10	1	448	448	0		2055	2055	22		313	0.00	120	

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Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	A	1	24.00	37.32	4.97	0.99	84.65	84.65	88.52	479.74	29.24	6.38	6.38
	Ax	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	B	2	2.40	26.93	1.06	0.03	15.51	15.51	67.96	98.31	0.91	1.24	1.24
	BSlip	2	7.20	30.28	2.39	0.15	36.07	36.07	74.62	220.80	4.56	2.83	2.83
	Bx	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	D	1	36.00	38.18	3.76	0.56	61.29	61.29	86.32	334.77	16.53	4.40	4.40
	Dx	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	10	1	1.20	0.24	0.00	0.03	0.43	0.43	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (PCU)	Mean max queue (PCU)	Max queue storage (PCU)	Utilised storage (%)	Average storage excess queue (PCU)	Average limit excess queue (PCU)	Excess queue penalty (£ per hr)	Max end of green queue (PCU)	Max end of red queue (PCU)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))	Estimated blocking
08:00-09:00	A	1	0.00	17.28	34.78	49.68	0.00	0.00	0.00	0.99	12.65	0.00	0.00	0.00	
	Ax	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			70.00	0.00	70.00	
	B	2	0.00	3.36	3.48	96.49	0.00	0.00	0.00	0.03	3.11	0.00	0.00	0.00	
	BSlip	2	0.00	7.62	10.43	73.01	0.00	0.00	0.00	0.15	6.53	0.00	0.00	0.00	
	Bx	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			22.00	0.00	22.00	
	D	1	0.00	11.86	52.17	22.74	0.00	0.00	0.00	0.56	9.49	0.00	0.00	0.00	
	Dx	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			27.00	0.00	27.00	
	10	1	0.00	0.03	1.74	1.75	0.00	0.00	0.00			0.00	0.00	0.00	

Traffic Stream Results: Journey times

Time Segment	Arm	Traffic Stream	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	A	1	115.00	9.79	11.74	61.32
	Ax	1	36.20	1.21	30.00	12.00
	B	2	2.92	1.19	2.46	29.33
	BSlip	2	18.12	3.14	5.76	37.48
	Bx	1	86.00	2.87	30.00	12.00
	D	1	122.10	8.39	14.56	74.18
	Dx	1	20.80	0.69	30.00	12.00
	10	1	4.48	0.18	24.93	1.44

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Mean Max Queue EoTS (PCU)	Max End of Green Queue EoTS (PCU)	Max End of Red Queue EoTS (PCU)	PCU Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	A	1	0.00	0.00	✓	17.29	1.00	12.65	1.00	0.00	91.03	91.03
	Ax	1	0.00	0.00	✓	0.00			1.00	0.00	0.00	0.00
	B	2	0.00	0.00	✓	3.36	0.03	3.11	1.00	0.00	16.75	16.75
	BSlip	2	0.00	0.00	✓	7.62	0.15	6.53	1.00	0.00	38.89	38.89
	Bx	1	0.00	0.00	✓	0.00			1.00	0.00	0.00	0.00
	D	1	0.00	0.00	✓	11.87	0.56	9.49	1.00	0.00	65.69	65.69
	Dx	1	0.00	0.00	✓	0.00			1.00	0.00	0.00	0.00
	10	1	0.00	0.00	✓	0.03			1.00	0.00	0.43	0.43

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s (per cycle))	Eff gr (c
08:00-09:00	(ALL)	(ALL)	0	0	0		11000	642	0		Unrestricted	0.00	7	

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Uniform delay (Ped-hr/hr)	Random plus oversat delay (Ped-hr/hr)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)
08:00-09:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Average storage excess queue (Ped)	Average limit excess queue (Ped)	Excess queue penalty (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Journey times

Time Segment	Crossing	Side	Distance travelled (Ped-km/hr)	Time spent (Ped-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	(ALL)	(ALL)	0.00	0.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
3	24/03/2023 09:33:21	24/03/2023 09:33:22	08:00	120	212.80	13.94	73.26	A/1	0	0	A/1	10/1	A/

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	73	0	3308	652	15.17	197.94	14.86	212.80

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	0	0	42	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))	Effective green (s (per cycle))
08:00-09:00	3308	3308	0		73		23	694	698

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	14.71	15.17	12.18	1.76	197.94	197.94	35.82	1133.62	51.24	14.86	14.86

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
08:00-09:00	405.62	27.46	14.77

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: B

		To		
		A	B	D
From	A	0.0	73.3	73.3
	B	50.9	0.0	42.8
	D	86.2	86.2	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (PCU/hr)	Normal journey time (s)	Calculated Total Flow (PCU/hr)	Avg journey time (s)
8	D	A	60	86.18	60	86.18
9	D	B	347	86.18	347	86.18
11	A	D	62	73.32	62	73.32
12	A	B	513	73.32	513	73.32
14	B	D	146	42.77	146	42.77
15	B	A	302	50.92	302	50.92

Final Prediction Table

Traffic Stream Results

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QU
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queu (PCU)
A	1	Scholarstown Rd	1	1	A	575	2004	46	0.00	73	23	61.32	37.32	88.52	17.28
Ax	1	(untitled)				362	Unrestricted	120	70.00	0	Unrestricted	12.00	0.00	0.00	0.00
B	2	Ballyboden Rd N	1	1	B	146	1823	43	0.00	22	312	29.33	26.93	67.96	3.36
BSlip	2	Ballyboden Rd N	1	1	B	302	1957	43	0.00	42	114	37.48	30.28	74.62	7.62
Bx	1	(untitled)				860	Unrestricted	120	22.00	0	Unrestricted	12.00	0.00	0.00	0.00
D	1	Edmonstown Road	1	1	D	407	1867	40	0.00	64	41	74.18	38.18	86.32	11.86
Dx	1	(untitled)				208	Unrestricted	120	27.00	0	Unrestricted	12.00	0.00	0.00	0.00
10	1	(untitled)	1			448	2055	120	0.00	22	313	1.44	0.24	0.00	0.03

Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE			PER PED		QUEUES	WEIGHTS	P
Pedestrian	Side	Name	Traffic node	Controller stream	Phase	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Degree of saturation (%)	Practical reserve capacity	JourneyTime (s)	Mean Delay per Ped (s)	Mean max queue (Ped)	Delay weighting (%)	(
(ALL)	(ALL)	(untitled)		1	E	0	11000	7	0	Unrestricted	0.00	0.00	0.00	100	

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	405.62	27.46	14.77	12.18	1.76	197.94	14.86	0.00	212.80
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	405.62	27.46	14.77	12.18	1.76	197.94	14.86	0.00	212.80

< = adjusted flow warning (upstream links/traffic streams are over-saturated)

** = Traffic Stream - Normal, Bus or Tram Stop or Delay weighting has been set to a value other than 100%*

^ = Traffic Stream - Normal, Bus or Tram Stop or Delay Path weighting has been set to a value other than 100%

+ = average link/traffic stream excess queue is greater than 0

P.I. = PERFORMANCE INDEX

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A4 - 2030 DN PM
D4 - 2030 DN PM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit over PR
4	24/03/2023 09:33:22	24/03/2023 09:33:22	17:00	120	168.52	11.00	69.34	A/1	0	0	A/1	10/1	A/

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2030 DN PM		D4	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2030 DN PM				17:00	

Network Options

Network timings

Network cycle time (s)	Restrict to SCOOT cycle times	Time segment length (min)	Number of time segments	Modelled time period (min)
120		60	1	60

Signals options

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

Advanced

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

Traffic options

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

Advanced

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

Normal Traffic parameters

Dispersion type	Dispersion coefficient	Travel time coefficient
Default	35	80

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

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

Tram parameters

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

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

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

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
1	(untitled)	

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
A	(untitled)		1
Ax	(untitled)		
B	(untitled)		1
BSlip	(untitled)		1
Bx	(untitled)		
D	(untitled)		1
Dx	(untitled)		
10	(untitled)		1

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Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
A	1	Scholarstown Rd			200.00	✓	Sum of lanes	2004	✓		Normal	
Ax	1	(untitled)			100.00						Normal	
B	2	Ballyboden Rd N			20.00	✓	Sum of lanes	1823	✓		Normal	
BSlip	2	Ballyboden Rd N			60.00	✓	Sum of lanes	1957	✓		Normal	
Bx	1	(untitled)			100.00						Normal	
D	1	Edmonstown Road			300.00	✓	Sum of lanes	1867	✓		Normal	
Dx	1	(untitled)			100.00						Normal	
10	1	(untitled)			10.00	✓	Sum of lanes	2055			Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Surface condition	Site quality factor	Gradient (%)	Width (m)	Use connector turning radius	Proportion that turn (%)	Turning radius (m)	Nearside lane	Saturation flow (PCU/hr)
A	1	1	(untitled)		✓	N/A	N/A	0	4.50		67	10.00		2004
Ax	1	1	(untitled)											
B	2	1	(untitled)		✓	N/A	N/A	0	3.00		67	20.00	✓	1823
BSlip	2	1	(untitled)		✓	N/A	N/A	0	3.00		67	20.00		1957
Bx	1	1	(untitled)											
D	1	1	(untitled)		✓	N/A	N/A	0	3.00		67	10.00		1867
Dx	1	1	(untitled)											
10	1	1	(untitled)		✓	N/A	N/A	0	3.00		0	6.00		2055

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
A	1	NetworkDefault	100	100	100		42.00		
Ax	1	NetworkDefault	100	100	100		0.00		
B	2	NetworkDefault	100	100	100		19.00		
BSlip	2	NetworkDefault	100	100	100		3.00		
Bx	1	NetworkDefault	100	100	100		0.00		
D	1	NetworkDefault	100	100	100		50.00		
Dx	1	NetworkDefault	100	100	100		0.00		
10	1	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
(ALL)	(ALL)	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	120

Normal traffic - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	(ALL)	100	100

Normal traffic - Advanced

Arm	Traffic Stream	Dispersion type for Normal Traffic
(ALL)	(ALL)	NetworkDefault

Flows

Arm	Traffic Stream	Total Flow (PCU/hr)	Normal Flow (PCU/hr)
A	1	440	440
Ax	1	519	519
B	2	185	185
BSlip	2	464	464
Bx	1	519	519
D	1	219	219
Dx	1	270	270
10	1	649	649

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled
A	1	1	A	
B	2	1	B	
BSlip	2	1	B	
D	1	1	D	

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
A	1	24.00	30.00
D	1	36.00	30.00
10	1	1.20	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	1	1	D/1	Ax/1	12.00	30.00	✓	Nearside	37.46
B	2	1	10/1	B/2	2.40	30.00	✓	Straight	Straight Movement
BSlip	2	1	10/1	BSlip/2	7.20	30.00	✓	Straight	Straight Movement
Bx	1	1	D/1	Bx/1	12.00	30.00	✓	Straight	Straight Movement
Dx	1	1	A/1	Dx/1	12.00	30.00	✓	Offside	67.90
Ax	1	2	BSlip/2	Ax/1	12.00	30.00	✓	Offside	81.96
Bx	1	2	A/1	Bx/1	12.00	30.00	✓	Nearside	55.47
Dx	1	2	B/2	Dx/1	12.00	30.00	✓	Straight	Straight Movement

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
1	(untitled)				Farside	9.00	6.00	5.40
2	(untitled)				Farside	10.50	7.00	5.40
3	(untitled)				Farside	9.50	6.33	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	E	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(ALL)	11000

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Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	100	100		0.00		

Local OD Matrix - Local Matrix: B

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
B	(untitled)	✓	✓	Path Equalisation			✓			✓	1.25		

Normal Input Flows (PCU/hr)

		To		
		A	B	D
From	A	0	355	85
	B	464	0	185
	D	55	164	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
B	A	Parnwell Lodge	A/1	Ax/1	#FFFF00
	B	Bridge Street (W)	10/1	Bx/1	#0000FF
	D	Bridge Street (E)	D/1	Dx/1	#00FF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
B	8		D	A	D/1, Ax/1	Normal	55
	9		D	B	D/1, Bx/1	Normal	164
	11		A	D	A/1, Dx/1	Normal	85
	12		A	B	A/1, Bx/1	Normal	355
	14		B	D	10/1, B/2, Dx/1	Normal	185
	15		B	A	10/1, BSlip/2, Ax/1	Normal	464

Signal Timings

Network Default: 120s cycle time; 120 steps

Controller Stream 1

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)
1	(untitled)		8	NetworkDefault	120

Controller Stream 1 - Properties

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
1	Unspecified						Absolute

Controller Stream 1 - Optimisation

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
1	✓	✓	Offsets And Green Splits	✓	

Phases

Controller Stream	Phase	Name	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type	Blackout Time (s)
1	A	(untitled)	7	300	0	0	Traffic	
	B	(untitled)	7	300	0	0	Traffic	
	D	(untitled)	7	300	0	0	Traffic	
	E	(untitled)	6	300	0	0	Pedestrian	0

Library Stages

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)
1	1	A	1
	2	B, D	1
	3	E	1
	4	B	1

Stage Sequences

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends
1	8	(untitled)	Single	1, 2, 4, 3	27, 84, 85, 99

Intergreen Matrix for Controller Stream 1

		To			
		A	B	D	E
From	A		5	5	6
	B	5			8
	D	6			7
	E	11	11	11	

Banned Stage transitions for Controller Stream 1

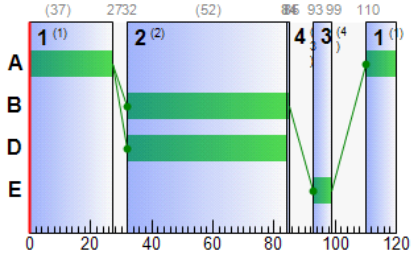
		To			
		1	2	3	4
From	1				
	2				
	3				
	4				

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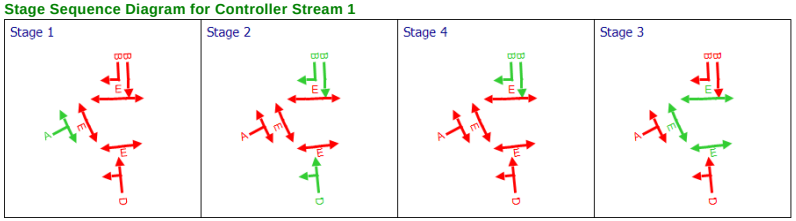
Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
A	1	1	1	A	110	27	37
B	2	1	1	B	32	85	53
BSlip	2	1	1	B	32	85	53
D	1	1	1	D	32	84	52

Phase Timings Diagram for Controller Stream 1



Stage Sequence Diagram for Controller Stream 1



Resultant penalties

Time Segment	Controller stream	Phase min max penalty (£ per hr)	Intergreen broken penalty (£ per hr)	Stage constraint broken penalty (£ per hr)	Cost of controller stream penalties (£ per hr)
17:00-18:00	1	0.00	0.00	0.00	0.00

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (PCU)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	A	1	69	30	440	2004	37	42.22	13.61	32.39	73.27	5.01	78.28
	Ax	1	0	Unrestricted	519	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	B	2	23	299	185	1823	53	20.85	3.78	19.92	15.21	1.40	16.61
	BSlip	2	53	71	464	1957	53	26.06	11.38	379.22	47.70	4.20	51.90
	Bx	1	0	Unrestricted	519	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	D	1	27	239	219	1867	52	21.98	4.61	9.22	18.99	1.71	20.69
	Dx	1	0	Unrestricted	270	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	10	1	32	185	649	2055	120	0.40	0.07	4.19	1.03	0.00	1.03

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Calculated sat flow (PCU/hr)	Calculated capacity (PCU/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))	Eff gre (cy
17:00-18:00	A	1	440	440	0		2004	635	69		30	0.00	37	
	Ax	1	519	519	0		Unrestricted	Unrestricted	0		Unrestricted	1.05	120	
	B	2	185	185	0		1823	820	23		299	0.00	53	
	BSlip	2	464	464	0		1957	881	53		71	0.00	53	
	Bx	1	519	519	0		Unrestricted	Unrestricted	0		Unrestricted	0.88	120	
	D	1	219	219	0		1867	825	27		239	0.00	52	
	Dx	1	270	270	0		Unrestricted	Unrestricted	0		Unrestricted	0.72	120	
	10	1	649	649	0		2055	2055	32		185	0.00	120	

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	A	1	24.00	42.22	4.39	0.77	73.27	73.27	90.87	376.95	22.86	5.01	5.01
	Ax	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	B	2	2.40	20.85	1.04	0.03	15.21	15.21	60.28	110.54	0.98	1.40	1.40
	BSlip	2	7.20	26.06	3.07	0.29	47.70	47.70	72.20	326.30	8.73	4.20	4.20
	Bx	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	D	1	36.00	21.98	1.29	0.05	18.99	18.99	62.15	134.68	1.44	1.71	1.71
	Dx	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	10	1	1.20	0.40	0.00	0.07	1.03	1.03	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (PCU)	Mean max queue (PCU)	Max queue storage (PCU)	Utilised storage (%)	Average storage excess queue (PCU)	Average limit excess queue (PCU)	Excess queue penalty (£ per hr)	Max end of green queue (PCU)	Max end of red queue (PCU)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))	Estimated blocking
17:00-18:00	A	1	0.00	13.61	42.00	32.39	0.00	0.00	0.00	0.77	10.79	0.00	0.00	0.00	
	Ax	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			58.00	0.00	58.00	
	B	2	0.00	3.78	19.00	19.92	0.00	0.00	0.00	0.03	3.42	0.00	0.00	0.00	
	BSlip	2	0.00	11.38	3.00	379.22	2.30	0.00	0.00	0.29	8.80	0.00	0.00	0.00	
	Bx	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			22.00	0.00	22.00	
	D	1	0.00	4.61	50.00	9.22	0.00	0.00	0.00	0.05	4.12	0.00	0.00	0.00	
	Dx	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			23.00	0.00	23.00	
	10	1	0.00	0.07	1.74	4.19	0.00	0.00	0.00			0.00	65.00	65.00	

Traffic Stream Results: Journey times

Time Segment	Arm	Traffic Stream	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
17:00-18:00	A	1	88.00	8.09	10.87	66.22
	Ax	1	51.90	1.73	30.00	12.00
	B	2	3.70	1.19	3.10	23.25
	BSlip	2	27.84	4.29	6.49	33.26
	Bx	1	51.90	1.73	30.00	12.00
	D	1	65.70	3.53	18.63	57.98
	Dx	1	27.00	0.90	30.00	12.00
	10	1	6.49	0.29	22.44	1.60

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Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Mean Max Queue EoTS (PCU)	Max End of Green Queue EoTS (PCU)	Max End of Red Queue EoTS (PCU)	PCU Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
17:00-18:00	A	1	0.00	0.00	✓	13.61	0.78	10.80	1.00	0.00	78.28	78.28
	Ax	1	0.00	0.00	✓	0.00			1.00	0.00	0.00	0.00
	B	2	0.00	0.00	✓	3.78	0.03	3.42	1.00	0.00	16.61	16.61
	BSlip	2	0.00	0.00	✓	11.38	0.29	8.80	1.00	0.00	51.90	51.90
	Bx	1	0.00	0.00	✓	0.00			1.00	0.00	0.00	0.00
	D	1	0.00	0.00	✓	4.61	0.05	4.12	1.00	0.00	20.69	20.69
	Dx	1	0.00	0.00	✓	0.00			1.00	0.00	0.00	0.00
	10	1	0.00	0.00	✓	0.07			1.00	0.00	1.03	1.03

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
17:00-18:00	(ALL)	(ALL)	0	0	11000	6	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s (per cycle))	Eff gr (c
17:00-18:00	(ALL)	(ALL)	0	0	0		11000	550	0		Unrestricted	0.00	6	

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Uniform delay (Ped-hr/hr)	Random plus oversat delay (Ped-hr/hr)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)
17:00-18:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Average storage excess queue (Ped)	Average limit excess queue (Ped)	Excess queue penalty (£ per hr)
17:00-18:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Journey times

Time Segment	Crossing	Side	Distance travelled (Ped-km/hr)	Time spent (Ped-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
17:00-18:00	(ALL)	(ALL)	0.00	0.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
17:00-18:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit over PR
4	24/03/2023 09:33:22	24/03/2023 09:33:22	17:00	120	168.52	11.00	69.34	A/1	0	0	A/1	10/1	A/

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	69	0	3265	675	12.13	156.20	12.32	168.52

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
17:00-18:00	0	0	36	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))	Effective green (s (per cycle))
17:00-18:00	3265	3265	0		69		30	711	715

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	11.85	12.13	9.78	1.22	156.20	156.20	30.09	948.46	34.01	12.32	12.32

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
17:00-18:00	322.53	21.75	14.83

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: B

		To		
		A	B	D
From	A	0.0	78.2	78.2
	B	46.9	0.0	36.9
	D	70.0	70.0	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (PCU/hr)	Normal journey time (s)	Calculated Total Flow (PCU/hr)	Avg journey time (s)
8	D	A	55	69.98	55	69.98
9	D	B	164	69.98	164	69.98
11	A	D	85	78.22	85	78.22
12	A	B	355	78.22	355	78.22
14	B	D	185	36.85	185	36.85
15	B	A	464	46.87	464	46.87

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Final Prediction Table

Traffic Stream Results

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QU
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queu (PCU
A	1	Scholarstown Rd	1	1	A	440	2004	37	0.00	69	30	66.22	42.22	90.87	13.61
Ax	1	(untitled)				519	Unrestricted	120	58.00	0	Unrestricted	12.00	0.00	0.00	0.00
B	2	Ballyboden Rd N	1	1	B	185	1823	53	0.00	23	299	23.25	20.85	60.28	3.78
BSlip	2	Ballyboden Rd N	1	1	B	464 <	1957	53	0.00	53	71	33.26	26.06	72.20	11.38 +
Bx	1	(untitled)				519	Unrestricted	120	22.00	0	Unrestricted	12.00	0.00	0.00	0.00
D	1	Edmonstown Road	1	1	D	219	1867	52	0.00	27	239	57.98	21.98	62.15	4.61
Dx	1	(untitled)				270	Unrestricted	120	23.00	0	Unrestricted	12.00	0.00	0.00	0.00
10	1	(untitled)	1			649	2055	120	65.00	32	185	1.60	0.40	0.00	0.07

Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE			PER PED		QUEUES	WEIGHTS	P
Pedestrian	Side	Name	Traffic node	Controller stream	Phase	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Degree of saturation (%)	Practical reserve capacity	JourneyTime (s)	Mean Delay per Ped (s)	Mean max queue (Ped)	Delay weighting (%)	(
(ALL)	(ALL)	(untitled)		1	E	0	11000	6	0	Unrestricted	0.00	0.00	0.00	100	

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	322.53	21.75	14.83	9.78	1.22	156.20	12.32	0.00	168.52
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	322.53	21.75	14.83	9.78	1.22	156.20	12.32	0.00	168.52

< = adjusted flow warning (upstream links/traffic streams are over-saturated)

** = Traffic Stream - Normal, Bus or Tram Stop or Delay weighting has been set to a value other than 100%*

^ = Traffic Stream - Normal, Bus or Tram Stop or Delay Path weighting has been set to a value other than 100%

+ = average link/traffic stream excess queue is greater than 0

P.I. = PERFORMANCE INDEX

A5 - 2040 DN AM
D5 - 2040 DN AM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
5	24/03/2023 09:33:22	24/03/2023 09:33:23	08:00	120	235.55	15.45	77.59	A/1	0	0	A/1	10/1	A/

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2040 DN AM		D5	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2040 DN AM				08:00	

Network Options

Network timings

Network cycle time (s)	Restrict to SCOOT cycle times	Time segment length (min)	Number of time segments	Modelled time period (min)
120		60	1	60

Signals options

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

Advanced

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

Traffic options

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

Advanced

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

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Normal Traffic parameters

Dispersion type	Dispersion coefficient	Travel time coefficient
Default	35	80

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

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

Tram parameters

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

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

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

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
1	(untitled)	

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
A	(untitled)		1
Ax	(untitled)		
B	(untitled)		1
BSlip	(untitled)		1
Bx	(untitled)		
D	(untitled)		1
Dx	(untitled)		
10	(untitled)		1

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
A	1	Scholarstown Rd			200.00	✓	Sum of lanes	2004	✓		Normal	
Ax	1	(untitled)			100.00						Normal	
B	2	Ballyboden Rd N			20.00	✓	Sum of lanes	1823	✓		Normal	
BSlip	2	Ballyboden Rd N			60.00	✓	Sum of lanes	1957	✓		Normal	
Bx	1	(untitled)			100.00						Normal	
D	1	Edmonstown Road			300.00	✓	Sum of lanes	1867	✓		Normal	
Dx	1	(untitled)			100.00						Normal	
10	1	(untitled)			10.00	✓	Sum of lanes	2055			Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Surface condition	Site quality factor	Gradient (%)	Width (m)	Use connector turning radius	Proportion that turn (%)	Turning radius (m)	Nearside lane	Saturation flow (PCU/hr)
A	1	1	(untitled)		✓	N/A	N/A	0	4.50		67	10.00		2004
Ax	1	1	(untitled)											
B	2	1	(untitled)		✓	N/A	N/A	0	3.00		67	20.00	✓	1823
BSlip	2	1	(untitled)		✓	N/A	N/A	0	3.00		67	20.00		1957
Bx	1	1	(untitled)											
D	1	1	(untitled)		✓	N/A	N/A	0	3.00		67	10.00		1867
Dx	1	1	(untitled)											
10	1	1	(untitled)		✓	N/A	N/A	0	3.00		0	6.00		2055

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
(ALL)	(ALL)	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	120

Normal traffic - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	(ALL)	100	100

Normal traffic - Advanced

Arm	Traffic Stream	Dispersion type for Normal Traffic
(ALL)	(ALL)	NetworkDefault

Flows

Arm	Traffic Stream	Total Flow (PCU/hr)	Normal Flow (PCU/hr)
A	1	609	609
Ax	1	385	385
B	2	156	156
BSlip	2	321	321
Bx	1	913	913
D	1	433	433
Dx	1	221	221
10	1	477	477

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Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled
A	1	1	A	
B	2	1	B	
BSlip	2	1	B	
D	1	1	D	

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
A	1	24.00	30.00
D	1	36.00	30.00
10	1	1.20	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	1	1	D/1	Ax/1	12.00	30.00	✓	Nearside	37.46
B	2	1	10/1	B/2	2.40	30.00	✓	Straight	Straight Movement
BSlip	2	1	10/1	BSlip/2	7.20	30.00	✓	Straight	Straight Movement
Bx	1	1	D/1	Bx/1	12.00	30.00	✓	Straight	Straight Movement
Dx	1	1	A/1	Dx/1	12.00	30.00	✓	Offside	67.90
Ax	1	2	BSlip/2	Ax/1	12.00	30.00	✓	Offside	81.96
Bx	1	2	A/1	Bx/1	12.00	30.00	✓	Nearside	55.47
Dx	1	2	B/2	Dx/1	12.00	30.00	✓	Straight	Straight Movement

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
1	(untitled)				Farside	9.00	6.00	5.40
2	(untitled)				Farside	10.50	7.00	5.40
3	(untitled)				Farside	9.50	6.33	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	E	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(ALL)	11000

Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	100	100		0.00		

Local OD Matrix - Local Matrix: B

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
B	(untitled)	✓	✓	Path Equalisation			✓			✓	1.25		

Normal Input Flows (PCU/hr)

		To		
		A	B	D
From	A	0	544	65
	B	321	0	156
	D	64	369	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
B	A	Parnwell Lodge	A/1	Ax/1	#FFFF00
	B	Bridge Street (W)	10/1	Bx/1	#0000FF
	D	Bridge Street (E)	D/1	Dx/1	#00FF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
B	8		D	A	D/1, Ax/1	Normal	64
	9		D	B	D/1, Bx/1	Normal	369
	11		A	D	A/1, Dx/1	Normal	65
	12		A	B	A/1, Bx/1	Normal	544
	14		B	D	10/1, B/2, Dx/1	Normal	156
	15		B	A	10/1, BSlip/2, Ax/1	Normal	321

Signal Timings

Network Default: 120s cycle time; 120 steps

Controller Stream 1

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)
1	(untitled)		8	NetworkDefault	120

Controller Stream 1 - Properties

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
1	Unspecified						Absolute

Controller Stream 1 - Optimisation

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
1	✓	✓	Offsets And Green Splits	✓	

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Phases

Controller Stream	Phase	Name	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type	Blackout Time (s)
1	A	(untitled)	7	300	0	0	Traffic	
	B	(untitled)	7	300	0	0	Traffic	
	D	(untitled)	7	300	0	0	Traffic	
	E	(untitled)	6	300	0	0	Pedestrian	0

Library Stages

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)
1	1	A	1
	2	B, D	1
	3	E	7
	4	B	3

Stage Sequences

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends
1	8	(untitled)	Single	1, 2, 4, 3	39, 84, 87, 102

Intergreen Matrix for Controller Stream 1

		To				
		A	B	D	E	
From	A		5	5	6	
	B	5			8	
	D	6			7	
	E	11	11	11		

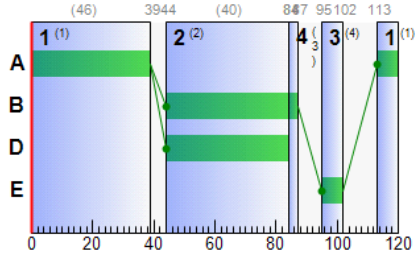
Banned Stage transitions for Controller Stream 1

	To				
		1	2	3	4
From	1				
	2				
	3				
	4				

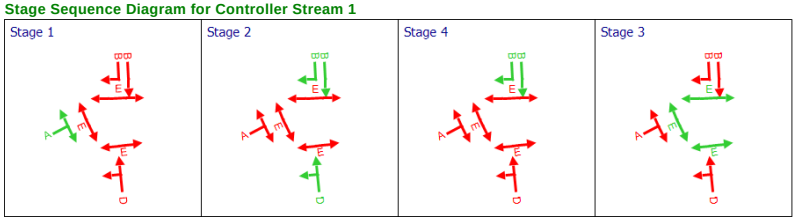
Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
A	1	1	1	A	113	39	46
B	2	1	1	B	44	87	43
BSlip	2	1	1	B	44	87	43
D	1	1	1	D	44	84	40

Phase Timings Diagram for Controller Stream 1



Stage Sequence Diagram for Controller Stream 1



Resultant penalties

Time Segment	Controller stream	Phase min max penalty (£ per hr)	Intergreen broken penalty (£ per hr)	Stage constraint broken penalty (£ per hr)	Cost of controller stream penalties (£ per hr)
08:00-09:00	1	0.00	0.00	0.00	0.00

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (PCU)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	A	1	78	16	609	2004	46	39.65	18.91	54.35	95.26	7.00	102.26
	Ax	1	0	Unrestricted	385	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	B	2	23	286	156	1823	43	27.14	3.63	104.42	16.70	1.34	18.04
	BSlip	2	45	101	321	1957	43	30.81	8.21	78.64	39.02	3.04	42.06
	Bx	1	0	Unrestricted	913	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	D	1	68	33	433	1867	40	39.74	12.98	24.87	67.88	4.81	72.69
	Dx	1	0	Unrestricted	221	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	10	1	23	288	477	2055	120	0.26	0.04	2.02	0.50	0.00	0.50

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Calculated sat flow (PCU/hr)	Calculated capacity (PCU/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))	Eff gre (cy
08:00-09:00	A	1	609	609	0		2004	785	78		16	0.00	46	
	Ax	1	385	385	0		Unrestricted	Unrestricted	0		Unrestricted	1.22	120	
	B	2	156	156	0		1823	668	23		286	0.00	43	
	BSlip	2	321	321	0		1957	718	45		101	0.00	43	
	Bx	1	913	913	0		Unrestricted	Unrestricted	0		Unrestricted	0.67	120	
	D	1	433	433	0		1867	638	68		33	0.00	40	
	Dx	1	221	221	0		Unrestricted	Unrestricted	0		Unrestricted	0.75	120	
	10	1	477	477	0		2055	2055	23		288	0.00	120	

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Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	A	1	24.00	39.65	5.40	1.31	95.26	95.26	91.69	519.65	38.73	7.00	7.00
	Ax	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	B	2	2.40	27.14	1.14	0.04	16.70	16.70	68.51	105.82	1.06	1.34	1.34
	BSlip	2	7.20	30.81	2.57	0.18	39.02	39.02	75.62	237.35	5.39	3.04	3.04
	Bx	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	D	1	36.00	39.74	4.07	0.71	67.88	67.88	88.66	362.91	20.97	4.81	4.81
	Dx	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	10	1	1.20	0.26	0.00	0.04	0.50	0.50	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (PCU)	Mean max queue (PCU)	Max queue storage (PCU)	Utilised storage (%)	Average storage excess queue (PCU)	Average limit excess queue (PCU)	Excess queue penalty (£ per hr)	Max end of green queue (PCU)	Max end of red queue (PCU)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))	Estimated blocking
08:00-09:00	A	1	0.00	18.91	34.78	54.35	0.00	0.00	0.00	1.31	13.66	0.00	0.00	0.00	
	Ax	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			70.00	0.00	70.00	
	B	2	0.00	3.63	3.48	104.42	0.00	0.00	0.00	0.04	3.33	0.00	0.00	0.00	
	BSlip	2	0.00	8.21	10.43	78.64	0.00	0.00	0.00	0.18	6.96	0.00	0.00	0.00	
	Bx	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			21.00	0.00	21.00	
	D	1	0.00	12.98	52.17	24.87	0.00	0.00	0.00	0.71	10.21	0.00	0.00	0.00	
	Dx	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			27.00	0.00	27.00	
	10	1	0.00	0.04	1.74	2.02	0.00	0.00	0.00			0.00	4.00	4.00	

Traffic Stream Results: Journey times

Time Segment	Arm	Traffic Stream	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	A	1	121.80	10.77	11.31	63.65
	Ax	1	38.50	1.28	30.00	12.00
	B	2	3.12	1.28	2.44	29.54
	BSlip	2	19.26	3.39	5.68	38.01
	Bx	1	91.30	3.04	30.00	12.00
	D	1	129.90	9.11	14.26	75.74
	Dx	1	22.10	0.74	30.00	12.00
	10	1	4.77	0.19	24.58	1.46

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Mean Max Queue EoTS (PCU)	Max End of Green Queue EoTS (PCU)	Max End of Red Queue EoTS (PCU)	PCU Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	A	1	0.00	0.00	✓	18.92	1.33	13.68	1.00	0.00	102.26	102.26
	Ax	1	0.00	0.00	✓	0.00			1.00	0.00	0.00	0.00
	B	2	0.00	0.00	✓	3.63	0.04	3.33	1.00	0.00	18.04	18.04
	BSlip	2	0.00	0.00	✓	8.21	0.18	6.96	1.00	0.00	42.06	42.06
	Bx	1	0.00	0.00	✓	0.00			1.00	0.00	0.00	0.00
	D	1	0.00	0.00	✓	12.98	0.71	10.21	1.00	0.00	72.69	72.69
	Dx	1	0.00	0.00	✓	0.00			1.00	0.00	0.00	0.00
	10	1	0.00	0.00	✓	0.04			1.00	0.00	0.50	0.50

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s (per cycle))	Eff gr (c
08:00-09:00	(ALL)	(ALL)	0	0	0		11000	642	0		Unrestricted	0.00	7	

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Uniform delay (Ped-hr/hr)	Random plus oversat delay (Ped-hr/hr)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)
08:00-09:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Average storage excess queue (Ped)	Average limit excess queue (Ped)	Excess queue penalty (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Journey times

Time Segment	Crossing	Side	Distance travelled (Ped-km/hr)	Time spent (Ped-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	(ALL)	(ALL)	0.00	0.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
5	24/03/2023 09:33:22	24/03/2023 09:33:23	08:00	120	235.55	15.45	77.59	A/1	0	0	A/1	10/1	A/

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	78	0	3515	652	15.82	219.35	16.20	235.55

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	0	0	42	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))	Effective green (s (per cycle))
08:00-09:00	3515	3515	0		78		16	694	698

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	14.71	15.82	13.18	2.27	219.35	219.35	36.75	1225.72	66.16	16.20	16.20

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
08:00-09:00	430.75	29.81	14.45

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: B

		To		
		A	B	D
From	A	0.0	75.7	75.7
	B	51.5	0.0	43.0
	D	87.7	87.7	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (PCU/hr)	Normal journey time (s)	Calculated Total Flow (PCU/hr)	Avg journey time (s)
8	D	A	64	87.74	64	87.74
9	D	B	369	87.74	369	87.74
11	A	D	65	75.65	65	75.65
12	A	B	544	75.65	544	75.65
14	B	D	156	43.01	156	43.01
15	B	A	321	51.48	321	51.48

Final Prediction Table

Traffic Stream Results

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QU
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queu (PCU)
A	1	Scholarstown Rd	1	1	A	609	2004	46	0.00	78	16	63.65	39.65	91.69	18.91
Ax	1	(untitled)				385	Unrestricted	120	70.00	0	Unrestricted	12.00	0.00	0.00	0.00
B	2	Ballyboden Rd N	1	1	B	156 <	1823	43	0.00	23	286	29.54	27.14	68.51	3.63 +
BSlip	2	Ballyboden Rd N	1	1	B	321	1957	43	0.00	45	101	38.01	30.81	75.62	8.21
Bx	1	(untitled)				913	Unrestricted	120	21.00	0	Unrestricted	12.00	0.00	0.00	0.00
D	1	Edmonstown Road	1	1	D	433	1867	40	0.00	68	33	75.74	39.74	88.66	12.98
Dx	1	(untitled)				221	Unrestricted	120	27.00	0	Unrestricted	12.00	0.00	0.00	0.00
10	1	(untitled)	1			477	2055	120	4.00	23	288	1.46	0.26	0.00	0.04

Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE			PER PED		QUEUES	WEIGHTS	P
Pedestrian	Side	Name	Traffic node	Controller stream	Phase	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Degree of saturation (%)	Practical reserve capacity	JourneyTime (s)	Mean Delay per Ped (s)	Mean max queue (Ped)	Delay weighting (%)	(
(ALL)	(ALL)	(untitled)		1	E	0	11000	7	0	Unrestricted	0.00	0.00	0.00	100	

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	430.75	29.81	14.45	13.18	2.27	219.35	16.20	0.00	235.55
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	430.75	29.81	14.45	13.18	2.27	219.35	16.20	0.00	235.55

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

THE FUTURE OF TRANSPORT
Generated on 24/03/2023 09:36:25 using TRANSYT 15 (15.5.3.7)

A6 - 2040 DN PM
D6 - 2040 DN PM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit over PR
6	24/03/2023 09:33:23	24/03/2023 09:33:24	17:00	120	188.88	12.35	71.70	A/1	0	0	A/1	10/1	A/

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2040 DN PM		D6	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2040 DN PM				17:00	

Network Options

Network timings

Network cycle time (s)	Restrict to SCOOT cycle times	Time segment length (min)	Number of time segments	Modelled time period (min)
120		60	1	60

Signals options

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

Advanced

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

Traffic options

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

Advanced

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

Normal Traffic parameters

Dispersion type	Dispersion coefficient	Travel time coefficient
Default	35	80

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

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

Tram parameters

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

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

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

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
1	(untitled)	

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
A	(untitled)		1
Ax	(untitled)		
B	(untitled)		1
BSlip	(untitled)		1
Bx	(untitled)		
D	(untitled)		1
Dx	(untitled)		
10	(untitled)		1

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Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
A	1	Scholarstown Rd			200.00	✓	Sum of lanes	2004	✓		Normal	
Ax	1	(untitled)			100.00						Normal	
B	2	Ballyboden Rd N			20.00	✓	Sum of lanes	1823	✓		Normal	
BSlip	2	Ballyboden Rd N			60.00	✓	Sum of lanes	1957	✓		Normal	
Bx	1	(untitled)			100.00						Normal	
D	1	Edmonstown Road			300.00	✓	Sum of lanes	1867	✓		Normal	
Dx	1	(untitled)			100.00						Normal	
10	1	(untitled)			10.00	✓	Sum of lanes	2055			Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Surface condition	Site quality factor	Gradient (%)	Width (m)	Use connector turning radius	Proportion that turn (%)	Turning radius (m)	Nearside lane	Saturation flow (PCU/hr)
A	1	1	(untitled)		✓	N/A	N/A	0	4.50		67	10.00		2004
Ax	1	1	(untitled)											
B	2	1	(untitled)		✓	N/A	N/A	0	3.00		67	20.00	✓	1823
BSlip	2	1	(untitled)		✓	N/A	N/A	0	3.00		67	20.00		1957
Bx	1	1	(untitled)											
D	1	1	(untitled)		✓	N/A	N/A	0	3.00		67	10.00		1867
Dx	1	1	(untitled)											
10	1	1	(untitled)		✓	N/A	N/A	0	3.00		0	6.00		2055

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
(ALL)	(ALL)	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	120

Normal traffic - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	(ALL)	100	100

Normal traffic - Advanced

Arm	Traffic Stream	Dispersion type for Normal Traffic
(ALL)	(ALL)	NetworkDefault

Flows

Arm	Traffic Stream	Total Flow (PCU/hr)	Normal Flow (PCU/hr)
A	1	467	467
Ax	1	550	550
B	2	196	196
BSlip	2	492	492
Bx	1	550	550
D	1	232	232
Dx	1	287	287
10	1	688	688

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled
A	1	1	A	
B	2	1	B	
BSlip	2	1	B	
D	1	1	D	

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
A	1	24.00	30.00
D	1	36.00	30.00
10	1	1.20	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	1	1	D/1	Ax/1	12.00	30.00	✓	Nearside	37.46
B	2	1	10/1	B/2	2.40	30.00	✓	Straight	Straight Movement
BSlip	2	1	10/1	BSlip/2	7.20	30.00	✓	Straight	Straight Movement
Bx	1	1	D/1	Bx/1	12.00	30.00	✓	Straight	Straight Movement
Dx	1	1	A/1	Dx/1	12.00	30.00	✓	Offside	67.90
Ax	1	2	BSlip/2	Ax/1	12.00	30.00	✓	Offside	81.96
Bx	1	2	A/1	Bx/1	12.00	30.00	✓	Nearside	55.47
Dx	1	2	B/2	Dx/1	12.00	30.00	✓	Straight	Straight Movement

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
1	(untitled)				Farside	9.00	6.00	5.40
2	(untitled)				Farside	10.50	7.00	5.40
3	(untitled)				Farside	9.50	6.33	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	E	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(ALL)	11000

Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	100	100		0.00		

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Local OD Matrix - Local Matrix: B

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
B	(untitled)	✓	✓	Path Equalisation			✓			✓	1.25		

Normal Input Flows (PCU/hr)

		To		
		A	B	D
From	A	0	376	91
	B	492	0	196
	D	58	174	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
B	A	Parnwell Lodge	A/1	Ax/1	#FFFF00
	B	Bridge Street (W)	10/1	Bx/1	#0000FF
	D	Bridge Street (E)	D/1	Dx/1	#00FF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
B	8		D	A	D/1, Ax/1	Normal	58
	9		D	B	D/1, Bx/1	Normal	174
	11		A	D	A/1, Dx/1	Normal	91
	12		A	B	A/1, Bx/1	Normal	376
	14		B	D	10/1, B/2, Dx/1	Normal	196
	15		B	A	10/1, BSlip/2, Ax/1	Normal	492

Signal Timings

Network Default: 120s cycle time; 120 steps

Controller Stream 1

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)
1	(untitled)		8	NetworkDefault	120

Controller Stream 1 - Properties

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
1	Unspecified						Absolute

Controller Stream 1 - Optimisation

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
1	✓	✓	Offsets And Green Splits	✓	

Phases

Controller Stream	Phase	Name	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type	Blackout Time (s)
1	A	(untitled)	7	300	0	0	Traffic	
	B	(untitled)	7	300	0	0	Traffic	
	D	(untitled)	7	300	0	0	Traffic	
	E	(untitled)	6	300	0	0	Pedestrian	0

Library Stages

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)
1	1	A	1
	2	B, D	1
	3	E	7
	4	B	3

Stage Sequences

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends
1	8	(untitled)	Single	1, 2, 4, 3	31, 84, 87, 102

Intergreen Matrix for Controller Stream 1

		To			
		A	B	D	E
From	A		5	5	6
	B	5			8
	D	6			7
	E	11	11	11	

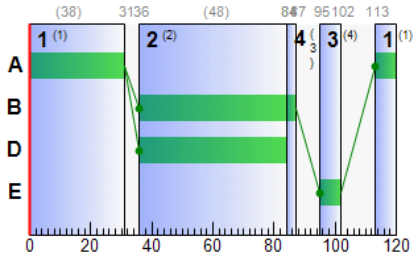
Banned Stage transitions for Controller Stream 1

		To			
		1	2	3	4
From	1				
	2				
	3				
	4				

Traffic Stream Green Times

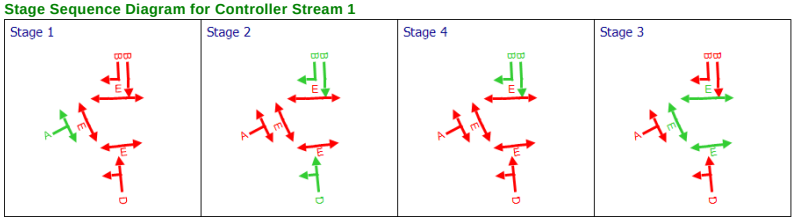
Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
A	1	1	1	A	113	31	38
B	2	1	1	B	36	87	51
BSlip	2	1	1	B	36	87	51
D	1	1	1	D	36	84	48

Phase Timings Diagram for Controller Stream 1



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Stage Sequence Diagram for Controller Stream 1



Resultant penalties

Time Segment	Controller stream	Phase min max penalty (£ per hr)	Intergreen broken penalty (£ per hr)	Stage constraint broken penalty (£ per hr)	Cost of controller stream penalties (£ per hr)
17:00-18:00	1	0.00	0.00	0.00	0.00

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (PCU)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	A	1	72	26	467	2004	38	42.53	14.51	41.73	78.34	5.38	83.72
	Ax	1	0	Unrestricted	550	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	B	2	25	263	196	1823	51	22.34	4.18	120.14	17.27	1.54	18.81
	BSlip	2	58	55	492	1957	51	28.66	12.70	121.70	55.61	4.70	60.31
	Bx	1	0	Unrestricted	550	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	D	1	30	196	232	1867	48	25.02	5.29	10.13	22.89	1.94	24.84
	Dx	1	0	Unrestricted	287	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	10	1	33	169	688	2055	120	0.44	0.08	4.84	1.20	0.00	1.20

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Calculated sat flow (PCU/hr)	Calculated capacity (PCU/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))	Eff gre (cy
17:00-18:00	A	1	467	467	0		2004	651	72		26	0.00	38	
	Ax	1	550	550	0		Unrestricted	Unrestricted	0		Unrestricted	1.08	120	
	B	2	196	196	0		1823	790	25		263	0.00	51	
	BSlip	2	492	492	0		1957	848	58		55	0.00	51	
	Bx	1	550	550	0		Unrestricted	Unrestricted	0		Unrestricted	0.88	120	
	D	1	232	232	0		1867	762	30		196	0.00	48	
	Dx	1	287	287	0		Unrestricted	Unrestricted	0		Unrestricted	0.72	120	
	10	1	688	688	0		2055	2055	33		169	0.00	120	

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	A	1	24.00	42.53	4.62	0.89	78.34	78.34	91.88	402.65	26.41	5.38	5.38
	Ax	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	B	2	2.40	22.34	1.18	0.04	17.27	17.27	62.68	121.62	1.22	1.54	1.54
	BSlip	2	7.20	28.66	3.52	0.40	55.61	55.61	76.18	362.93	11.89	4.70	4.70
	Bx	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	D	1	36.00	25.02	1.55	0.07	22.89	22.89	66.77	152.92	1.99	1.94	1.94
	Dx	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	10	1	1.20	0.44	0.00	0.08	1.20	1.20	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (PCU)	Mean max queue (PCU)	Max queue storage (PCU)	Utilised storage (%)	Average storage excess queue (PCU)	Average limit excess queue (PCU)	Excess queue penalty (£ per hr)	Max end of green queue (PCU)	Max end of red queue (PCU)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))	Estimated blocking
17:00-18:00	A	1	0.00	14.51	34.78	41.73	0.00	0.00	0.00	0.89	11.40	0.00	0.00	0.00	
	Ax	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			60.00	0.00	60.00	
	B	2	0.00	4.18	3.48	120.14	0.04	0.00	0.00	0.04	3.74	0.00	0.00	0.00	
	BSlip	2	0.00	12.70	10.43	121.70	0.17	0.00	0.00	0.40	9.69	0.00	0.00	0.00	
	Bx	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			24.00	0.00	24.00	
	D	1	0.00	5.29	52.17	10.13	0.00	0.00	0.00	0.07	4.64	0.00	0.00	0.00	
	Dx	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			24.00	0.00	24.00	
	10	1	0.00	0.08	1.74	4.84	0.00	0.00	0.00			0.00	27.00	27.00	

Traffic Stream Results: Journey times

Time Segment	Arm	Traffic Stream	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
17:00-18:00	A	1	93.40	8.63	10.82	66.53
	Ax	1	55.00	1.83	30.00	12.00
	B	2	3.92	1.35	2.91	24.74
	BSlip	2	29.52	4.90	6.02	35.86
	Bx	1	55.00	1.83	30.00	12.00
	D	1	69.60	3.93	17.70	61.02
	Dx	1	28.70	0.96	30.00	12.00
	10	1	6.88	0.31	21.94	1.64

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Mean Max Queue EoTS (PCU)	Max End of Green Queue EoTS (PCU)	Max End of Red Queue EoTS (PCU)	PCU Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
17:00-18:00	A	1	0.00	0.00	✓	14.52	0.90	11.41	1.00	0.00	83.72	83.72
	Ax	1	0.00	0.00	✓	0.00			1.00	0.00	0.00	0.00
	B	2	0.00	0.00	✓	4.18	0.04	3.74	1.00	0.00	18.81	18.81
	BSlip	2	0.00	0.00	✓	12.70	0.40	9.69	1.00	0.00	60.31	60.31
	Bx	1	0.00	0.00	✓	0.00			1.00	0.00	0.00	0.00
	D	1	0.00	0.00	✓	5.29	0.07	4.64	1.00	0.00	24.84	24.84
	Dx	1	0.00	0.00	✓	0.00			1.00	0.00	0.00	0.00
	10	1	0.00	0.00	✓	0.08			1.00	0.00	1.20	1.20

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Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
17:00-18:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s (per cycle))	Eff gr (c
17:00-18:00	(ALL)	(ALL)	0	0	0		11000	642	0		Unrestricted	0.00	7	

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Uniform delay (Ped-hr/hr)	Random plus oversat delay (Ped-hr/hr)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)
17:00-18:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Average storage excess queue (Ped)	Average limit excess queue (Ped)	Excess queue penalty (£ per hr)
17:00-18:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Journey times

Time Segment	Crossing	Side	Distance travelled (Ped-km/hr)	Time spent (Ped-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
17:00-18:00	(ALL)	(ALL)	0.00	0.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
17:00-18:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
6	24/03/2023 09:33:23	24/03/2023 09:33:24	17:00	120	188.88	12.35	71.70	A/1	0	0	A/1	10/1	A/

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	72	0	3462	668	12.84	175.32	13.56	188.88

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
17:00-18:00	0	0	42	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))	Effective green (s (per cycle))
17:00-18:00	3462	3462	0		72		26	710	714

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	11.86	12.84	10.86	1.48	175.32	175.32	31.24	1040.12	41.51	13.56	13.56

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
17:00-18:00	342.02	23.75	14.40

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: B

		To		
		A	B	D
From	A	0.0	78.5	78.5
	B	49.5	0.0	38.4
	D	73.0	73.0	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (PCU/hr)	Normal journey time (s)	Calculated Total Flow (PCU/hr)	Avg journey time (s)
8	D	A	58	73.02	58	73.02
9	D	B	174	73.02	174	73.02
11	A	D	91	78.53	91	78.53
12	A	B	376	78.53	376	78.53
14	B	D	196	38.38	196	38.38
15	B	A	492	49.50	492	49.50

Final Prediction Table

Traffic Stream Results

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QU
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queu (PCU
A	1	Scholarstown Rd	1	1	A	467	2004	38	0.00	72	26	66.53	42.53	91.88	14.51
Ax	1	(untitled)				550	Unrestricted	120	60.00	0	Unrestricted	12.00	0.00	0.00	0.00
B	2	Ballyboden Rd N	1	1	B	196 <	1823	51	0.00	25	263	24.74	22.34	62.68	4.18 +
BSlip	2	Ballyboden Rd N	1	1	B	492 <	1957	51	0.00	58	55	35.86	28.66	76.18	12.70 +
Bx	1	(untitled)				550	Unrestricted	120	24.00	0	Unrestricted	12.00	0.00	0.00	0.00
D	1	Edmonstown Road	1	1	D	232	1867	48	0.00	30	196	61.02	25.02	66.77	5.29
Dx	1	(untitled)				287	Unrestricted	120	24.00	0	Unrestricted	12.00	0.00	0.00	0.00
10	1	(untitled)	1			688	2055	120	27.00	33	169	1.64	0.44	0.00	0.08

Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE			PER PED		QUEUES	WEIGHTS	P
Pedestrian	Side	Name	Traffic node	Controller stream	Phase	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Degree of saturation (%)	Practical reserve capacity	JourneyTime (s)	Mean Delay per Ped (s)	Mean max queue (Ped)	Delay weighting (%)	(
(ALL)	(ALL)	(untitled)		1	E	0	11000	7	0	Unrestricted	0.00	0.00	0.00	100	

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	342.02	23.75	14.40	10.86	1.48	175.32	13.56	0.00	188.88
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	342.02	23.75	14.40	10.86	1.48	175.32	13.56	0.00	188.88

< = adjusted flow warning (upstream links/traffic streams are over-saturated)

** = Traffic Stream - Normal, Bus or Tram Stop or Delay weighting has been set to a value other than 100%*

^ = Traffic Stream - Normal, Bus or Tram Stop or Delay Path weighting has been set to a value other than 100%

+ = average link/traffic stream excess queue is greater than 0

P.I. = PERFORMANCE INDEX

TRANSYT 15

Version: 15.5.3.7
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Filename: 190068 Double Lane Entries -Do Something.t15
Path: G:\2019\p190068\calcs\Traffic\2022 Resubmission\TRANSYT
Report generation date: 24/03/2023 09:50:45

»A1 - 2025 DS AM : D1 - 2025 DS AM* :
»A2 - 2025 DS PM : D2 - 2025 DS PM* :
»A3 - 2030 DS AM : D3 - 2030 DS AM* :
»A4 - 2030 DS PM : D4 - 2030 DS PM* :
»A5 - 2040 DS AM : D5 - 2040 DS AM* :
»A6 - 2040 DS PM : D6 - 2040 DS PM* :

File summary

File description

File title	Residential Development, Taylors Lane
Location	Ballyboden Rd/Edmondstown Rd/Scholarstown Rd/Site Access
Site number	
UTCRegion	
Driving side	Left
Date	03/03/2023
Version	
Status	Preliminary
Identifier	RB
Client	
Jobnumber	190068
Enumerator	HEADOFFICE\browner
Description	Do Something - Double Lane Entries

Model and Results

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

Units

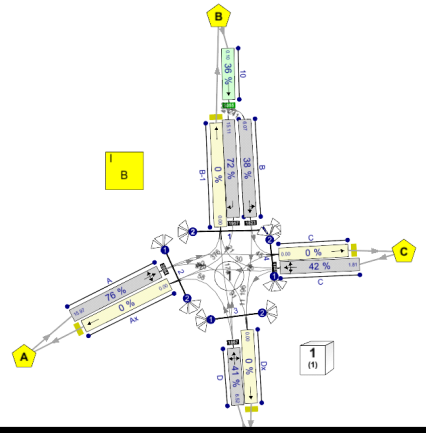
Cost units	Speed units	Distance units	Fuel economy units	Fuel rate units	Mass units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
£	kph	m	mpg	l/h	kg	PCU	PCU	perHour	s	-Hour	perHour

Sorting

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

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Network Diagrams



A1 - 2025 DS AM
D1 - 2025 DS AM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
1	24/03/2023 09:50:20	24/03/2023 09:50:21	08:00	100	235.21	15.49	76.85	A/1	0	0	A/1	10/1	A/

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2025 DS AM		D1	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2025 DS AM				08:00	

Network Options

Network timings

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

Signals options

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

Advanced

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

Traffic options

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

Advanced

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

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Normal Traffic parameters

Dispersion type	Dispersion coefficient	Travel time coefficient
Default	35	80

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

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

Tram parameters

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

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

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

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
1	(untitled)	

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
A	(untitled)		1
Ax	(untitled)		
B	(untitled)		1
B Slip	(untitled)		1
C	(untitled)		1
Cx	(untitled)		
D	(untitled)		1
Dx	(untitled)		
B-1	(untitled)		
10	(untitled)		1

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
A	1	Scholarstown Rd			200.00	✓	Sum of lanes	2004	✓		Normal	
Ax	1	(untitled)			100.00						Normal	
B	2	Ballyboden Rd N			20.00	✓	Sum of lanes	1823	✓		Normal	
B Slip	2	Ballyboden Rd N			60.00	✓	Sum of lanes	1957	✓		Normal	
C	1	Site Access			100.00	✓	Sum of lanes	1867	✓		Normal	
Cx	1	(untitled)			100.00						Normal	
D	1	Edmonstown Road			300.00	✓	Sum of lanes	1867	✓		Normal	
Dx	1	(untitled)			100.00						Normal	
B-1	1	(untitled)			100.00						Normal	
10	1	(untitled)			10.00	✓	Sum of lanes	2055			Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Surface condition	Site quality factor	Gradient (%)	Width (m)	Use connector turning radius	Proportion that turn (%)	Turning radius (m)	Nearside lane	Saturation flow (PCU/hr)
A	1	1	(untitled)		✓	N/A	N/A	0	4.50		67	10.00		2004
Ax	1	1	(untitled)											
B	2	1	(untitled)		✓	N/A	N/A	0	3.00		67	20.00	✓	1823
B Slip	2	1	(untitled)		✓	N/A	N/A	0	3.00		67	20.00		1957
C	1	1	(untitled)		✓	N/A	N/A	0	3.00		67	10.00		1867
Cx	1	1	(untitled)											
D	1	1	(untitled)		✓	N/A	N/A	0	3.00		67	10.00		1867
Dx	1	1	(untitled)											
B-1	1	1	(untitled)											
10	1	1	(untitled)		✓	N/A	N/A	0	3.00		0	6.00		2055

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
(ALL)	(ALL)	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	120

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Normal traffic - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	(ALL)	100	100

Normal traffic - Advanced

Arm	Traffic Stream	Dispersion type for Normal Traffic
(ALL)	(ALL)	NetworkDefault

Flows

Arm	Traffic Stream	Total Flow (PCU/hr)	Normal Flow (PCU/hr)
A	1	539	539
Ax	1	342	342
B	2	142	142
B Slip	2	278	278
C	1	36	36
Cx	1	25	25
D	1	380	380
Dx	1	196	196
B-1	1	812	812
10	1	420	420

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled
A	1	1	A	
B	2	1	B	
B Slip	2	1	B	
C	1	1	C	
D	1	1	D	

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
A	1	24.00	30.00
C	1	12.00	30.00
D	1	36.00	30.00
10	1	1.20	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	1	1	D/1	Ax/1	12.00	30.00	✓	Nearside	37.21
B	2	1	10/1	B/2	2.40	30.00	✓	Straight	Straight Movement
B Slip	2	1	10/1	B Slip/2	7.20	30.00	✓	Straight	Straight Movement
Cx	1	1	D/1	Cx/1	12.00	30.00	✓	Offside	60.33
Dx	1	1	A/1	Dx/1	12.00	30.00	✓	Offside	67.90
B-1	1	1	D/1	B-1/1	12.00	30.00	✓	Straight	Straight Movement
Ax	1	2	C/1	Ax/1	12.00	30.00	✓	Straight	Straight Movement
Cx	1	2	A/1	Cx/1	12.00	30.00	✓	Straight	Straight Movement
Dx	1	2	C/1	Dx/1	12.00	30.00	✓	Nearside	42.41
B-1	1	2	A/1	B-1/1	12.00	30.00	✓	Nearside	55.47
Ax	1	3	B Slip/2	Ax/1	12.00	30.00	✓	Offside	81.96
Cx	1	3	B/2	Cx/1	12.00	30.00	✓	Nearside	31.62
Dx	1	3	B/2	Dx/1	12.00	30.00	✓	Straight	Straight Movement
B-1	1	3	C/1	B-1/1	12.00	30.00	✓	Offside	51.75

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
1	(untitled)				Farside	9.00	6.00	5.40
2	(untitled)				Farside	10.50	7.00	5.40
3	(untitled)				Farside	9.50	6.33	5.40
4	(untitled)				Farside	6.00	4.00	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	E	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(ALL)	11000

Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	100	100		0.00		

Local OD Matrix - Local Matrix: B

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
B	(untitled)	✓	✓	Path Equalisation			✓			✓	1.25		

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Normal Input Flows (PCU/hr)

		To			
		A	B	C	D
From	A	0	472	10	57
	B	278	0	8	134
	C	9	22	0	5
	D	55	318	7	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
B	A	Parnwell Lodge	A/1	Ax/1	#FFFF00
	B	Bridge Street (W)	10/1	B-1/1	#0000FF
	C	Highfield Park	C/1	Cx/1	#FF0000
	D	Bridge Street (E)	D/1	Dx/1	#00FF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
B	4		C	D	C/1, Dx/1	Normal	5
	5		C	A	C/1, Ax/1	Normal	9
	6		C	B	C/1, B-1/1	Normal	22
	7		D	C	D/1, Cx/1	Normal	7
	8		D	A	D/1, Ax/1	Normal	55
	9		D	B	D/1, B-1/1	Normal	318
	10		A	C	A/1, Cx/1	Normal	10
	11		A	D	A/1, Dx/1	Normal	57
	12		A	B	A/1, B-1/1	Normal	472
	13		B	C	10/1, B/2, Cx/1	Normal	8
	14		B	D	10/1, B/2, Dx/1	Normal	134
	15		B	A	10/1, B Slip/2, Ax/1	Normal	278

Signal Timings

Network Default: 100s cycle time; 100 steps

Controller Stream 1

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)
1	(untitled)		8	Manual	120

Controller Stream 1 - Properties

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
1	Unspecified						Absolute

Controller Stream 1 - Optimisation

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
1	✓	✓	Offsets And Green Splits	✓	

Phases

Controller Stream	Phase	Name	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type	Blackout Time (s)
1	A	(untitled)	7	300	0	0	Traffic	
	B	(untitled)	7	300	0	0	Traffic	
	C	(untitled)	7	300	0	0	Traffic	
	D	(untitled)	7	300	0	0	Traffic	
	E	(untitled)	6	300	0	0	Pedestrian	0

Library Stages

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)
1	1	A	1
	2	B, D	1
	3	E	7
	5	B	3
	6	C	5

Stage Sequences

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends
1	8	(untitled)	Single	1, 2, 5, 6, 3	38, 78, 81, 93, 106

Intergreen Matrix for Controller Stream 1

		To				
		A	B	C	D	E
From	A		5		5	6
	B	5		5		8
	C		5		5	6
	D	6		5		7
	E	11	11	11	11	

Banned Stage transitions for Controller Stream 1

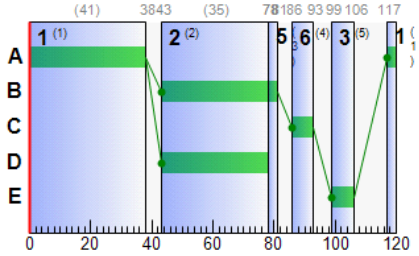
		To				
		1	2	3	5	6
From	1					
	2					
	3					
	5					
	6					

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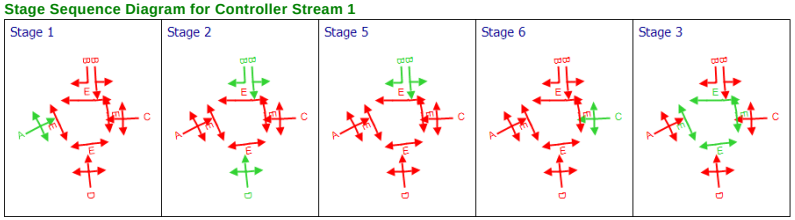
Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
A	1	1	1	A	117	38	41
B	2	1	1	B	43	81	38
B Slip	2	1	1	B	43	81	38
C	1	1	1	C	86	93	7
D	1	1	1	D	43	78	35

Phase Timings Diagram for Controller Stream 1



Stage Sequence Diagram for Controller Stream 1



Resultant penalties

Time Segment	Controller stream	Phase min max penalty (£ per hr)	Intergreen broken penalty (£ per hr)	Stage constraint broken penalty (£ per hr)	Cost of controller stream penalties (£ per hr)
08:00-09:00	1	0.00	0.00	0.00	0.00

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (PCU)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	A	1	77	17	539	2004	41	42.99	17.11	49.21	91.40	6.34	97.74
	Ax	1	0	Unrestricted	342	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	B	2	24	276	142	1823	38	30.61	3.47	99.75	17.14	1.29	18.43
	B Slip	2	44	106	278	1957	38	34.06	7.43	71.19	37.35	2.75	40.10
	C	1	29	211	36	1867	7	59.17	1.20	6.89	8.40	0.45	8.85
	Cx	1	0	Unrestricted	25	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	D	1	68	33	380	1867	35	43.60	11.79	22.59	65.34	4.37	69.71
	Dx	1	0	Unrestricted	196	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	B-1	1	0	Unrestricted	812	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	10	1	20	340	420	2055	120	0.22	0.03	1.51	0.37	0.00	0.37

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Calculated sat flow (PCU/hr)	Calculated capacity (PCU/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))	Effec gree (p cycl
08:00-09:00	A	1	539	539	0		2004	701	77		17	0.00	41	4
	Ax	1	342	342	0		Unrestricted	Unrestricted	0		Unrestricted	1.25	120	12
	B	2	142	142	0		1823	592	24		276	0.00	38	3
	B Slip	2	278	278	0		1957	636	44		106	0.00	38	3
	C	1	36	36	0		1867	124	29		211	0.00	7	8
	Cx	1	25	25	0		Unrestricted	Unrestricted	0		Unrestricted	0.78	120	12
	D	1	380	380	0		1867	560	68		33	0.00	35	3
	Dx	1	196	196	0		Unrestricted	Unrestricted	0		Unrestricted	0.80	120	12
	B-1	1	812	812	0		Unrestricted	Unrestricted	0		Unrestricted	0.73	120	12
	10	1	420	420	0		2055	2055	20		340	0.00	120	12

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	A	1	24.00	42.99	5.19	1.24	91.40	91.40	93.81	468.97	36.69	6.34	6.34
	Ax	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	B	2	2.40	30.61	1.17	0.04	17.14	17.14	72.31	101.55	1.13	1.29	1.29
	B Slip	2	7.20	34.06	2.46	0.17	37.35	37.35	78.96	214.47	5.05	2.75	2.75
	C	1	12.00	59.17	0.53	0.06	8.40	8.40	98.82	33.85	1.73	0.45	0.45
	Cx	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	D	1	36.00	43.60	3.90	0.70	65.34	65.34	91.70	327.60	20.86	4.37	4.37
	Dx	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	B-1	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	10	1	1.20	0.22	0.00	0.03	0.37	0.37	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (PCU)	Mean max queue (PCU)	Max queue storage (PCU)	Utilised storage (%)	Average storage excess queue (PCU)	Average limit excess queue (PCU)	Excess queue penalty (£ per hr)	Max end of green queue (PCU)	Max end of red queue (PCU)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))	Estimated blocking
08:00-09:00	A	1	0.00	17.11	34.78	49.21	0.00	0.00	0.00	1.24	12.92	0.00	0.00	0.00	
	Ax	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			69.00	0.00	69.00	
	B	2	0.00	3.47	3.48	99.75	0.00	0.00	0.00	0.04	3.23	0.00	0.00	0.00	
	B Slip	2	0.00	7.43	10.43	71.19	0.00	0.00	0.00	0.17	6.42	0.00	0.00	0.00	
	C	1	0.00	1.20	17.39	6.89	0.00	0.00	0.00	0.06	1.18	5.00	0.00	5.00	
	Cx	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			110.00	0.00	110.00	
	D	1	0.00	11.79	52.17	22.59	0.00	0.00	0.00	0.70	9.57	0.00	0.00	0.00	
	Dx	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			32.00	0.00	32.00	
	B-1	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			21.00	0.00	21.00	
	10	1	0.00	0.03	1.74	1.51	0.00	0.00	0.00			0.00	0.00	0.00	

Traffic Stream Results: Journey times

Time Segment	Arm	Traffic Stream	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	A	1	107.80	10.03	10.75	66.99
	Ax	1	34.20	1.14	30.00	12.00
	B	2	2.84	1.30	2.18	33.01
	B Slip	2	16.68	3.19	5.24	41.26
	C	1	3.60	0.71	5.06	71.17
	Cx	1	2.50	0.08	30.00	12.00
	D	1	114.00	8.40	13.57	79.60
	Dx	1	19.60	0.65	30.00	12.00
	B-1	1	81.20	2.71	30.00	12.00
	10	1	4.20	0.17	25.26	1.42

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Mean Max Queue EoTS (PCU)	Max End of Green Queue EoTS (PCU)	Max End of Red Queue EoTS (PCU)	PCU Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	A	1	0.00	0.00	✓	17.13	1.26	12.94	1.00	0.00	97.74	97.74
	Ax	1	0.00	0.00	✓	0.00			1.00	0.00	0.00	0.00
	B	2	0.00	0.00	✓	3.47	0.04	3.23	1.00	0.00	18.43	18.43
	B Slip	2	0.00	0.00	✓	7.43	0.17	6.42	1.00	0.00	40.10	40.10
	C	1	0.00	0.00	✓	1.20	0.06	1.18	1.00	0.00	8.85	8.85
	Cx	1	0.00	0.00	✓	0.00			1.00	0.00	0.00	0.00
	D	1	0.00	0.00	✓	11.79	0.71	9.58	1.00	0.00	69.71	69.71
	Dx	1	0.00	0.00	✓	0.00			1.00	0.00	0.00	0.00
	B-1	1	0.00	0.00	✓	0.00			1.00	0.00	0.00	0.00
	10	1	0.00	0.00	✓	0.03			1.00	0.00	0.37	0.37

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s (per cycle))	Eff gr (c
08:00-09:00	(ALL)	(ALL)	0	0	0		11000	642	0		Unrestricted	0.00	7	

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Uniform delay (Ped-hr/hr)	Random plus oversat delay (Ped-hr/hr)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)
08:00-09:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Average storage excess queue (Ped)	Average limit excess queue (Ped)	Excess queue penalty (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Journey times

Time Segment	Crossing	Side	Distance travelled (Ped-km/hr)	Time spent (Ped-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	(ALL)	(ALL)	0.00	0.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
1	24/03/2023 09:50:20	24/03/2023 09:50:21	08:00	100	235.21	15.49	76.85	A/1	0	0	A/1	10/1	A/

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	77	0	3170	759	17.60	220.01	15.20	235.21

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	0	0	56	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))	Effective green (s (per cycle))
08:00-09:00	3170	3170	0		77		17	815	820

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	14.64	17.60	13.25	2.24	220.01	220.01	38.23	1146.42	65.46	15.20	15.20

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
08:00-09:00	386.62	28.38	13.62

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Point to Point Journey Time

Average Journey Time (s) for Local Matrix: B

		To			
		A	B	C	D
From	A	0.0	79.0	79.0	79.0
	B	54.7	0.0	46.4	46.4
	C	83.2	83.2	0.0	83.2
	D	91.6	91.6	91.6	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (PCU/hr)	Normal journey time (s)	Calculated Total Flow (PCU/hr)	Avg journey time (s)
4	C	D	5	83.17	5	83.17
5	C	A	9	83.17	9	83.17
6	C	B	22	83.17	22	83.17
7	D	C	7	91.60	7	91.60
8	D	A	55	91.60	55	91.60
9	D	B	318	91.60	318	91.60
10	A	C	10	78.99	10	78.99
11	A	D	57	78.99	57	78.99
12	A	B	472	78.99	472	78.99
13	B	C	8	46.43	8	46.43
14	B	D	134	46.43	134	46.43
15	B	A	278	54.69	278	54.69

Final Prediction Table

Traffic Stream Results

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QUE
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (PCU)
A	1	Scholarstown Rd	1	1	A	539	2004	41	0.00	77	17	66.99	42.99	93.81	17.11
Ax	1	(untitled)				342	Unrestricted	120	69.00	0	Unrestricted	12.00	0.00	0.00	0.00
B	2	Ballyboden Rd N	1	1	B	142	1823	38	0.00	24	276	33.01	30.61	72.31	3.47
B Slip	2	Ballyboden Rd N	1	1	B	278	1957	38	0.00	44	106	41.26	34.06	78.96	7.43
C	1	Site Access	1	1	C	36	1867	7	5.00	29	211	71.17	59.17	98.82	1.20
Cx	1	(untitled)				25	Unrestricted	120	110.00	0	Unrestricted	12.00	0.00	0.00	0.00
D	1	Edmonstown Road	1	1	D	380	1867	35	0.00	68	33	79.60	43.60	91.70	11.79
Dx	1	(untitled)				196	Unrestricted	120	32.00	0	Unrestricted	12.00	0.00	0.00	0.00
B-1	1	(untitled)				812	Unrestricted	120	21.00	0	Unrestricted	12.00	0.00	0.00	0.00
10	1	(untitled)	1			420	2055	120	0.00	20	340	1.42	0.22	0.00	0.03

Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE			PER PED		QUEUES	WEIGHTS	P
Pedestrian	Side	Name	Traffic node	Controller stream	Phase	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Degree of saturation (%)	Practical reserve capacity	JourneyTime (s)	Mean Delay per Ped (s)	Mean max queue (Ped)	Delay weighting (%)	(
(ALL)	(ALL)	(untitled)		1	E	0	11000	7	0	Unrestricted	0.00	0.00	0.00	100	

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	386.62	28.38	13.62	13.25	2.24	220.01	15.20	0.00	235.21
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	386.62	28.38	13.62	13.25	2.24	220.01	15.20	0.00	235.21

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

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A2 - 2025 DS PM
D2 - 2025 DS PM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
2	24/03/2023 09:50:21	24/03/2023 09:50:22	17:00	120	183.41	12.03	69.36	A/1	0	0	A/1	10/1	A/

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2025 DS PM		D2	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2025 DS PM				17:00	

Network Options

Network timings

Network cycle time (s)	Restrict to SCOOT cycle times	Time segment length (min)	Number of time segments	Modelled time period (min)
120		60	1	60

Signals options

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

Advanced

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

Traffic options

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

Advanced

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

Normal Traffic parameters

Dispersion type	Dispersion coefficient	Travel time coefficient
Default	35	80

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

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

Tram parameters

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

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

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

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
1	(untitled)	

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Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
A	(untitled)		1
Ax	(untitled)		
B	(untitled)		1
B Slip	(untitled)		1
C	(untitled)		1
Cx	(untitled)		
D	(untitled)		1
Dx	(untitled)		
B-1	(untitled)		
10	(untitled)		1

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
A	1	Scholarstown Rd			200.00	✓	Sum of lanes	2004	✓		Normal	
Ax	1	(untitled)			100.00						Normal	
B	2	Ballyboden Rd N			20.00	✓	Sum of lanes	1823	✓		Normal	
B Slip	2	Ballyboden Rd N			60.00	✓	Sum of lanes	1957	✓		Normal	
C	1	Site Access			100.00	✓	Sum of lanes	1867	✓		Normal	
Cx	1	(untitled)			100.00						Normal	
D	1	Edmonstown Road			300.00	✓	Sum of lanes	1867	✓		Normal	
Dx	1	(untitled)			100.00						Normal	
B-1	1	(untitled)			100.00						Normal	
10	1	(untitled)			10.00	✓	Sum of lanes	2055			Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Surface condition	Site quality factor	Gradient (%)	Width (m)	Use connector turning radius	Proportion that turn (%)	Turning radius (m)	Nearside lane	Saturation flow (PCU/hr)
A	1	1	(untitled)		✓	N/A	N/A	0	4.50		67	10.00		2004
Ax	1	1	(untitled)											
B	2	1	(untitled)		✓	N/A	N/A	0	3.00		67	20.00	✓	1823
B Slip	2	1	(untitled)		✓	N/A	N/A	0	3.00		67	20.00		1957
C	1	1	(untitled)		✓	N/A	N/A	0	3.00		67	10.00		1867
Cx	1	1	(untitled)											
D	1	1	(untitled)		✓	N/A	N/A	0	3.00		67	10.00		1867
Dx	1	1	(untitled)											
B-1	1	1	(untitled)											
10	1	1	(untitled)		✓	N/A	N/A	0	3.00		0	6.00		2055

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
(ALL)	(ALL)	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	120

Normal traffic - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	(ALL)	100	100

Normal traffic - Advanced

Arm	Traffic Stream	Dispersion type for Normal Traffic
(ALL)	(ALL)	NetworkDefault

Flows

Arm	Traffic Stream	Total Flow (PCU/hr)	Normal Flow (PCU/hr)
A	1	417	417
Ax	1	487	487
B	2	186	186
B Slip	2	426	426
C	1	28	28
Cx	1	34	34
D	1	206	206
Dx	1	254	254
B-1	1	488	488
10	1	612	612

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled
A	1	1	A	
B	2	1	B	
B Slip	2	1	B	
C	1	1	C	
D	1	1	D	

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
A	1	24.00	30.00
C	1	12.00	30.00
D	1	36.00	30.00
10	1	1.20	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	1	1	D/1	Ax/1	12.00	30.00	✓	Nearside	37.21
B	2	1	10/1	B/2	2.40	30.00	✓	Straight	Straight Movement
B Slip	2	1	10/1	B Slip/2	7.20	30.00	✓	Straight	Straight Movement
Cx	1	1	D/1	Cx/1	12.00	30.00	✓	Offside	60.33
Dx	1	1	A/1	Dx/1	12.00	30.00	✓	Offside	67.90
B-1	1	1	D/1	B-1/1	12.00	30.00	✓	Straight	Straight Movement
Ax	1	2	C/1	Ax/1	12.00	30.00	✓	Straight	Straight Movement
Cx	1	2	A/1	Cx/1	12.00	30.00	✓	Straight	Straight Movement
Dx	1	2	C/1	Dx/1	12.00	30.00	✓	Nearside	42.41
B-1	1	2	A/1	B-1/1	12.00	30.00	✓	Nearside	55.47
Ax	1	3	B Slip/2	Ax/1	12.00	30.00	✓	Offside	81.96
Cx	1	3	B/2	Cx/1	12.00	30.00	✓	Nearside	31.62
Dx	1	3	B/2	Dx/1	12.00	30.00	✓	Straight	Straight Movement
B-1	1	3	C/1	B-1/1	12.00	30.00	✓	Offside	51.75

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
1	(untitled)				Farside	9.00	6.00	5.40
2	(untitled)				Farside	10.50	7.00	5.40
3	(untitled)				Farside	9.50	6.33	5.40
4	(untitled)				Farside	6.00	4.00	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	E	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(ALL)	11000

Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	100	100		0.00		

Local OD Matrix - Local Matrix: B

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
B	(untitled)	✓	✓	Path Equalisation			✓			✓	1.25		

Normal Input Flows (PCU/hr)

		To			
		A	B	C	D
From	A	0	327	11	79
	B	426	0	17	169
	C	11	11	0	6
	D	50	150	6	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
B	A	Parnwell Lodge	A/1	Ax/1	#FFFF00
	B	Bridge Street (W)	10/1	B-1/1	#0000FF
	C	Highfield Park	C/1	Cx/1	#FF0000
	D	Bridge Street (E)	D/1	Dx/1	#00FF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
B	4		C	D	C/1, Dx/1	Normal	6
	5		C	A	C/1, Ax/1	Normal	11
	6		C	B	C/1, B-1/1	Normal	11
	7		D	C	D/1, Cx/1	Normal	6
	8		D	A	D/1, Ax/1	Normal	50
	9		D	B	D/1, B-1/1	Normal	150
	10		A	C	A/1, Cx/1	Normal	11
	11		A	D	A/1, Dx/1	Normal	79
	12		A	B	A/1, B-1/1	Normal	327
	13		B	C	10/1, B/2, Cx/1	Normal	17
	14		B	D	10/1, B/2, Dx/1	Normal	169
	15		B	A	10/1, B Slip/2, Ax/1	Normal	426

Signal Timings

Network Default: 120s cycle time; 120 steps

Controller Stream 1

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)
1	(untitled)		10	Manual	120

Controller Stream 1 - Properties

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
1	Unspecified						Absolute

Controller Stream 1 - Optimisation

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
1	✓	✓	Offsets And Green Splits	✓	

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Phases

Controller Stream	Phase	Name	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type	Blackout Time (s)
1	A	(untitled)	7	300	0	0	Traffic	
	B	(untitled)	7	300	0	0	Traffic	
	C	(untitled)	7	300	0	0	Traffic	
	D	(untitled)	7	300	0	0	Traffic	
	E	(untitled)	6	300	0	0	Pedestrian	0

Library Stages

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)
1	1	A	1
	2	B, D	1
	3	E	7
	5	B	3
	6	C	1

Stage Sequences

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends
1	10	(untitled)	Single	1, 2, 5, 3, 6	22, 71, 74, 89, 107

Intergreen Matrix for Controller Stream 1

		To				
		A	B	C	D	E
From	A		5		5	6
	B	5		5		8
	C		5		5	6
	D	6		5		7
	E	11	11	11	11	

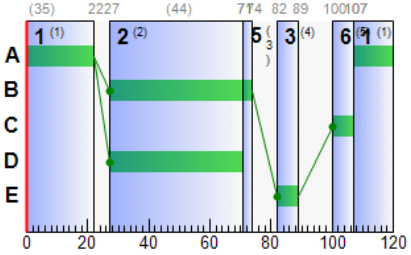
Banned Stage transitions for Controller Stream 1

		To				
		1	2	3	5	6
From	1					
	2					
	3					
	5					
	6					

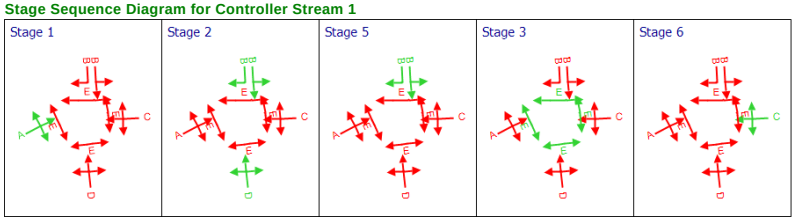
Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
A	1	1	1	A	107	22	35
B	2	1	1	B	27	74	47
B Slip	2	1	1	B	27	74	47
C	1	1	1	C	100	107	7
D	1	1	1	D	27	71	44

Phase Timings Diagram for Controller Stream 1



Stage Sequence Diagram for Controller Stream 1



Resultant penalties

Time Segment	Controller stream	Phase min max penalty (£ per hr)	Intergreen broken penalty (£ per hr)	Stage constraint broken penalty (£ per hr)	Cost of controller stream penalties (£ per hr)
17:00-18:00	1	0.00	0.00	0.00	0.00

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (PCU)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	A	1	69	30	417	2004	35	43.80	13.05	37.52	72.04	4.81	76.85
	Ax	1	0	Unrestricted	487	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	B	2	26	253	186	1823	47	24.90	4.18	120.09	18.27	1.54	19.81
	B Slip	2	54	65	426	1957	47	30.34	11.21	107.43	50.99	4.12	55.10
	C	1	22	300	28	1867	7	57.29	0.91	5.24	6.33	0.34	6.67
	Cx	1	0	Unrestricted	34	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	D	1	29	206	206	1867	44	27.42	4.87	9.33	22.28	1.80	24.08
	Dx	1	0	Unrestricted	254	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	B-1	1	0	Unrestricted	488	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	10	1	30	202	612	2055	120	0.37	0.06	3.63	0.90	0.00	0.90

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Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Calculated sat flow (PCU/hr)	Calculated capacity (PCU/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))	Effec gree (p cycl
17:00-18:00	A	1	417	417	0		2004	601	69		30	0.00	35	3
	Ax	1	487	487	0		Unrestricted	Unrestricted	0		Unrestricted	1.11	120	12
	B	2	186	186	0		1823	729	26		253	0.00	47	4
	B Slip	2	426	426	0		1957	783	54		65	0.00	47	4
	C	1	28	28	0		1867	124	22		300	0.00	7	8
	Cx	1	34	34	0		Unrestricted	Unrestricted	0		Unrestricted	0.81	120	12
	D	1	206	206	0		1867	700	29		206	0.00	44	4
	Dx	1	254	254	0		Unrestricted	Unrestricted	0		Unrestricted	0.77	120	12
	B-1	1	488	488	0		Unrestricted	Unrestricted	0		Unrestricted	0.91	120	12
	10	1	612	612	0		2055	2055	30		202	0.00	120	12

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	A	1	24.00	43.80	4.30	0.77	72.04	72.04	92.02	360.86	22.87	4.81	4.81
	Ax	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	B	2	2.40	24.90	1.24	0.04	18.27	18.27	66.09	121.62	1.31	1.54	1.54
	B Slip	2	7.20	30.34	3.27	0.32	50.99	50.99	77.04	318.55	9.64	4.12	4.12
	C	1	12.00	57.29	0.41	0.03	6.33	6.33	96.63	26.09	0.97	0.34	0.34
	Cx	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	D	1	36.00	27.42	1.51	0.06	22.28	22.28	69.70	141.75	1.83	1.80	1.80
	Dx	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	B-1	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	10	1	1.20	0.37	0.00	0.06	0.90	0.90	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (PCU)	Mean max queue (PCU)	Max queue storage (PCU)	Utilised storage (%)	Average storage excess queue (PCU)	Average limit excess queue (PCU)	Excess queue penalty (£ per hr)	Max end of green queue (PCU)	Max end of red queue (PCU)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))	Estimated blocking
17:00-18:00	A	1	0.00	13.05	34.78	37.52	0.00	0.00	0.00	0.77	10.50	0.00	0.00	0.00	
	Ax	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			57.00	0.00	57.00	
	B	2	0.00	4.18	3.48	120.09	0.04	0.00	0.00	0.04	3.76	0.00	0.00	0.00	
	B Slip	2	0.00	11.21	10.43	107.43	0.02	0.00	0.00	0.32	8.84	0.00	0.00	0.00	
	C	1	0.00	0.91	17.39	5.24	0.00	0.00	0.00	0.03	0.90	6.00	0.00	6.00	
	Cx	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			107.00	0.00	107.00	
	D	1	0.00	4.87	52.17	9.33	0.00	0.00	0.00	0.06	4.35	0.00	0.00	0.00	
	Dx	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			27.00	0.00	27.00	
	B-1	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			25.00	0.00	25.00	
	10	1	0.00	0.06	1.74	3.63	0.00	0.00	0.00			0.00	21.00	21.00	

Traffic Stream Results: Journey times

Time Segment	Arm	Traffic Stream	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
17:00-18:00	A	1	83.40	7.85	10.62	67.80
	Ax	1	48.70	1.62	30.00	12.00
	B	2	3.72	1.41	2.64	27.30
	B Slip	2	25.56	4.44	5.75	37.54
	C	1	2.80	0.54	5.20	69.29
	Cx	1	3.40	0.11	30.00	12.00
	D	1	61.80	3.63	17.03	63.42
	Dx	1	25.40	0.85	30.00	12.00
	B-1	1	48.80	1.63	30.00	12.00
	10	1	6.12	0.27	22.91	1.57

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Mean Max Queue EoTS (PCU)	Max End of Green Queue EoTS (PCU)	Max End of Red Queue EoTS (PCU)	PCU Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
17:00-18:00	A	1	0.00	0.00	✓	13.06	0.78	10.51	1.00	0.00	76.85	76.85
	Ax	1	0.00	0.00	✓	0.00			1.00	0.00	0.00	0.00
	B	2	0.00	0.00	✓	4.18	0.04	3.76	1.00	0.00	19.81	19.81
	B Slip	2	0.00	0.00	✓	11.21	0.32	8.84	1.00	0.00	55.10	55.10
	C	1	0.00	0.00	✓	0.91	0.03	0.90	1.00	0.00	6.67	6.67
	Cx	1	0.00	0.00	✓	0.00			1.00	0.00	0.00	0.00
	D	1	0.00	0.00	✓	4.87	0.06	4.35	1.00	0.00	24.08	24.08
	Dx	1	0.00	0.00	✓	0.00			1.00	0.00	0.00	0.00
	B-1	1	0.00	0.00	✓	0.00			1.00	0.00	0.00	0.00
	10	1	0.00	0.00	✓	0.06			1.00	0.00	0.90	0.90

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
17:00-18:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s (per cycle))	Eff gr c
17:00-18:00	(ALL)	(ALL)	0	0	0		11000	642	0		Unrestricted	0.00	7	

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Uniform delay (Ped-hr/hr)	Random plus oversat delay (Ped-hr/hr)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)
17:00-18:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Average storage excess queue (Ped)	Average limit excess queue (Ped)	Excess queue penalty (£ per hr)
17:00-18:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00	0.00	0.00

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Pedestrian Crossings: Journey times

Time Segment	Crossing	Side	Distance travelled (Ped-km/hr)	Time spent (Ped-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
17:00-18:00	(ALL)	(ALL)	0.00	0.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
17:00-18:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
2	24/03/2023 09:50:21	24/03/2023 09:50:22	17:00	120	183.41	12.03	69.36	A/1	0	0	A/1	10/1	A/

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	69	0	3138	780	13.80	170.80	12.61	183.41

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
17:00-18:00	0	0	56	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))	Effective green (s (per cycle))
17:00-18:00	3138	3138	0		69		30	836	841

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	11.84	13.80	10.73	1.30	170.80	170.80	32.04	968.86	36.61	12.61	12.61

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
17:00-18:00	309.70	22.35	13.86

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: B

		To			
		A	B	C	D
From	A	0.0	79.8	79.8	79.8
	B	51.1	0.0	40.9	40.9
	C	81.3	81.3	0.0	81.3
	D	75.4	75.4	75.4	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (PCU/hr)	Normal journey time (s)	Calculated Total Flow (PCU/hr)	Avg journey time (s)
4	C	D	6	81.29	6	81.29
5	C	A	11	81.29	11	81.29
6	C	B	11	81.29	11	81.29
7	D	C	6	75.42	6	75.42
8	D	A	50	75.42	50	75.42
9	D	B	150	75.42	150	75.42
10	A	C	11	79.80	11	79.80
11	A	D	79	79.80	79	79.80
12	A	B	327	79.80	327	79.80
13	B	C	17	40.88	17	40.88
14	B	D	169	40.88	169	40.88
15	B	A	426	51.11	426	51.11

Final Prediction Table

Traffic Stream Results

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QUE
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (PCU)
A	1	Scholarstown Rd	1	1	A	417	2004	35	0.00	69	30	67.80	43.80	92.02	13.05
Ax	1	(untitled)				487	Unrestricted	120	57.00	0	Unrestricted	12.00	0.00	0.00	0.00
B	2	Ballyboden Rd N	1	1	B	186 <	1823	47	0.00	26	253	27.30	24.90	66.09	4.18 +
B Slip	2	Ballyboden Rd N	1	1	B	426 <	1957	47	0.00	54	65	37.54	30.34	77.04	11.21 +
C	1	Site Access	1	1	C	28	1867	7	6.00	22	300	69.29	57.29	96.63	0.91
Cx	1	(untitled)				34	Unrestricted	120	107.00	0	Unrestricted	12.00	0.00	0.00	0.00
D	1	Edmonstown Road	1	1	D	206	1867	44	0.00	29	206	63.42	27.42	69.70	4.87
Dx	1	(untitled)				254	Unrestricted	120	27.00	0	Unrestricted	12.00	0.00	0.00	0.00
B-1	1	(untitled)				488	Unrestricted	120	25.00	0	Unrestricted	12.00	0.00	0.00	0.00
10	1	(untitled)	1			612	2055	120	21.00	30	202	1.57	0.37	0.00	0.06

Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE			PER PED		QUEUES	WEIGHTS	P
Pedestrian	Side	Name	Traffic node	Controller stream	Phase	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Degree of saturation (%)	Practical reserve capacity	JourneyTime (s)	Mean Delay per Ped (s)	Mean max queue (Ped)	Delay weighting (%)	(
(ALL)	(ALL)	(untitled)		1	E	0	11000	7	0	Unrestricted	0.00	0.00	0.00	100	

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Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	309.70	22.35	13.86	10.73	1.30	170.80	12.61	0.00	183.41
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	309.70	22.35	13.86	10.73	1.30	170.80	12.61	0.00	183.41

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

A3 - 2030 DS AM
D3 - 2030 DS AM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
3	24/03/2023 09:50:22	24/03/2023 09:50:24	08:00	120	314.20	20.80	81.80	D/1	0	0	D/1	10/1	D/

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2030 DS AM		D3	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2030 DS AM				08:00	

Network Options

Network timings

Network cycle time (s)	Restrict to SCOOT cycle times	Time segment length (min)	Number of time segments	Modelled time period (min)
120		60	1	60

Signals options

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

Advanced

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

Traffic options

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

Advanced

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

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Normal Traffic parameters

Dispersion type	Dispersion coefficient	Travel time coefficient
Default	35	80

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

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

Tram parameters

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

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

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

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
1	(untitled)	

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
A	(untitled)		1
Ax	(untitled)		
B	(untitled)		1
B Slip	(untitled)		1
C	(untitled)		1
Cx	(untitled)		
D	(untitled)		1
Dx	(untitled)		
B-1	(untitled)		
10	(untitled)		1

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
A	1	Scholarstown Rd			200.00	✓	Sum of lanes	2004	✓		Normal	
Ax	1	(untitled)			100.00						Normal	
B	2	Ballyboden Rd N			20.00	✓	Sum of lanes	1823	✓		Normal	
B Slip	2	Ballyboden Rd N			60.00	✓	Sum of lanes	1957	✓		Normal	
C	1	Site Access			100.00	✓	Sum of lanes	1867	✓		Normal	
Cx	1	(untitled)			100.00						Normal	
D	1	Edmonstown Road			300.00	✓	Sum of lanes	1867	✓		Normal	
Dx	1	(untitled)			100.00						Normal	
B-1	1	(untitled)			100.00						Normal	
10	1	(untitled)			10.00	✓	Sum of lanes	2055			Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Surface condition	Site quality factor	Gradient (%)	Width (m)	Use connector turning radius	Proportion that turn (%)	Turning radius (m)	Nearside lane	Saturation flow (PCU/hr)
A	1	1	(untitled)		✓	N/A	N/A	0	4.50		67	10.00		2004
Ax	1	1	(untitled)											
B	2	1	(untitled)		✓	N/A	N/A	0	3.00		67	20.00	✓	1823
B Slip	2	1	(untitled)		✓	N/A	N/A	0	3.00		67	20.00		1957
C	1	1	(untitled)		✓	N/A	N/A	0	3.00		67	10.00		1867
Cx	1	1	(untitled)											
D	1	1	(untitled)		✓	N/A	N/A	0	3.00		67	10.00		1867
Dx	1	1	(untitled)											
B-1	1	1	(untitled)											
10	1	1	(untitled)		✓	N/A	N/A	0	3.00		0	6.00		2055

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
(ALL)	(ALL)	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	120

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Normal traffic - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	(ALL)	100	100

Normal traffic - Advanced

Arm	Traffic Stream	Dispersion type for Normal Traffic
(ALL)	(ALL)	NetworkDefault

Flows

Arm	Traffic Stream	Total Flow (PCU/hr)	Normal Flow (PCU/hr)
A	1	593	593
Ax	1	387	387
B	2	160	160
B Slip	2	302	302
C	1	100	100
Cx	1	45	45
D	1	420	420
Dx	1	223	223
B-1	1	920	920
10	1	462	462

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled
A	1	1	A	
B	2	1	B	
B Slip	2	1	B	
C	1	1	C	
D	1	1	D	

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
A	1	24.00	30.00
C	1	12.00	30.00
D	1	36.00	30.00
10	1	1.20	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	1	1	D/1	Ax/1	12.00	30.00	✓	Nearside	37.21
B	2	1	10/1	B/2	2.40	30.00	✓	Straight	Straight Movement
B Slip	2	1	10/1	B Slip/2	7.20	30.00	✓	Straight	Straight Movement
Cx	1	1	D/1	Cx/1	12.00	30.00	✓	Offside	60.33
Dx	1	1	A/1	Dx/1	12.00	30.00	✓	Offside	67.90
B-1	1	1	D/1	B-1/1	12.00	30.00	✓	Straight	Straight Movement
Ax	1	2	C/1	Ax/1	12.00	30.00	✓	Straight	Straight Movement
Cx	1	2	A/1	Cx/1	12.00	30.00	✓	Straight	Straight Movement
Dx	1	2	C/1	Dx/1	12.00	30.00	✓	Nearside	42.41
B-1	1	2	A/1	B-1/1	12.00	30.00	✓	Nearside	55.47
Ax	1	3	B Slip/2	Ax/1	12.00	30.00	✓	Offside	81.96
Cx	1	3	B/2	Cx/1	12.00	30.00	✓	Nearside	31.62
Dx	1	3	B/2	Dx/1	12.00	30.00	✓	Straight	Straight Movement
B-1	1	3	C/1	B-1/1	12.00	30.00	✓	Offside	51.75

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
1	(untitled)				Farside	9.00	6.00	5.40
2	(untitled)				Farside	10.50	7.00	5.40
3	(untitled)				Farside	9.50	6.33	5.40
4	(untitled)				Farside	6.00	4.00	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	E	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(ALL)	11000

Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	100	100		0.00		

Local OD Matrix - Local Matrix: B

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
B	(untitled)	✓	✓	Path Equalisation			✓			✓	1.25		

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Normal Input Flows (PCU/hr)

		To			
		A	B	C	D
From	A	0	513	18	62
	B	302	0	14	146
	C	25	60	0	15
	D	60	347	13	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
B	A	Parnwell Lodge	A/1	Ax/1	#FFFF00
	B	Bridge Street (W)	10/1	B-1/1	#0000FF
	C	Highfield Park	C/1	Cx/1	#FF0000
	D	Bridge Street (E)	D/1	Dx/1	#00FF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
B	4		C	D	C/1, Dx/1	Normal	15
	5		C	A	C/1, Ax/1	Normal	25
	6		C	B	C/1, B-1/1	Normal	60
	7		D	C	D/1, Cx/1	Normal	13
	8		D	A	D/1, Ax/1	Normal	60
	9		D	B	D/1, B-1/1	Normal	347
	10		A	C	A/1, Cx/1	Normal	18
	11		A	D	A/1, Dx/1	Normal	62
	12		A	B	A/1, B-1/1	Normal	513
	13		B	C	10/1, B/2, Cx/1	Normal	14
	14		B	D	10/1, B/2, Dx/1	Normal	146
	15		B	A	10/1, B Slip/2, Ax/1	Normal	302

Signal Timings

Network Default: 120s cycle time; 120 steps

Controller Stream 1

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)
1	(untitled)		10	Manual	120

Controller Stream 1 - Properties

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
1	Unspecified						Absolute

Controller Stream 1 - Optimisation

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
1	✓	✓	Offsets And Green Splits	✓	

Phases

Controller Stream	Phase	Name	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type	Blackout Time (s)
1	A	(untitled)	7	300	0	0	Traffic	
	B	(untitled)	7	300	0	0	Traffic	
	C	(untitled)	7	300	0	0	Traffic	
	D	(untitled)	7	300	0	0	Traffic	
	E	(untitled)	6	300	0	0	Pedestrian	0

Library Stages

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)
1	1	A	1
	2	B, D	1
	3	E	7
	4	C	1
	5	B	3

Stage Sequences

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends
1	10	(untitled)	Single	1, 3, 4, 2, 5	34, 47, 66, 103, 106

Intergreen Matrix for Controller Stream 1

		To				
		A	B	C	D	E
From	A		5		5	6
	B	5		5		8
	C		5		5	6
	D	6		5		7
	E	11	11	11	11	

Banned Stage transitions for Controller Stream 1

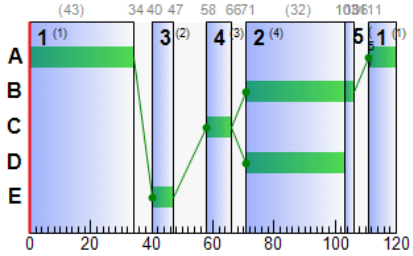
		To				
		1	2	3	4	5
From	1					
	2					
	3					
	4					
	5					

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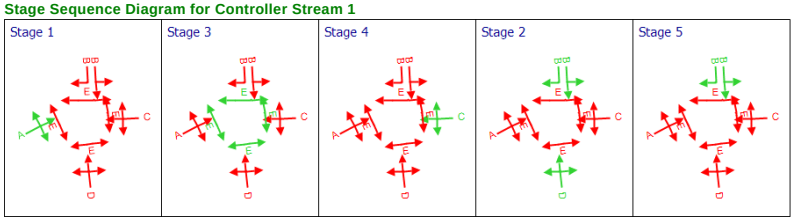
Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
A	1	1	1	A	111	34	43
B	2	1	1	B	71	106	35
B Slip	2	1	1	B	71	106	35
C	1	1	1	C	58	66	8
D	1	1	1	D	71	103	32

Phase Timings Diagram for Controller Stream 1



Stage Sequence Diagram for Controller Stream 1



Resultant penalties

Time Segment	Controller stream	Phase min max penalty (£ per hr)	Intergreen broken penalty (£ per hr)	Stage constraint broken penalty (£ per hr)	Cost of controller stream penalties (£ per hr)
08:00-09:00	1	0.00	0.00	0.00	0.00

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (PCU)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	A	1	81	12	593	2004	43	44.09	19.26	55.36	103.12	7.13	110.25
	Ax	1	0	Unrestricted	387	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	B	2	29	208	160	1823	35	33.59	4.15	119.29	21.20	1.53	22.73
	B Slip	2	51	75	302	1957	35	38.00	8.58	82.19	45.27	3.18	48.44
	C	1	71	26	100	1867	8	84.08	4.08	23.45	33.17	1.50	34.67
	Cx	1	0	Unrestricted	45	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	D	1	82	10	420	1867	32	55.64	14.81	28.39	92.17	5.47	97.64
	Dx	1	0	Unrestricted	223	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	B-1	1	0	Unrestricted	920	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	10	1	22	300	462	2055	120	0.25	0.03	1.87	0.46	0.00	0.46

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Calculated sat flow (PCU/hr)	Calculated capacity (PCU/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))	Effec gree (p cycl
08:00-09:00	A	1	593	593	0		2004	735	81		12	0.00	43	4
	Ax	1	387	387	0		Unrestricted	Unrestricted	0		Unrestricted	1.23	120	12
	B	2	160	160	0		1823	547	29		208	0.00	35	3
	B Slip	2	302	302	0		1957	587	51		75	0.00	35	3
	C	1	100	100	0		1867	140	71		26	0.00	8	9
	Cx	1	45	45	0		Unrestricted	Unrestricted	0		Unrestricted	0.75	120	12
	D	1	420	420	0		1867	513	82		10	0.00	32	3
	Dx	1	223	223	0		Unrestricted	Unrestricted	0		Unrestricted	0.76	120	12
	B-1	1	920	920	0		Unrestricted	Unrestricted	0		Unrestricted	0.62	120	12
	10	1	462	462	0		2055	2055	22		300	0.00	120	12

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	A	1	24.00	44.09	5.63	1.63	103.12	103.12	95.96	521.07	47.95	7.13	7.13
	Ax	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	B	2	2.40	33.59	1.43	0.06	21.20	21.20	76.36	120.38	1.81	1.53	1.53
	B Slip	2	7.20	38.00	2.92	0.27	45.27	45.27	83.91	245.33	8.07	3.18	3.18
	C	1	12.00	84.08	1.51	0.83	33.17	33.17	119.83	96.45	23.37	1.50	1.50
	Cx	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	D	1	36.00	55.64	4.75	1.74	92.17	92.17	103.89	385.63	50.70	5.47	5.47
	Dx	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	B-1	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	10	1	1.20	0.25	0.00	0.03	0.46	0.46	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (PCU)	Mean max queue (PCU)	Max queue storage (PCU)	Utilised storage (%)	Average storage excess queue (PCU)	Average limit excess queue (PCU)	Excess queue penalty (£ per hr)	Max end of green queue (PCU)	Max end of red queue (PCU)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))	Estimated blocking
08:00-09:00	A	1	0.00	19.26	34.78	55.36	0.00	0.00	0.00	1.63	14.15	0.00	0.00	0.00	
	Ax	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			65.00	0.00	65.00	
	B	2	0.00	4.15	3.48	119.29	0.05	0.00	0.00	0.06	3.79	0.00	0.00	0.00	
	B Slip	2	0.00	8.58	10.43	82.19	0.00	0.00	0.00	0.27	7.32	0.00	0.00	0.00	
	C	1	0.00	4.08	17.39	23.45	0.00	0.00	0.00	0.83	3.91	0.00	0.00	0.00	
	Cx	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			78.00	0.00	78.00	
	D	1	0.00	14.81	52.17	28.39	0.00	0.00	0.00	1.74	11.89	0.00	0.00	0.00	
	Dx	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			26.00	0.00	26.00	
	B-1	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			15.00	0.00	15.00	
	10	1	0.00	0.03	1.74	1.87	0.00	0.00	0.00			0.00	16.00	16.00	

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Traffic Stream Results: Journey times

Time Segment	Arm	Traffic Stream	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	A	1	118.60	11.22	10.57	68.09
	Ax	1	38.70	1.29	30.00	12.00
	B	2	3.20	1.60	2.00	35.99
	B Slip	2	18.12	3.79	4.78	45.20
	C	1	10.00	2.67	3.75	96.08
	Cx	1	4.50	0.15	30.00	12.00
	D	1	126.00	10.69	11.79	91.64
	Dx	1	22.30	0.74	30.00	12.00
	B-1	1	92.00	3.07	30.00	12.00
	10	1	4.62	0.19	24.76	1.45

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Mean Max Queue EoTS (PCU)	Max End of Green Queue EoTS (PCU)	Max End of Red Queue EoTS (PCU)	PCU Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	A	1	0.00	0.00	✓	19.28	1.66	14.18	1.00	0.00	110.25	110.25
	Ax	1	0.00	0.00	✓	0.00			1.00	0.00	0.00	0.00
	B	2	0.00	0.00	✓	4.15	0.06	3.79	1.00	0.00	22.73	22.73
	B Slip	2	0.00	0.00	✓	8.58	0.27	7.32	1.00	0.00	48.44	48.44
	C	1	0.00	0.00	✓	4.11	0.86	3.94	1.00	0.00	34.67	34.67
	Cx	1	0.00	0.00	✓	0.00			1.00	0.00	0.00	0.00
	D	1	0.00	0.00	✓	14.86	1.79	11.94	1.00	0.00	97.64	97.64
	Dx	1	0.00	0.00	✓	0.00			1.00	0.00	0.00	0.00
	B-1	1	0.00	0.00	✓	0.00			1.00	0.00	0.00	0.00
	10	1	0.00	0.00	✓	0.03			1.00	0.00	0.46	0.46

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s (per cycle))	Eff gr (c
08:00-09:00	(ALL)	(ALL)	0	0	0		11000	642	0		Unrestricted	0.00	7	

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Uniform delay (Ped-hr/hr)	Random plus oversat delay (Ped-hr/hr)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)
08:00-09:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Average storage excess queue (Ped)	Average limit excess queue (Ped)	Excess queue penalty (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Journey times

Time Segment	Crossing	Side	Distance travelled (Ped-km/hr)	Time spent (Ped-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	(ALL)	(ALL)	0.00	0.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
3	24/03/2023 09:50:22	24/03/2023 09:50:24	08:00	120	314.20	20.80	81.80	D/1	0	0	D/1	10/1	D/

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	82	0	3612	753	20.73	295.39	18.82	314.20

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	0	0	56	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))	Effective green (s (per cycle))
08:00-09:00	3612	3612	0		82		10	809	814

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	14.55	20.73	16.23	4.57	295.39	295.39	41.55	1368.86	131.90	18.82	18.82

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
08:00-09:00	438.04	35.40	12.37

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Point to Point Journey Time

		To			
		A	B	C	D
From	A	0.0	80.1	80.1	80.1
	B	58.7	0.0	49.4	49.4
	C	108.1	108.1	0.0	108.1
	D	103.6	103.6	103.6	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (PCU/hr)	Normal journey time (s)	Calculated Total Flow (PCU/hr)	Avg journey time (s)
4	C	D	15	108.08	15	108.08
5	C	A	25	108.08	25	108.08
6	C	B	60	108.08	60	108.08
7	D	C	13	103.64	13	103.64
8	D	A	60	103.64	60	103.64
9	D	B	347	103.64	347	103.64
10	A	C	18	80.09	18	80.09
11	A	D	62	80.09	62	80.09
12	A	B	513	80.09	513	80.09
13	B	C	14	49.44	14	49.44
14	B	D	146	49.44	146	49.44
15	B	A	302	58.65	302	58.65

Final Prediction Table

Traffic Stream Results

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QU
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (PCU)
A	1	Scholarstown Rd	1	1	A	593	2004	43	0.00	81	12	68.09	44.09	95.96	19.26
Ax	1	(untitled)				387	Unrestricted	120	65.00	0	Unrestricted	12.00	0.00	0.00	0.00
B	2	Ballyboden Rd N	1	1	B	160 <	1823	35	0.00	29	208	35.99	33.59	76.36	4.15 +
B Slip	2	Ballyboden Rd N	1	1	B	302	1957	35	0.00	51	75	45.20	38.00	83.91	8.58
C	1	Site Access	1	1	C	100	1867	8	0.00	71	26	96.08	84.08	119.83	4.08
Cx	1	(untitled)				45	Unrestricted	120	78.00	0	Unrestricted	12.00	0.00	0.00	0.00
D	1	Edmonstown Road	1	1	D	420	1867	32	0.00	82	10	91.64	55.64	103.89	14.81
Dx	1	(untitled)				223	Unrestricted	120	26.00	0	Unrestricted	12.00	0.00	0.00	0.00
B-1	1	(untitled)				920	Unrestricted	120	15.00	0	Unrestricted	12.00	0.00	0.00	0.00
10	1	(untitled)	1			462	2055	120	16.00	22	300	1.45	0.25	0.00	0.03

Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE			PER PED		QUEUES	WEIGHTS	P
Pedestrian	Side	Name	Traffic node	Controller stream	Phase	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Degree of saturation (%)	Practical reserve capacity	JourneyTime (s)	Mean Delay per Ped (s)	Mean max queue (Ped)	Delay weighting (%)	(
(ALL)	(ALL)	(untitled)		1	E	0	11000	7	0	Unrestricted	0.00	0.00	0.00	100	

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	438.04	35.40	12.37	16.23	4.57	295.39	18.82	0.00	314.20
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	438.04	35.40	12.37	16.23	4.57	295.39	18.82	0.00	314.20

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

A4 - 2030 DS PM
D4 - 2030 DS PM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
4	24/03/2023 09:50:24	24/03/2023 09:50:25	17:00	120	238.35	15.69	72.16	A/1	0	0	A/1	10/1	A/

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2030 DS PM		D4	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2030 DS PM				17:00	

Network Options

Network timings

Network cycle time (s)	Restrict to SCOOT cycle times	Time segment length (min)	Number of time segments	Modelled time period (min)
120		60	1	60

Signals options

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

Advanced

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

Traffic options

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

Advanced

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

Normal Traffic parameters

Dispersion type	Dispersion coefficient	Travel time coefficient
Default	35	80

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

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

Tram parameters

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

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

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

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
1	(untitled)	

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Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
A	(untitled)		1
Ax	(untitled)		
B	(untitled)		1
B Slip	(untitled)		1
C	(untitled)		1
Cx	(untitled)		
D	(untitled)		1
Dx	(untitled)		
B-1	(untitled)		
10	(untitled)		1

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
A	1	Scholarstown Rd			200.00	✓	Sum of lanes	2004	✓		Normal	
Ax	1	(untitled)			100.00						Normal	
B	2	Ballyboden Rd N			20.00	✓	Sum of lanes	1823	✓		Normal	
B Slip	2	Ballyboden Rd N			60.00	✓	Sum of lanes	1957	✓		Normal	
C	1	Site Access			100.00	✓	Sum of lanes	1867	✓		Normal	
Cx	1	(untitled)			100.00						Normal	
D	1	Edmonstown Road			300.00	✓	Sum of lanes	1867	✓		Normal	
Dx	1	(untitled)			100.00						Normal	
B-1	1	(untitled)			100.00						Normal	
10	1	(untitled)			10.00	✓	Sum of lanes	2055			Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Surface condition	Site quality factor	Gradient (%)	Width (m)	Use connector turning radius	Proportion that turn (%)	Turning radius (m)	Nearside lane	Saturation flow (PCU/hr)
A	1	1	(untitled)		✓	N/A	N/A	0	4.50		67	10.00		2004
Ax	1	1	(untitled)											
B	2	1	(untitled)		✓	N/A	N/A	0	3.00		67	20.00	✓	1823
B Slip	2	1	(untitled)		✓	N/A	N/A	0	3.00		67	20.00		1957
C	1	1	(untitled)		✓	N/A	N/A	0	3.00		67	10.00		1867
Cx	1	1	(untitled)											
D	1	1	(untitled)		✓	N/A	N/A	0	3.00		67	10.00		1867
Dx	1	1	(untitled)											
B-1	1	1	(untitled)											
10	1	1	(untitled)		✓	N/A	N/A	0	3.00		0	6.00		2055

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
(ALL)	(ALL)	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	120

Normal traffic - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	(ALL)	100	100

Normal traffic - Advanced

Arm	Traffic Stream	Dispersion type for Normal Traffic
(ALL)	(ALL)	NetworkDefault

Flows

Arm	Traffic Stream	Total Flow (PCU/hr)	Normal Flow (PCU/hr)
A	1	470	470
Ax	1	539	539
B	2	230	230
B Slip	2	464	464
C	1	52	52
Cx	1	90	90
D	1	234	234
Dx	1	281	281
B-1	1	540	540
10	1	694	694

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled
A	1	1	A	
B	2	1	B	
B Slip	2	1	B	
C	1	1	C	
D	1	1	D	

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
A	1	24.00	30.00
C	1	12.00	30.00
D	1	36.00	30.00
10	1	1.20	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	1	1	D/1	Ax/1	12.00	30.00	✓	Nearside	37.21
B	2	1	10/1	B/2	2.40	30.00	✓	Straight	Straight Movement
B Slip	2	1	10/1	B Slip/2	7.20	30.00	✓	Straight	Straight Movement
Cx	1	1	D/1	Cx/1	12.00	30.00	✓	Offside	60.33
Dx	1	1	A/1	Dx/1	12.00	30.00	✓	Offside	67.90
B-1	1	1	D/1	B-1/1	12.00	30.00	✓	Straight	Straight Movement
Ax	1	2	C/1	Ax/1	12.00	30.00	✓	Straight	Straight Movement
Cx	1	2	A/1	Cx/1	12.00	30.00	✓	Straight	Straight Movement
Dx	1	2	C/1	Dx/1	12.00	30.00	✓	Nearside	42.41
B-1	1	2	A/1	B-1/1	12.00	30.00	✓	Nearside	55.47
Ax	1	3	B Slip/2	Ax/1	12.00	30.00	✓	Offside	81.96
Cx	1	3	B/2	Cx/1	12.00	30.00	✓	Nearside	31.62
Dx	1	3	B/2	Dx/1	12.00	30.00	✓	Straight	Straight Movement
B-1	1	3	C/1	B-1/1	12.00	30.00	✓	Offside	51.75

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
1	(untitled)				Farside	9.00	6.00	5.40
2	(untitled)				Farside	10.50	7.00	5.40
3	(untitled)				Farside	9.50	6.33	5.40
4	(untitled)				Farside	6.00	4.00	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	E	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(ALL)	11000

Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	100	100		0.00		

Local OD Matrix - Local Matrix: B

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
B	(untitled)	✓	✓	Path Equalisation			✓			✓	1.25		

Normal Input Flows (PCU/hr)

		To			
		A	B	C	D
From	A	0	355	30	85
	B	464	0	45	185
	C	20	21	0	11
	D	55	164	15	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
B	A	Parnwell Lodge	A/1	Ax/1	#FFFF00
	B	Bridge Street (W)	10/1	B-1/1	#0000FF
	C	Highfield Park	C/1	Cx/1	#FF0000
	D	Bridge Street (E)	D/1	Dx/1	#00FF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
B	4		C	D	C/1, Dx/1	Normal	11
	5		C	A	C/1, Ax/1	Normal	20
	6		C	B	C/1, B-1/1	Normal	21
	7		D	C	D/1, Cx/1	Normal	15
	8		D	A	D/1, Ax/1	Normal	55
	9		D	B	D/1, B-1/1	Normal	164
	10		A	C	A/1, Cx/1	Normal	30
	11		A	D	A/1, Dx/1	Normal	85
	12		A	B	A/1, B-1/1	Normal	355
	13		B	C	10/1, B/2, Cx/1	Normal	45
	14		B	D	10/1, B/2, Dx/1	Normal	185
	15		B	A	10/1, B Slip/2, Ax/1	Normal	464

Signal Timings

Network Default: 120s cycle time; 120 steps

Controller Stream 1

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)
1	(untitled)		10	Manual	120

Controller Stream 1 - Properties

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
1	Unspecified						Absolute

Controller Stream 1 - Optimisation

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
1	✓	✓	Offsets And Green Splits	✓	

Generated on 24/03/2023 09:51:14 using TRANSYT 15 (15.5.3.7)

Phases

Controller Stream	Phase	Name	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type	Blackout Time (s)
1	A	(untitled)	7	300	0	0	Traffic	
	B	(untitled)	7	300	0	0	Traffic	
	C	(untitled)	7	300	0	0	Traffic	
	D	(untitled)	7	300	0	0	Traffic	
	E	(untitled)	6	300	0	0	Pedestrian	0

Library Stages

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)
1	1	A	1
	2	B, D	1
	3	E	7
	4	C	1
	5	B	3

Stage Sequences

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends
1	10	(untitled)	Single	1, 3, 4, 2, 5	36, 49, 67, 110, 113

Intergreen Matrix for Controller Stream 1

		To				
		A	B	C	D	E
From	A		5		5	6
	B	5		5		8
	C		5		5	6
	D	6		5		7
	E	11	11	11	11	

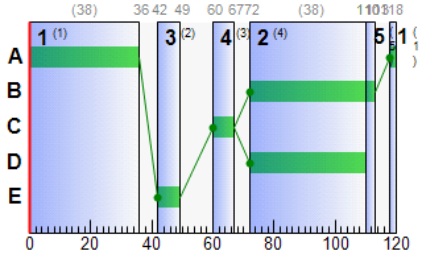
Banned Stage transitions for Controller Stream 1

		To				
		1	2	3	4	5
From	1					
	2					
	3					
	4					
	5					

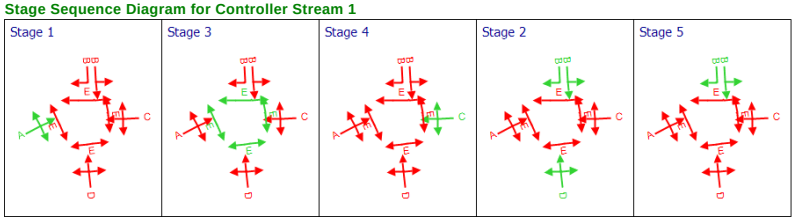
Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
A	1	1	1	A	118	36	38
B	2	1	1	B	72	113	41
B Slip	2	1	1	B	72	113	41
C	1	1	1	C	60	67	7
D	1	1	1	D	72	110	38

Phase Timings Diagram for Controller Stream 1



Stage Sequence Diagram for Controller Stream 1



Resultant penalties

Time Segment	Controller stream	Phase min max penalty (£ per hr)	Intergreen broken penalty (£ per hr)	Stage constraint broken penalty (£ per hr)	Cost of controller stream penalties (£ per hr)
17:00-18:00	1	0.00	0.00	0.00	0.00

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (PCU)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	A	1	72	25	470	2004	38	42.75	14.63	42.05	79.26	5.43	84.68
	Ax	1	0	Unrestricted	539	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	B	2	36	150	230	1823	41	30.60	5.79	166.39	27.76	2.14	29.90
	B Slip	2	68	33	464	1957	41	38.68	13.85	132.72	70.80	5.11	75.91
	C	1	42	115	52	1867	7	64.01	1.81	10.40	13.13	0.67	13.80
	Cx	1	0	Unrestricted	90	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	D	1	39	133	234	1867	38	33.12	6.10	11.69	30.57	2.26	32.83
	Dx	1	0	Unrestricted	281	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	B-1	1	0	Unrestricted	540	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	10	1	34	166	694	2055	120	0.45	0.09	4.95	1.22	0.00	1.22

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Calculated sat flow (PCU/hr)	Calculated capacity (PCU/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))	Effec gree (p cycl
17:00-18:00	A	1	470	470	0		2004	651	72		25	0.00	38	3
	Ax	1	539	539	0		Unrestricted	Unrestricted	0		Unrestricted	1.18	120	12
	B	2	230	230	0		1823	638	36		150	0.00	41	4
	B Slip	2	464	464	0		1957	685	68		33	0.00	41	4
	C	1	52	52	0		1867	124	42		115	0.00	7	8
	Cx	1	90	90	0		Unrestricted	Unrestricted	0		Unrestricted	0.83	120	12
	D	1	234	234	0		1867	607	39		133	0.00	38	3
	Dx	1	281	281	0		Unrestricted	Unrestricted	0		Unrestricted	0.77	120	12
	B-1	1	540	540	0		Unrestricted	Unrestricted	0		Unrestricted	0.84	120	12
	10	1	694	694	0		2055	2055	34		166	0.00	120	12

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	A	1	24.00	42.75	4.66	0.92	79.26	79.26	92.07	405.59	27.16	5.43	5.43
	Ax	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	B	2	2.40	30.60	1.85	0.10	27.76	27.76	74.23	167.70	3.03	2.14	2.14
	B Slip	2	7.20	38.68	4.28	0.70	70.80	70.80	87.91	387.08	20.84	5.11	5.11
	C	1	12.00	64.01	0.78	0.15	13.13	13.13	103.17	49.31	4.33	0.67	0.67
	Cx	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	D	1	36.00	33.12	2.03	0.12	30.57	30.57	77.13	176.88	3.61	2.26	2.26
	Dx	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	B-1	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	10	1	1.20	0.45	0.00	0.09	1.22	1.22	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (PCU)	Mean max queue (PCU)	Max queue storage (PCU)	Utilised storage (%)	Average storage excess queue (PCU)	Average limit excess queue (PCU)	Excess queue penalty (£ per hr)	Max end of green queue (PCU)	Max end of red queue (PCU)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))	Estimated blocking
17:00-18:00	A	1	0.00	14.63	34.78	42.05	0.00	0.00	0.00	0.92	11.49	0.00	0.00	0.00	
	Ax	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			59.00	0.00	59.00	
	B	2	0.00	5.79	3.48	166.39	0.36	0.00	0.00	0.10	5.08	0.00	0.00	0.00	
	B Slip	2	0.00	13.85	10.43	132.72	0.39	0.00	0.00	0.70	10.76	0.00	0.00	0.00	
	C	1	0.00	1.81	17.39	10.40	0.00	0.00	0.00	0.15	1.77	4.00	0.00	4.00	
	Cx	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			53.00	0.00	53.00	
	D	1	0.00	6.10	52.17	11.69	0.00	0.00	0.00	0.12	5.39	0.00	0.00	0.00	
	Dx	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			26.00	0.00	26.00	
	B-1	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			21.00	0.00	21.00	
	10	1	0.00	0.09	1.74	4.95	0.00	0.00	0.00			0.00	50.00	50.00	

Traffic Stream Results: Journey times

Time Segment	Arm	Traffic Stream	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
17:00-18:00	A	1	94.00	8.71	10.79	66.75
	Ax	1	53.90	1.80	30.00	12.00
	B	2	4.60	2.11	2.18	33.00
	B Slip	2	27.84	5.91	4.71	45.88
	C	1	5.20	1.10	4.74	76.01
	Cx	1	9.00	0.30	30.00	12.00
	D	1	70.20	4.49	15.63	69.12
	Dx	1	28.10	0.94	30.00	12.00
	B-1	1	54.00	1.80	30.00	12.00
	10	1	6.94	0.32	21.87	1.65

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Mean Max Queue EoTS (PCU)	Max End of Green Queue EoTS (PCU)	Max End of Red Queue EoTS (PCU)	PCU Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
17:00-18:00	A	1	0.00	0.00	✓	14.64	0.93	11.50	1.00	0.00	84.68	84.68
	Ax	1	0.00	0.00	✓	0.00			1.00	0.00	0.00	0.00
	B	2	0.00	0.00	✓	5.79	0.10	5.08	1.00	0.00	29.90	29.90
	B Slip	2	0.00	0.00	✓	13.85	0.71	10.76	1.00	0.00	75.91	75.91
	C	1	0.00	0.00	✓	1.81	0.15	1.77	1.00	0.00	13.80	13.80
	Cx	1	0.00	0.00	✓	0.00			1.00	0.00	0.00	0.00
	D	1	0.00	0.00	✓	6.10	0.12	5.39	1.00	0.00	32.83	32.83
	Dx	1	0.00	0.00	✓	0.00			1.00	0.00	0.00	0.00
	B-1	1	0.00	0.00	✓	0.00			1.00	0.00	0.00	0.00
	10	1	0.00	0.00	✓	0.09			1.00	0.00	1.22	1.22

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
17:00-18:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s (per cycle))	Eff gr c
17:00-18:00	(ALL)	(ALL)	0	0	0		11000	642	0		Unrestricted	0.00	7	

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Uniform delay (Ped-hr/hr)	Random plus oversat delay (Ped-hr/hr)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)
17:00-18:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Average storage excess queue (Ped)	Average limit excess queue (Ped)	Excess queue penalty (£ per hr)
17:00-18:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Journey times

Time Segment	Crossing	Side	Distance travelled (Ped-km/hr)	Time spent (Ped-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
17:00-18:00	(ALL)	(ALL)	0.00	0.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
17:00-18:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
4	24/03/2023 09:50:24	24/03/2023 09:50:25	17:00	120	238.35	15.69	72.16	A/1	0	0	A/1	10/1	A/

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	72	0	3594	765	15.71	222.74	15.62	238.35

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
17:00-18:00	0	0	56	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))	Effective green (s (per cycle))
17:00-18:00	3594	3594	0		72		25	821	826

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	11.81	15.71	13.61	2.08	222.74	222.74	34.66	1186.57	58.97	15.62	15.62

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
17:00-18:00	353.78	27.48	12.87

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: B

		To			
		A	B	C	D
From	A	0.0	78.8	78.8	78.8
	B	59.5	0.0	46.6	46.6
	C	88.0	88.0	0.0	88.0
	D	81.1	81.1	81.1	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (PCU/hr)	Normal journey time (s)	Calculated Total Flow (PCU/hr)	Avg journey time (s)
4	C	D	11	88.01	11	88.01
5	C	A	20	88.01	20	88.01
6	C	B	21	88.01	21	88.01
7	D	C	15	81.12	15	81.12
8	D	A	55	81.12	55	81.12
9	D	B	164	81.12	164	81.12
10	A	C	30	78.75	30	78.75
11	A	D	85	78.75	85	78.75
12	A	B	355	78.75	355	78.75
13	B	C	45	46.65	45	46.65
14	B	D	185	46.65	185	46.65
15	B	A	464	59.53	464	59.53

Final Prediction Table

Traffic Stream Results

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QU
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (PCU)
A	1	Scholarstown Rd	1	1	A	470	2004	38	0.00	72	25	66.75	42.75	92.07	14.63
Ax	1	(untitled)				539	Unrestricted	120	59.00	0	Unrestricted	12.00	0.00	0.00	0.00
B	2	Ballyboden Rd N	1	1	B	230 <	1823	41	0.00	36	150	33.00	30.60	74.23	5.79 +
B Slip	2	Ballyboden Rd N	1	1	B	464 <	1957	41	0.00	68	33	45.88	38.68	87.91	13.85 +
C	1	Site Access	1	1	C	52	1867	7	4.00	42	115	76.01	64.01	103.17	1.81
Cx	1	(untitled)				90	Unrestricted	120	53.00	0	Unrestricted	12.00	0.00	0.00	0.00
D	1	Edmonstown Road	1	1	D	234	1867	38	0.00	39	133	69.12	33.12	77.13	6.10
Dx	1	(untitled)				281	Unrestricted	120	26.00	0	Unrestricted	12.00	0.00	0.00	0.00
B-1	1	(untitled)				540	Unrestricted	120	21.00	0	Unrestricted	12.00	0.00	0.00	0.00
10	1	(untitled)	1			694	2055	120	50.00	34	166	1.65	0.45	0.00	0.09

Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE			PER PED		QUEUES	WEIGHTS	P
Pedestrian	Side	Name	Traffic node	Controller stream	Phase	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Degree of saturation (%)	Practical reserve capacity	JourneyTime (s)	Mean Delay per Ped (s)	Mean max queue (Ped)	Delay weighting (%)	(
(ALL)	(ALL)	(untitled)		1	E	0	11000	7	0	Unrestricted	0.00	0.00	0.00	100	

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	353.78	27.48	12.87	13.61	2.08	222.74	15.62	0.00	238.35
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	353.78	27.48	12.87	13.61	2.08	222.74	15.62	0.00	238.35

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

A5 - 2040 DS AM
D5 - 2040 DS AM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
5	24/03/2023 09:50:25	24/03/2023 09:50:26	08:00	120	353.73	23.46	85.33	A/1	0	0	A/1	10/1	A/

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2040 DS AM		D5	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2040 DS AM				08:00	

Network Options

Network timings

Network cycle time (s)	Restrict to SCOOT cycle times	Time segment length (min)	Number of time segments	Modelled time period (min)
120		60	1	60

Signals options

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

Advanced

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

Traffic options

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

Advanced

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

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Normal Traffic parameters

Dispersion type	Dispersion coefficient	Travel time coefficient
Default	35	80

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

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

Tram parameters

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

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

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

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
1	(untitled)	

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
A	(untitled)		1
Ax	(untitled)		
B	(untitled)		1
B Slip	(untitled)		1
C	(untitled)		1
Cx	(untitled)		
D	(untitled)		1
Dx	(untitled)		
B-1	(untitled)		
10	(untitled)		1

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
A	1	Scholarstown Rd			200.00	✓	Sum of lanes	2004	✓		Normal	
Ax	1	(untitled)			100.00						Normal	
B	2	Ballyboden Rd N			20.00	✓	Sum of lanes	1823	✓		Normal	
B Slip	2	Ballyboden Rd N			60.00	✓	Sum of lanes	1957	✓		Normal	
C	1	Site Access			100.00	✓	Sum of lanes	1867	✓		Normal	
Cx	1	(untitled)			100.00						Normal	
D	1	Edmonstown Road			300.00	✓	Sum of lanes	1867	✓		Normal	
Dx	1	(untitled)			100.00						Normal	
B-1	1	(untitled)			100.00						Normal	
10	1	(untitled)			10.00	✓	Sum of lanes	2055			Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Surface condition	Site quality factor	Gradient (%)	Width (m)	Use connector turning radius	Proportion that turn (%)	Turning radius (m)	Nearside lane	Saturation flow (PCU/hr)
A	1	1	(untitled)		✓	N/A	N/A	0	4.50		67	10.00		2004
Ax	1	1	(untitled)											
B	2	1	(untitled)		✓	N/A	N/A	0	3.00		67	20.00	✓	1823
B Slip	2	1	(untitled)		✓	N/A	N/A	0	3.00		67	20.00		1957
C	1	1	(untitled)		✓	N/A	N/A	0	3.00		67	10.00		1867
Cx	1	1	(untitled)											
D	1	1	(untitled)		✓	N/A	N/A	0	3.00		67	10.00		1867
Dx	1	1	(untitled)											
B-1	1	1	(untitled)											
10	1	1	(untitled)		✓	N/A	N/A	0	3.00		0	6.00		2055

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
(ALL)	(ALL)	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	120

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Normal traffic - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	(ALL)	100	100

Normal traffic - Advanced

Arm	Traffic Stream	Dispersion type for Normal Traffic
(ALL)	(ALL)	NetworkDefault

Flows

Arm	Traffic Stream	Total Flow (PCU/hr)	Normal Flow (PCU/hr)
A	1	627	627
Ax	1	410	410
B	2	170	170
B Slip	2	321	321
C	1	100	100
Cx	1	45	45
D	1	446	446
Dx	1	236	236
B-1	1	973	973
10	1	491	491

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled
A	1	1	A	
B	2	1	B	
B Slip	2	1	B	
C	1	1	C	
D	1	1	D	

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
A	1	24.00	30.00
C	1	12.00	30.00
D	1	36.00	30.00
10	1	1.20	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	1	1	D/1	Ax/1	12.00	30.00	✓	Nearside	37.21
B	2	1	10/1	B/2	2.40	30.00	✓	Straight	Straight Movement
B Slip	2	1	10/1	B Slip/2	7.20	30.00	✓	Straight	Straight Movement
Cx	1	1	D/1	Cx/1	12.00	30.00	✓	Offside	60.33
Dx	1	1	A/1	Dx/1	12.00	30.00	✓	Offside	67.90
B-1	1	1	D/1	B-1/1	12.00	30.00	✓	Straight	Straight Movement
Ax	1	2	C/1	Ax/1	12.00	30.00	✓	Straight	Straight Movement
Cx	1	2	A/1	Cx/1	12.00	30.00	✓	Straight	Straight Movement
Dx	1	2	C/1	Dx/1	12.00	30.00	✓	Nearside	42.41
B-1	1	2	A/1	B-1/1	12.00	30.00	✓	Nearside	55.47
Ax	1	3	B Slip/2	Ax/1	12.00	30.00	✓	Offside	81.96
Cx	1	3	B/2	Cx/1	12.00	30.00	✓	Nearside	31.62
Dx	1	3	B/2	Dx/1	12.00	30.00	✓	Straight	Straight Movement
B-1	1	3	C/1	B-1/1	12.00	30.00	✓	Offside	51.75

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
1	(untitled)				Farside	9.00	6.00	5.40
2	(untitled)				Farside	10.50	7.00	5.40
3	(untitled)				Farside	9.50	6.33	5.40
4	(untitled)				Farside	6.00	4.00	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	E	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(ALL)	11000

Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	100	100		0.00		

Local OD Matrix - Local Matrix: B

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
B	(untitled)	✓	✓	Path Equalisation			✓			✓	1.25		

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Normal Input Flows (PCU/hr)

		To			
		A	B	C	D
From	A	0	544	18	65
	B	321	0	14	156
	C	25	60	0	15
	D	64	369	13	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
B	A	Parnwell Lodge	A/1	Ax/1	#FFFF00
	B	Bridge Street (W)	10/1	B-1/1	#0000FF
	C	Highfield Park	C/1	Cx/1	#FF0000
	D	Bridge Street (E)	D/1	Dx/1	#00FF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
B	4		C	D	C/1, Dx/1	Normal	15
	5		C	A	C/1, Ax/1	Normal	25
	6		C	B	C/1, B-1/1	Normal	60
	7		D	C	D/1, Cx/1	Normal	13
	8		D	A	D/1, Ax/1	Normal	64
	9		D	B	D/1, B-1/1	Normal	369
	10		A	C	A/1, Cx/1	Normal	18
	11		A	D	A/1, Dx/1	Normal	65
	12		A	B	A/1, B-1/1	Normal	544
	13		B	C	10/1, B/2, Cx/1	Normal	14
	14		B	D	10/1, B/2, Dx/1	Normal	156
	15		B	A	10/1, B Slip/2, Ax/1	Normal	321

Signal Timings

Network Default: 120s cycle time; 120 steps

Controller Stream 1

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)
1	(untitled)		9	Manual	120

Controller Stream 1 - Properties

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
1	Unspecified						Absolute

Controller Stream 1 - Optimisation

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
1	✓	✓	Offsets And Green Splits	✓	

Phases

Controller Stream	Phase	Name	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type	Blackout Time (s)
1	A	(untitled)	7	300	0	0	Traffic	
	B	(untitled)	7	300	0	0	Traffic	
	C	(untitled)	7	300	0	0	Traffic	
	D	(untitled)	7	300	0	0	Traffic	
	E	(untitled)	6	300	0	0	Pedestrian	0

Library Stages

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)
1	1	A	1
	2	B, D	1
	3	E	7
	4	C	1
	5	B	3

Stage Sequences

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends
1	9	(untitled)	Single	1, 3, 4, 2, 5	34, 47, 65, 103, 106

Intergreen Matrix for Controller Stream 1

		To				
		A	B	C	D	E
From	A		5		5	6
	B	5		5		8
	C		5		5	6
	D	6		5		7
	E	11	11	11	11	

Banned Stage transitions for Controller Stream 1

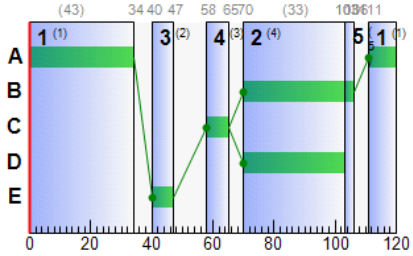
		To				
		1	2	3	4	5
From	1					
	2					
	3					
	4					
	5					

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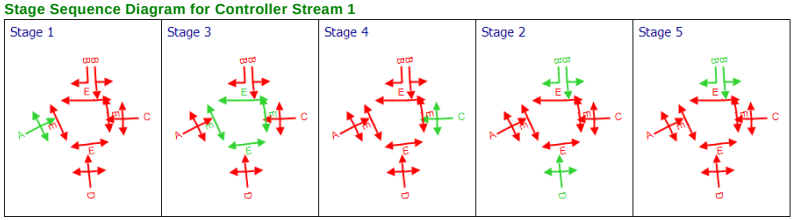
Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
A	1	1	1	A	111	34	43
B	2	1	1	B	70	106	36
B Slip	2	1	1	B	70	106	36
C	1	1	1	C	58	65	7
D	1	1	1	D	70	103	33

Phase Timings Diagram for Controller Stream 1



Stage Sequence Diagram for Controller Stream 1



Resultant penalties

Time Segment	Controller stream	Phase min max penalty (£ per hr)	Intergreen broken penalty (£ per hr)	Stage constraint broken penalty (£ per hr)	Cost of controller stream penalties (£ per hr)
08:00-09:00	1	0.00	0.00	0.00	0.00

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (PCU)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	A	1	85	5	627	2004	43	48.48	21.50	61.82	119.90	7.95	127.84
	Ax	1	0	Unrestricted	410	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	B	2	30	198	170	1823	36	33.05	4.36	125.43	22.16	1.62	23.78
	B Slip	2	53	69	321	1957	36	37.71	9.13	87.48	47.75	3.38	51.13
	C	1	80	12	100	1867	7	105.39	4.67	26.86	41.57	1.69	43.26
	Cx	1	0	Unrestricted	45	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	D	1	84	7	446	1867	33	57.56	15.99	30.65	101.26	5.92	107.19
	Dx	1	0	Unrestricted	236	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	B-1	1	0	Unrestricted	973	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	10	1	24	277	491	2055	120	0.27	0.04	2.16	0.53	0.00	0.53

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Calculated sat flow (PCU/hr)	Calculated capacity (PCU/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))	Effec gree (p cycl
08:00-09:00	A	1	627	627	0		2004	735	85		5	0.00	43	4
	Ax	1	410	410	0		Unrestricted	Unrestricted	0		Unrestricted	1.23	120	12
	B	2	170	170	0		1823	562	30		198	0.00	36	3
	B Slip	2	321	321	0		1957	603	53		69	0.00	36	3
	C	1	100	100	0		1867	124	80		12	0.00	7	8
	Cx	1	45	45	0		Unrestricted	Unrestricted	0		Unrestricted	0.71	120	12
	D	1	446	446	0		1867	529	84		7	0.00	33	3
	Dx	1	236	236	0		Unrestricted	Unrestricted	0		Unrestricted	0.76	120	12
	B-1	1	973	973	0		Unrestricted	Unrestricted	0		Unrestricted	0.59	120	12
	10	1	491	491	0		2055	2055	24		277	0.00	120	12

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	A	1	24.00	48.48	6.10	2.34	119.90	119.90	101.08	565.41	68.35	7.95	7.95
	Ax	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	B	2	2.40	33.05	1.50	0.07	22.16	22.16	75.95	127.15	1.96	1.62	1.62
	B Slip	2	7.20	37.71	3.06	0.30	47.75	47.75	83.97	260.58	8.95	3.38	3.38
	C	1	12.00	105.39	1.53	1.39	41.57	41.57	135.03	97.31	37.71	1.69	1.69
	Cx	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	D	1	36.00	57.56	5.02	2.12	101.26	101.26	105.91	411.10	61.25	5.92	5.92
	Dx	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	B-1	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	10	1	1.20	0.27	0.00	0.04	0.53	0.53	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (PCU)	Mean max queue (PCU)	Max queue storage (PCU)	Utilised storage (%)	Average storage excess queue (PCU)	Average limit excess queue (PCU)	Excess queue penalty (£ per hr)	Max end of green queue (PCU)	Max end of red queue (PCU)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))	Estimated blocking
08:00-09:00	A	1	0.00	21.50	34.78	61.82	0.00	0.00	0.00	2.34	15.58	0.00	0.00	0.00	
	Ax	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			64.00	0.00	64.00	
	B	2	0.00	4.36	3.48	125.43	0.07	0.00	0.00	0.07	3.98	0.00	0.00	0.00	
	B Slip	2	0.00	9.13	10.43	87.48	0.00	0.00	0.00	0.30	7.70	0.00	0.00	0.00	
	C	1	0.00	4.67	17.39	26.86	0.00	0.00	0.00	1.39	4.50	0.00	0.00	0.00	
	Cx	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			94.00	0.00	94.00	
	D	1	0.00	15.99	52.17	30.65	0.00	0.00	0.00	2.12	12.77	0.00	0.00	0.00	
	Dx	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			25.00	0.00	25.00	
	B-1	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			14.00	0.00	14.00	
	10	1	0.00	0.04	1.74	2.16	0.00	0.00	0.00			0.00	19.00	19.00	

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Traffic Stream Results: Journey times

Time Segment	Arm	Traffic Stream	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	A	1	125.40	12.62	9.93	72.48
	Ax	1	41.00	1.37	30.00	12.00
	B	2	3.40	1.67	2.03	35.45
	B Slip	2	19.26	4.00	4.81	44.91
	C	1	10.00	3.26	3.07	117.39
	Cx	1	4.50	0.15	30.00	12.00
	D	1	133.80	11.59	11.54	93.56
	Dx	1	23.60	0.79	30.00	12.00
	B-1	1	97.30	3.24	30.00	12.00
	10	1	4.91	0.20	24.41	1.47

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Mean Max Queue EoTS (PCU)	Max End of Green Queue EoTS (PCU)	Max End of Red Queue EoTS (PCU)	PCU Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	A	1	0.00	0.00	✓	21.57	2.41	15.65	1.00	0.00	127.84	127.84
	Ax	1	0.00	0.00	✓	0.00			1.00	0.00	0.00	0.00
	B	2	0.00	0.00	✓	4.36	0.07	3.98	1.00	0.00	23.78	23.78
	B Slip	2	0.00	0.00	✓	9.13	0.30	7.70	1.00	0.00	51.13	51.13
	C	1	0.00	0.00	✓	4.78	1.50	4.61	1.00	0.00	43.26	43.26
	Cx	1	0.00	0.00	✓	0.00			1.00	0.00	0.00	0.00
	D	1	0.00	0.00	✓	16.06	2.19	12.84	1.00	0.00	107.19	107.19
	Dx	1	0.00	0.00	✓	0.00			1.00	0.00	0.00	0.00
	B-1	1	0.00	0.00	✓	0.00			1.00	0.00	0.00	0.00
	10	1	0.00	0.00	✓	0.04			1.00	0.00	0.53	0.53

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s (per cycle))	Eff gr (c
08:00-09:00	(ALL)	(ALL)	0	0	0		11000	642	0		Unrestricted	0.00	7	

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Uniform delay (Ped-hr/hr)	Random plus oversat delay (Ped-hr/hr)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)
08:00-09:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Average storage excess queue (Ped)	Average limit excess queue (Ped)	Excess queue penalty (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Journey times

Time Segment	Crossing	Side	Distance travelled (Ped-km/hr)	Time spent (Ped-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	(ALL)	(ALL)	0.00	0.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
5	24/03/2023 09:50:25	24/03/2023 09:50:26	08:00	120	353.73	23.46	85.33	A/1	0	0	A/1	10/1	A/

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	85	0	3819	755	22.12	333.17	20.56	353.73

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	0	0	56	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))	Effective green (s (per cycle))
08:00-09:00	3819	3819	0		85		5	811	816

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	14.55	22.12	17.21	6.25	333.17	333.17	42.94	1461.55	178.22	20.56	20.56

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
08:00-09:00	463.17	38.90	11.91

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Point to Point Journey Time

Average Journey Time (s) for Local Matrix: B

		To			
		A	B	C	D
From	A	0.0	84.5	84.5	84.5
	B	58.4	0.0	48.9	48.9
	C	129.4	129.4	0.0	129.4
	D	105.6	105.6	105.6	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (PCU/hr)	Normal journey time (s)	Calculated Total Flow (PCU/hr)	Avg journey time (s)
4	C	D	15	129.39	15	129.39
5	C	A	25	129.39	25	129.39
6	C	B	60	129.39	60	129.39
7	D	C	13	105.56	13	105.56
8	D	A	64	105.56	64	105.56
9	D	B	369	105.56	369	105.56
10	A	C	18	84.48	18	84.48
11	A	D	65	84.48	65	84.48
12	A	B	544	84.48	544	84.48
13	B	C	14	48.93	14	48.93
14	B	D	156	48.93	156	48.93
15	B	A	321	58.39	321	58.39

Final Prediction Table

Traffic Stream Results

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QU
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (PCU)
A	1	Scholarstown Rd	1	1	A	627	2004	43	0.00	85	5	72.48	48.48	101.08	21.50
Ax	1	(untitled)				410	Unrestricted	120	64.00	0	Unrestricted	12.00	0.00	0.00	0.00
B	2	Ballyboden Rd N	1	1	B	170 <	1823	36	0.00	30	198	35.45	33.05	75.95	4.36 +
B Slip	2	Ballyboden Rd N	1	1	B	321	1957	36	0.00	53	69	44.91	37.71	83.97	9.13
C	1	Site Access	1	1	C	100	1867	7	0.00	80	12	117.39	105.39	135.03	4.67
Cx	1	(untitled)				45	Unrestricted	120	94.00	0	Unrestricted	12.00	0.00	0.00	0.00
D	1	Edmonstown Road	1	1	D	446	1867	33	0.00	84	7	93.56	57.56	105.91	15.99
Dx	1	(untitled)				236	Unrestricted	120	25.00	0	Unrestricted	12.00	0.00	0.00	0.00
B-1	1	(untitled)				973	Unrestricted	120	14.00	0	Unrestricted	12.00	0.00	0.00	0.00
10	1	(untitled)	1			491	2055	120	19.00	24	277	1.47	0.27	0.00	0.04

Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE			PER PED		QUEUES	WEIGHTS	P
Pedestrian	Side	Name	Traffic node	Controller stream	Phase	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Degree of saturation (%)	Practical reserve capacity	JourneyTime (s)	Mean Delay per Ped (s)	Mean max queue (Ped)	Delay weighting (%)	(
(ALL)	(ALL)	(untitled)		1	E	0	11000	7	0	Unrestricted	0.00	0.00	0.00	100	

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	463.17	38.90	11.91	17.21	6.25	333.17	20.56	0.00	353.73
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	463.17	38.90	11.91	17.21	6.25	333.17	20.56	0.00	353.73

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

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A6 - 2040 DS PM
D6 - 2040 DS PM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
6	24/03/2023 09:50:26	24/03/2023 09:50:27	17:00	120	260.25	17.14	76.31	A/1	0	0	A/1	10/1	A/

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2040 DS PM		D6	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2040 DS PM				17:00	

Network Options

Network timings

Network cycle time (s)	Restrict to SCOOT cycle times	Time segment length (min)	Number of time segments	Modelled time period (min)
120		60	1	60

Signals options

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

Advanced

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

Traffic options

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

Advanced

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

Normal Traffic parameters

Dispersion type	Dispersion coefficient	Travel time coefficient
Default	35	80

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

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

Tram parameters

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

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

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

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
1	(untitled)	

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Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
A	(untitled)		1
Ax	(untitled)		
B	(untitled)		1
B Slip	(untitled)		1
C	(untitled)		1
Cx	(untitled)		
D	(untitled)		1
Dx	(untitled)		
B-1	(untitled)		
10	(untitled)		1

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
A	1	Scholarstown Rd			200.00	✓	Sum of lanes	2004	✓		Normal	
Ax	1	(untitled)			100.00						Normal	
B	2	Ballyboden Rd N			20.00	✓	Sum of lanes	1823	✓		Normal	
B Slip	2	Ballyboden Rd N			60.00	✓	Sum of lanes	1957	✓		Normal	
C	1	Site Access			100.00	✓	Sum of lanes	1867	✓		Normal	
Cx	1	(untitled)			100.00						Normal	
D	1	Edmonstown Road			300.00	✓	Sum of lanes	1867	✓		Normal	
Dx	1	(untitled)			100.00						Normal	
B-1	1	(untitled)			100.00						Normal	
10	1	(untitled)			10.00	✓	Sum of lanes	2055			Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Surface condition	Site quality factor	Gradient (%)	Width (m)	Use connector turning radius	Proportion that turn (%)	Turning radius (m)	Nearside lane	Saturation flow (PCU/hr)
A	1	1	(untitled)		✓	N/A	N/A	0	4.50		67	10.00		2004
Ax	1	1	(untitled)											
B	2	1	(untitled)		✓	N/A	N/A	0	3.00		67	20.00	✓	1823
B Slip	2	1	(untitled)		✓	N/A	N/A	0	3.00		67	20.00		1957
C	1	1	(untitled)		✓	N/A	N/A	0	3.00		67	10.00		1867
Cx	1	1	(untitled)											
D	1	1	(untitled)		✓	N/A	N/A	0	3.00		67	10.00		1867
Dx	1	1	(untitled)											
B-1	1	1	(untitled)											
10	1	1	(untitled)		✓	N/A	N/A	0	3.00		0	6.00		2055

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
A	1	NetworkDefault	100	100	100		46.00		
Ax	1	NetworkDefault	100	100	100		0.00		
B	2	NetworkDefault	100	100	100		19.00		
B Slip	2	NetworkDefault	100	100	100		3.00		
C	1	NetworkDefault	100	100	100		10.00		
Cx	1	NetworkDefault	100	100	100		0.00		
D	1	NetworkDefault	100	100	100		50.00		
Dx	1	NetworkDefault	100	100	100		0.00		
B-1	1	NetworkDefault	100	100	100		0.00		
10	1	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
(ALL)	(ALL)	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	120

Normal traffic - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	(ALL)	100	100

Normal traffic - Advanced

Arm	Traffic Stream	Dispersion type for Normal Traffic
(ALL)	(ALL)	NetworkDefault

Flows

Arm	Traffic Stream	Total Flow (PCU/hr)	Normal Flow (PCU/hr)
A	1	497	497
Ax	1	570	570
B	2	241	241
B Slip	2	492	492
C	1	52	52
Cx	1	90	90
D	1	247	247
Dx	1	298	298
B-1	1	571	571
10	1	733	733

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled
A	1	1	A	
B	2	1	B	
B Slip	2	1	B	
C	1	1	C	
D	1	1	D	

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
A	1	24.00	30.00
C	1	12.00	30.00
D	1	36.00	30.00
10	1	1.20	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	1	1	D/1	Ax/1	12.00	30.00	✓	Nearside	37.21
B	2	1	10/1	B/2	2.40	30.00	✓	Straight	Straight Movement
B Slip	2	1	10/1	B Slip/2	7.20	30.00	✓	Straight	Straight Movement
Cx	1	1	D/1	Cx/1	12.00	30.00	✓	Offside	60.33
Dx	1	1	A/1	Dx/1	12.00	30.00	✓	Offside	67.90
B-1	1	1	D/1	B-1/1	12.00	30.00	✓	Straight	Straight Movement
Ax	1	2	C/1	Ax/1	12.00	30.00	✓	Straight	Straight Movement
Cx	1	2	A/1	Cx/1	12.00	30.00	✓	Straight	Straight Movement
Dx	1	2	C/1	Dx/1	12.00	30.00	✓	Nearside	42.41
B-1	1	2	A/1	B-1/1	12.00	30.00	✓	Nearside	55.47
Ax	1	3	B Slip/2	Ax/1	12.00	30.00	✓	Offside	81.96
Cx	1	3	B/2	Cx/1	12.00	30.00	✓	Nearside	31.62
Dx	1	3	B/2	Dx/1	12.00	30.00	✓	Straight	Straight Movement
B-1	1	3	C/1	B-1/1	12.00	30.00	✓	Offside	51.75

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
1	(untitled)				Farside	9.00	6.00	5.40
2	(untitled)				Farside	10.50	7.00	5.40
3	(untitled)				Farside	9.50	6.33	5.40
4	(untitled)				Farside	6.00	4.00	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	E	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(ALL)	11000

Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	100	100		0.00		

Local OD Matrix - Local Matrix: B

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
B	(untitled)	✓	✓	Path Equalisation			✓			✓	1.25		

Normal Input Flows (PCU/hr)

		To			
		A	B	C	D
From	A	0	376	30	91
	B	492	0	45	196
	C	20	21	0	11
	D	58	174	15	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
B	A	Parnwell Lodge	A/1	Ax/1	#FFFF00
	B	Bridge Street (W)	10/1	B-1/1	#0000FF
	C	Highfield Park	C/1	Cx/1	#FF0000
	D	Bridge Street (E)	D/1	Dx/1	#00FF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
B	4		C	D	C/1, Dx/1	Normal	11
	5		C	A	C/1, Ax/1	Normal	20
	6		C	B	C/1, B-1/1	Normal	21
	7		D	C	D/1, Cx/1	Normal	15
	8		D	A	D/1, Ax/1	Normal	58
	9		D	B	D/1, B-1/1	Normal	174
	10		A	C	A/1, Cx/1	Normal	30
	11		A	D	A/1, Dx/1	Normal	91
	12		A	B	A/1, B-1/1	Normal	376
	13		B	C	10/1, B/2, Cx/1	Normal	45
	14		B	D	10/1, B/2, Dx/1	Normal	196
	15		B	A	10/1, B Slip/2, Ax/1	Normal	492

Signal Timings

Network Default: 120s cycle time; 120 steps

Controller Stream 1

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)
1	(untitled)		1	Manual	120

Controller Stream 1 - Properties

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
1	Unspecified						Absolute

Controller Stream 1 - Optimisation

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
1	✓	✓	Offsets And Green Splits	✓	

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Phases

Controller Stream	Phase	Name	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type	Blackout Time (s)
1	A	(untitled)	7	300	0	0	Traffic	
	B	(untitled)	7	300	0	0	Traffic	
	C	(untitled)	7	300	0	0	Traffic	
	D	(untitled)	7	300	0	0	Traffic	
	E	(untitled)	6	300	0	0	Pedestrian	0

Library Stages

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)
1	1	A	1
	2	B, D	1
	3	E	7
	4	B	3
	5	C	1

Stage Sequences

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends
1	1	(untitled)	Single	1, 3, 5, 2, 4	36, 49, 67, 110, 113

Intergreen Matrix for Controller Stream 1

		To				
		A	B	C	D	E
From	A		5		5	6
	B	5		5		8
	C		5		5	6
	D	6		5		7
	E	11	11	11	11	

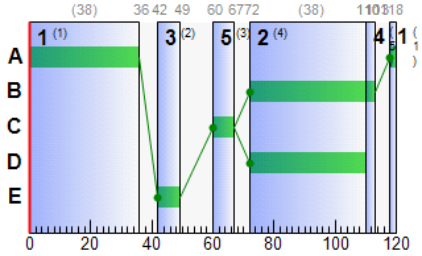
Banned Stage transitions for Controller Stream 1

		To				
		1	2	3	4	5
From	1					
	2					
	3					
	4					
	5					

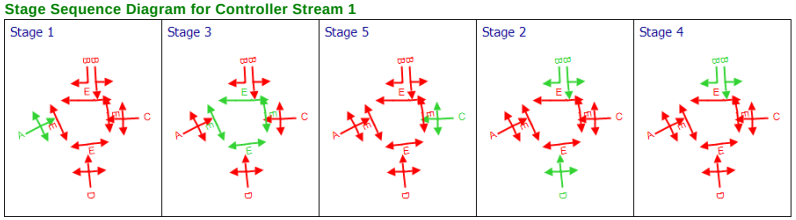
Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
A	1	1	1	A	118	36	38
B	2	1	1	B	72	113	41
B Slip	2	1	1	B	72	113	41
C	1	1	1	C	60	67	7
D	1	1	1	D	72	110	38

Phase Timings Diagram for Controller Stream 1



Stage Sequence Diagram for Controller Stream 1



Resultant penalties

Time Segment	Controller stream	Phase min max penalty (£ per hr)	Intergreen broken penalty (£ per hr)	Stage constraint broken penalty (£ per hr)	Cost of controller stream penalties (£ per hr)
17:00-18:00	1	0.00	0.00	0.00	0.00

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (PCU)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	A	1	76	18	497	2004	38	45.04	15.97	34.72	88.29	5.92	94.21
	Ax	1	0	Unrestricted	570	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	B	2	38	138	241	1823	41	30.92	6.07	31.96	29.40	2.25	31.65
	B Slip	2	72	25	492	1957	41	40.46	15.11	503.80	78.51	5.58	84.09
	C	1	42	115	52	1867	7	64.01	1.81	18.09	13.13	0.67	13.80
	Cx	1	0	Unrestricted	90	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	D	1	41	121	247	1867	38	33.54	6.52	13.04	32.68	2.42	35.09
	Dx	1	0	Unrestricted	298	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	B-1	1	0	Unrestricted	571	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	10	1	36	152	733	2055	120	0.49	0.10	5.68	1.40	0.00	1.40

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Calculated sat flow (PCU/hr)	Calculated capacity (PCU/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))	Effec gree (p cycl
17:00-18:00	A	1	497	497	0		2004	651	76		18	0.00	38	3
	Ax	1	570	570	0		Unrestricted	Unrestricted	0		Unrestricted	1.18	120	12
	B	2	241	241	0		1823	638	38		138	0.00	41	4
	B Slip	2	492	492	0		1957	685	72		25	0.00	41	4
	C	1	52	52	0		1867	124	42		115	0.00	7	8
	Cx	1	90	90	0		Unrestricted	Unrestricted	0		Unrestricted	0.81	120	12
	D	1	247	247	0		1867	607	41		121	0.00	38	3
	Dx	1	298	298	0		Unrestricted	Unrestricted	0		Unrestricted	0.75	120	12
	B-1	1	571	571	0		Unrestricted	Unrestricted	0		Unrestricted	0.83	120	12
	10	1	733	733	0		2055	2055	36		152	0.00	120	12

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	A	1	24.00	45.04	5.02	1.20	88.29	88.29	95.00	436.84	35.31	5.92	5.92
	Ax	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	B	2	2.40	30.92	1.96	0.11	29.40	29.40	74.56	176.27	3.42	2.25	2.25
	B Slip	2	7.20	40.46	4.63	0.90	78.51	78.51	90.38	418.03	26.65	5.58	5.58
	C	1	12.00	64.01	0.78	0.15	13.13	13.13	103.17	49.31	4.33	0.67	0.67
	Cx	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	D	1	36.00	33.54	2.16	0.14	32.68	32.68	77.98	188.46	4.16	2.42	2.42
	Dx	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	B-1	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	10	1	1.20	0.49	0.00	0.10	1.40	1.40	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (PCU)	Mean max queue (PCU)	Max queue storage (PCU)	Utilised storage (%)	Average storage excess queue (PCU)	Average limit excess queue (PCU)	Excess queue penalty (£ per hr)	Max end of green queue (PCU)	Max end of red queue (PCU)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))	Estimated blocking
17:00-18:00	A	1	0.00	15.97	46.00	34.72	0.00	0.00	0.00	1.20	12.38	0.00	0.00	0.00	
	Ax	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			59.00	0.00	59.00	
	B	2	0.00	6.07	19.00	31.96	0.00	0.00	0.00	0.11	5.34	0.00	0.00	0.00	
	B Slip	2	0.00	15.11	3.00	503.80	4.52	0.00	0.00	0.90	11.56	0.00	0.00	0.00	
	C	1	0.00	1.81	10.00	18.09	0.00	0.00	0.00	0.15	1.77	4.00	0.00	4.00	
	Cx	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			52.00	0.00	52.00	
	D	1	0.00	6.52	50.00	13.04	0.00	0.00	0.00	0.14	5.70	0.00	0.00	0.00	
	Dx	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			25.00	0.00	25.00	
	B-1	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			20.00	0.00	20.00	
	10	1	0.00	0.10	1.74	5.68	0.00	0.00	0.00			0.00	89.00	89.00	

Traffic Stream Results: Journey times

Time Segment	Arm	Traffic Stream	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
17:00-18:00	A	1	99.40	9.53	10.43	69.04
	Ax	1	57.00	1.90	30.00	12.00
	B	2	4.82	2.23	2.16	33.32
	B Slip	2	29.52	6.51	4.53	47.66
	C	1	5.20	1.10	4.74	76.01
	Cx	1	9.00	0.30	30.00	12.00
	D	1	74.10	4.77	15.53	69.54
	Dx	1	29.80	0.99	30.00	12.00
	B-1	1	57.10	1.90	30.00	12.00
	10	1	7.33	0.34	21.36	1.69

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Mean Max Queue EoTS (PCU)	Max End of Green Queue EoTS (PCU)	Max End of Red Queue EoTS (PCU)	PCU Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
17:00-18:00	A	1	0.00	0.00	✓	15.99	1.21	12.40	1.00	0.00	94.21	94.21
	Ax	1	0.00	0.00	✓	0.00			1.00	0.00	0.00	0.00
	B	2	0.00	0.00	✓	6.07	0.11	5.34	1.00	0.00	31.65	31.65
	B Slip	2	0.00	0.00	✓	15.12	0.91	11.57	1.00	0.00	84.09	84.09
	C	1	0.00	0.00	✓	1.81	0.15	1.77	1.00	0.00	13.80	13.80
	Cx	1	0.00	0.00	✓	0.00			1.00	0.00	0.00	0.00
	D	1	0.00	0.00	✓	6.52	0.14	5.70	1.00	0.00	35.09	35.09
	Dx	1	0.00	0.00	✓	0.00			1.00	0.00	0.00	0.00
	B-1	1	0.00	0.00	✓	0.00			1.00	0.00	0.00	0.00
	10	1	0.00	0.00	✓	0.10			1.00	0.00	1.40	1.40

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
17:00-18:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s (per cycle))	Eff gr c
17:00-18:00	(ALL)	(ALL)	0	0	0		11000	642	0		Unrestricted	0.00	7	

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Uniform delay (Ped-hr/hr)	Random plus oversat delay (Ped-hr/hr)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)
17:00-18:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Average storage excess queue (Ped)	Average limit excess queue (Ped)	Excess queue penalty (£ per hr)
17:00-18:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00	0.00	0.00

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Pedestrian Crossings: Journey times

Time Segment	Crossing	Side	Distance travelled (Ped-km/hr)	Time spent (Ped-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
17:00-18:00	(ALL)	(ALL)	0.00	0.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
17:00-18:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
6	24/03/2023 09:50:26	24/03/2023 09:50:27	17:00	120	260.25	17.14	76.31	A/1	0	0	A/1	10/1	A/

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	76	0	3791	765	16.28	243.41	16.84	260.25

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
17:00-18:00	0	0	56	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))	Effective green (s (per cycle))
17:00-18:00	3791	3791	0		76		18	821	826

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	11.82	16.28	14.54	2.60	243.41	243.41	35.42	1268.92	73.88	16.84	16.84

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
17:00-18:00	373.27	29.58	12.62

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: B

		To			
		A	B	C	D
From	A	0.0	81.0	81.0	81.0
	B	61.3	0.0	47.0	47.0
	C	88.0	88.0	0.0	88.0
	D	81.5	81.5	81.5	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (PCU/hr)	Normal journey time (s)	Calculated Total Flow (PCU/hr)	Avg journey time (s)
4	C	D	11	88.01	11	88.01
5	C	A	20	88.01	20	88.01
6	C	B	21	88.01	21	88.01
7	D	C	15	81.54	15	81.54
8	D	A	58	81.54	58	81.54
9	D	B	174	81.54	174	81.54
10	A	C	30	81.04	30	81.04
11	A	D	91	81.04	91	81.04
13	B	C	45	47.01	45	47.01
14	B	D	196	47.01	196	47.01
15	B	A	492	61.34	492	61.34

Final Prediction Table

Traffic Stream Results

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QU
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (PCU)
A	1	Scholarstown Rd	1	1	A	497	2004	38	0.00	76	18	69.04	45.04	95.00	15.97
Ax	1	(untitled)				570	Unrestricted	120	59.00	0	Unrestricted	12.00	0.00	0.00	0.00
B	2	Ballyboden Rd N	1	1	B	241	1823	41	0.00	38	138	33.32	30.92	74.56	6.07
B Slip	2	Ballyboden Rd N	1	1	B	492 <	1957	41	0.00	72	25	47.66	40.46	90.38	15.11 +
C	1	Site Access	1	1	C	52	1867	7	4.00	42	115	76.01	64.01	103.17	1.81
Cx	1	(untitled)				90	Unrestricted	120	52.00	0	Unrestricted	12.00	0.00	0.00	0.00
D	1	Edmonstown Road	1	1	D	247	1867	38	0.00	41	121	69.54	33.54	77.98	6.52
Dx	1	(untitled)				298	Unrestricted	120	25.00	0	Unrestricted	12.00	0.00	0.00	0.00
B-1	1	(untitled)				571	Unrestricted	120	20.00	0	Unrestricted	12.00	0.00	0.00	0.00
10	1	(untitled)	1			733	2055	120	89.00	36	152	1.69	0.49	0.00	0.10

Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE			PER PED		QUEUES	WEIGHTS	P
Pedestrian	Side	Name	Traffic node	Controller stream	Phase	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Degree of saturation (%)	Practical reserve capacity	JourneyTime (s)	Mean Delay per Ped (s)	Mean max queue (Ped)	Delay weighting (%)	(
(ALL)	(ALL)	(untitled)		1	E	0	11000	7	0	Unrestricted	0.00	0.00	0.00	100	

Generated on 24/03/2023 09:51:14 using TRANSYT 15 (15.5.3.7)

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	373.27	29.58	12.62	14.54	2.60	243.41	16.84	0.00	260.25
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	373.27	29.58	12.62	14.54	2.60	243.41	16.84	0.00	260.25

< = adjusted flow warning (upstream links/traffic streams are over-saturated)

** = Traffic Stream - Normal, Bus or Tram Stop or Delay weighting has been set to a value other than 100%*

^ = Traffic Stream - Normal, Bus or Tram Stop or Delay Path weighting has been set to a value other than 100%

+ = average link/traffic stream excess queue is greater than 0

P.I. = PERFORMANCE INDEX

Appendix D : ARCADY Outputs

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.5.2.1013
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Filename: Taylors Lane Roundabout ARCADY Analysis 2022 Submission Rev A.j9
Path: G:\2019\p190068\calcs\Traffic\2022 Resubmission\ARCADY
Report generation date: 23/03/2023 17:20:34

»Do Nothing - DN 2025, AM
»Do Nothing - DN 2025, PM
»Do Nothing - DN 2030, AM
»Do Nothing - DN 2030, PM
»Do Nothing - DN 2040, AM
»Do Nothing - DN 2040, PM
»Do Nothing - Base 2022, AM
»Do Nothing - Base 2022, PM
»Do Something - DS 2025, AM
»Do Something - DS 2025, PM
»Do Something - DS 2030, AM
»Do Something - DS 2030, PM
»Do Something - DS 2040, AM
»Do Something - DS 2040, PM

Generated on 23/03/2023 17:54:47 using Junctions 9 (9.5.2.1013)

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	Do Nothing - DN 2025									
A - Ballyboden Rd (N)	A1 D1	1.6	10.02	0.60	B	A1 D2	3.6	16.42	0.77	C
B - Taylor's Lane		7.7	39.45	0.89	E		37.8	166.92	1.08	F
C - Ballyboden Rd (S)		49.9	190.66	1.10	F		2.1	14.71	0.66	B
D - Ballyboden Way		43.4	230.54	1.11	F		3.6	22.06	0.78	C
	Do Nothing - DN 2030									
A - Ballyboden Rd (N)	A1 D5	1.9	11.17	0.64	B	A1 D6	6.4	27.45	0.87	D
B - Taylor's Lane		20.5	90.58	1.00	F		85.3	379.09	1.23	F
C - Ballyboden Rd (S)		103.2	446.58	1.25	F		2.7	17.90	0.72	C
D - Ballyboden Way		74.5	439.99	1.20	F		6.3	36.34	0.87	E
	Do Nothing - DN 2040									
A - Ballyboden Rd (N)	A1 D9	2.2	12.13	0.68	B	A1 D10	12.0	48.46	0.94	E
B - Taylor's Lane		43.1	165.74	1.08	F		128.5	625.32	1.35	F
C - Ballyboden Rd (S)		160.9	699.44	1.34	F		3.4	21.26	0.77	C
D - Ballyboden Way		110.4	626.58	1.27	F		11.3	61.44	0.94	F
	Do Nothing - Base 2022									
A - Ballyboden Rd (N)	A1 D13	1.3	9.02	0.55	A	A1 D14	2.6	12.38	0.71	B
B - Taylor's Lane		4.4	23.76	0.81	C		13.2	70.43	0.96	F
C - Ballyboden Rd (S)		17.4	80.45	0.98	F		1.6	12.51	0.60	B
D - Ballyboden Way		15.0	89.14	0.98	F		2.3	15.30	0.68	C

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	Do Something - DS 2025									
A - Ballyboden Rd (N)	A2 D3	1.6	10.09	0.60	B	A2 D4	3.9	17.37	0.79	C
B - Taylor's Lane		8.1	41.35	0.90	E		43.1	187.22	1.09	F
C - Ballyboden Rd (S)		60.9	226.40	1.13	F		2.2	15.10	0.67	C
D - Ballyboden Way		44.8	241.74	1.12	F		3.7	22.65	0.78	C
	Do Something - DS 2030									
A - Ballyboden Rd (N)	A2 D7	2.0	11.35	0.65	B	A2 D8	8.4	35.10	0.90	E
B - Taylor's Lane		23.5	101.37	1.01	F		103.9	493.07	1.29	F
C - Ballyboden Rd (S)		148.0	633.47	1.33	F		3.0	18.84	0.74	C
D - Ballyboden Way		78.7	464.95	1.21	F		6.7	38.98	0.88	E
	Do Something - DS 2040									
A - Ballyboden Rd (N)	A2 D11	2.3	12.33	0.68	B	A2 D12	17.3	65.88	0.98	F
B - Taylor's Lane		47.9	181.91	1.09	F		157.8	759.40	1.40	F
C - Ballyboden Rd (S)		214.4	905.14	1.42	F		3.8	22.61	0.78	C
D - Ballyboden Way		115.2	653.39	1.27	F		12.7	68.06	0.95	F

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

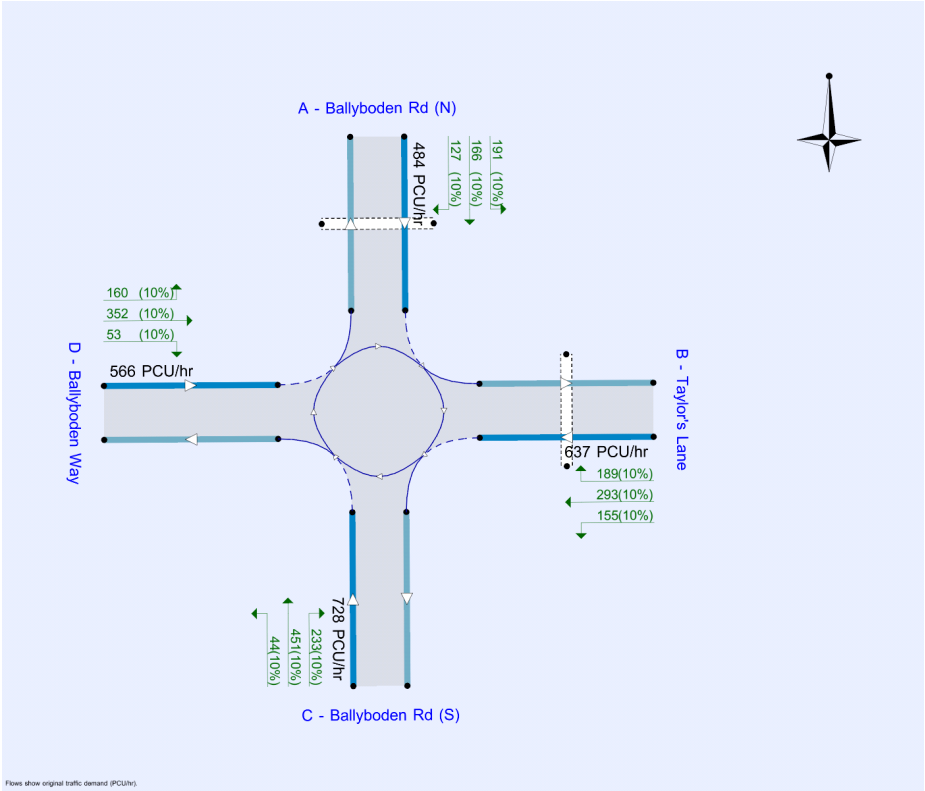
File summary

File Description

Title	Proposed Residential Development
Location	Taylor's Lane, Dublin 16
Site number	
Date	23/03/2023
Version	
Status	Planning
Identifier	RB
Client	
Jobnumber	190068
Enumerator	HEADOFFICE\browner
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of Junctions.

Generated on 23/03/2023 17:54:47 using Junctions 9 (9.5.2.1013)

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	DN 2025	AM	ONE HOUR	07:45	09:15	15	✓
D2	DN 2025	PM	ONE HOUR	16:45	18:15	15	✓
D3	DS 2025	AM	ONE HOUR	07:45	09:15	15	✓
D4	DS 2025	PM	ONE HOUR	16:45	18:15	15	✓
D5	DN 2030	AM	ONE HOUR	07:45	09:15	15	✓
D6	DN 2030	PM	ONE HOUR	16:45	18:15	15	✓
D7	DS 2030	AM	ONE HOUR	07:45	09:15	15	✓
D8	DS 2030	PM	ONE HOUR	16:45	18:15	15	✓
D9	DN 2040	AM	ONE HOUR	07:45	09:15	15	✓
D10	DN 2040	PM	ONE HOUR	16:45	18:15	15	✓
D11	DS 2040	AM	ONE HOUR	07:45	09:15	15	✓
D12	DS 2040	PM	ONE HOUR	16:45	18:15	15	✓
D13	Base 2022	AM	ONE HOUR	07:45	09:15	15	✓
D14	Base 2022	PM	ONE HOUR	16:45	18:15	15	✓

Do Nothing - DN 2025, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set (s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Do Nothing	✓	✓	D1,D2,D5,D6,D9,D10,D13,D14	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Taylor's Lane Roundabout	Standard Roundabout		A, B, C, D	124.93	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
A	Ballyboden Rd (N)	
B	Taylor's Lane	
C	Ballyboden Rd (S)	
D	Ballyboden Way	

Capacity Options

Arm	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)	Assume flat start profile	Initial queue (PCU)
A - Ballyboden Rd (N)	0	99999		3.00
B - Taylor's Lane	0	99999		2.00
C - Ballyboden Rd (S)	0	99999		16.00
D - Ballyboden Way	0	99999		13.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
A - Ballyboden Rd (N)	3.57	5.70	14.8	20.8	38.0	53.2	
B - Taylor's Lane	3.25	6.00	21.0	16.5	38.0	53.2	
C - Ballyboden Rd (S)	3.20	5.80	16.5	21.4	38.0	54.8	
D - Ballyboden Way	4.70	4.82	14.0	26.0	38.0	54.5	

Pelican/Puffin Crossings

Arm	Space between crossing and junc. entry (Signalised) (PCU)	Amber time preceding red (s)	Amber time regarded as green (s)	Time from traffic red start to green man start (s)	Time period green man shown (s)	Clearance Period (s)	Traffic minimum green (s)
A - Ballyboden Rd (N)	16.00	3.00	2.90	1.00	7.00	6.00	7.00
B - Taylor's Lane	35.00	3.00	2.90	1.00	7.00	6.00	7.00

Generated on 23/03/2023 17:54:47 using Junctions 9 (9.5.2.1013)

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - Ballyboden Rd (N)	0.563	1404
B - Taylor's Lane	0.564	1429
C - Ballyboden Rd (S)	0.555	1370
D - Ballyboden Way	0.554	1352

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct capacity adjustment (PCU/hr)
A - Ballyboden Rd (N)	Direct		0
B - Taylor's Lane	Direct	Calibrating Base Model	-350
C - Ballyboden Rd (S)	Direct	Calibrating Base Model	-183
D - Ballyboden Way	Direct	Calibrating Base Model	-196

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	DN 2025	AM	ONE HOUR	07:45	09:15	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Ballyboden Rd (N)		ONE HOUR	✓	524	100.000
B - Taylor's Lane		ONE HOUR	✓	687	100.000
C - Ballyboden Rd (S)		ONE HOUR	✓	791	100.000
D - Ballyboden Way		ONE HOUR	✓	634	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A - Ballyboden Rd (N)	[ONEHOUR]	50.00
B - Taylor's Lane	[ONEHOUR]	50.00
C - Ballyboden Rd (S)		
D - Ballyboden Way		

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - Ballyboden Rd (N)	B - Taylor's Lane	C - Ballyboden Rd (S)	D - Ballyboden Way
From	A - Ballyboden Rd (N)	0	202	185	137
	B - Taylor's Lane	199	0	171	317
	C - Ballyboden Rd (S)	489	253	0	49
	D - Ballyboden Way	180	395	58	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - Ballyboden Rd (N)	B - Taylor's Lane	C - Ballyboden Rd (S)	D - Ballyboden Way
From	A - Ballyboden Rd (N)	10	10	10	10
	B - Taylor's Lane	10	10	10	10
	C - Ballyboden Rd (S)	10	10	10	10
	D - Ballyboden Way	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Ballyboden Rd (N)	0.60	10.02	1.6	B	481	721
B - Taylor's Lane	0.89	39.45	7.7	E	630	946
C - Ballyboden Rd (S)	1.10	190.66	49.9	F	726	1089
D - Ballyboden Way	1.11	230.54	43.4	F	582	873

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	394	99	581	37.64	1055	0.374	404	700	3.0	0.7	6.165	A
B - Taylor's Lane	517	129	297	37.64	876	0.590	519	688	2.0	1.6	11.131	B
C - Ballyboden Rd (S)	596	149	496		912	0.653	651	319	16.0	2.2	18.270	C
D - Ballyboden Way	477	119	761		735	0.650	521	386	13.0	2.2	21.963	C

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	471	118	626	44.95	991	0.476	470	771	0.7	1.0	7.585	A
B - Taylor's Lane	618	154	341	44.95	859	0.719	613	755	1.6	2.7	15.843	C
C - Ballyboden Rd (S)	711	178	584		863	0.824	702	370	2.2	4.5	23.252	C
D - Ballyboden Way	570	142	836		693	0.823	561	450	2.2	4.4	28.202	D

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	577	144	690	55.05	967	0.596	575	869	1.0	1.6	10.017	B
B - Taylor's Lane	756	189	410	55.05	848	0.892	740	854	2.7	6.9	32.417	D
C - Ballyboden Rd (S)	871	218	707		795	1.095	775	443	4.5	28.4	92.591	F
D - Ballyboden Way	698	175	942		634	1.100	617	540	4.4	24.7	103.495	F

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	577	144	697	55.05	977	0.591	577	880	1.6	1.6	9.907	A
B - Taylor's Lane	756	189	413	55.05	846	0.894	753	862	6.9	7.7	39.450	E
C - Ballyboden Rd (S)	871	218	717		789	1.103	785	448	28.4	49.9	190.656	F
D - Ballyboden Way	698	175	954		627	1.113	623	548	24.7	43.4	212.745	F

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08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	471	118	700	44.95	971	0.485	473	872	1.6	1.1	7.987	A
B - Taylor's Lane	618	154	347	44.95	883	0.699	638	826	7.7	2.7	17.301	C
C - Ballyboden Rd (S)	711	178	604		852	0.834	834	381	49.9	19.2	154.072	F
D - Ballyboden Way	570	142	967		620	0.919	605	471	43.4	34.7	230.539	F

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	394	99	647	37.64	991	0.398	396	734	1.1	0.7	6.666	A
B - Taylor's Lane	517	129	300	37.64	885	0.584	522	743	2.7	1.6	11.026	B
C - Ballyboden Rd (S)	596	149	496		912	0.653	664	325	19.2	2.2	20.294	C
D - Ballyboden Way	477	119	774		727	0.656	607	386	34.7	2.3	61.867	F

Do Nothing - DN 2025, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set (s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Do Nothing	✓	✓	D1,D2,D5,D6,D9,D10,D13,D14	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Taylor's Lane Roundabout	Standard Roundabout		A, B, C, D	59.81	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
A	Ballyboden Rd (N)	
B	Taylor's Lane	
C	Ballyboden Rd (S)	
D	Ballyboden Way	

Capacity Options

Arm	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)	Assume flat start profile	Initial queue (PCU)
A - Ballyboden Rd (N)	0	99999		3.00
B - Taylor's Lane	0	99999		2.00
C - Ballyboden Rd (S)	0	99999		16.00
D - Ballyboden Way	0	99999		13.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
A - Ballyboden Rd (N)	3.57	5.70	14.8	20.8	38.0	53.2	
B - Taylor's Lane	3.25	6.00	21.0	16.5	38.0	53.2	
C - Ballyboden Rd (S)	3.20	5.80	16.5	21.4	38.0	54.8	
D - Ballyboden Way	4.70	4.82	14.0	26.0	38.0	54.5	

Pelican/Puffin Crossings

Arm	Space between crossing and junc. entry (Signalised) (PCU)	Amber time preceding red (s)	Amber time regarded as green (s)	Time from traffic red start to green man start (s)	Time period green man shown (s)	Clearance Period (s)	Traffic minimum green (s)
A - Ballyboden Rd (N)	16.00	3.00	2.90	1.00	7.00	6.00	7.00
B - Taylor's Lane	35.00	3.00	2.90	1.00	7.00	6.00	7.00

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Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - Ballyboden Rd (N)	0.563	1404
B - Taylor's Lane	0.564	1429
C - Ballyboden Rd (S)	0.555	1370
D - Ballyboden Way	0.554	1352

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct capacity adjustment (PCU/hr)
A - Ballyboden Rd (N)	Direct		0
B - Taylor's Lane	Direct	Calibrating Base Model	-350
C - Ballyboden Rd (S)	Direct	Calibrating Base Model	-183
D - Ballyboden Way	Direct	Calibrating Base Model	-196

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	DN 2025	PM	ONE HOUR	16:45	18:15	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Ballyboden Rd (N)		ONE HOUR	✓	743	100.000
B - Taylor's Lane		ONE HOUR	✓	697	100.000
C - Ballyboden Rd (S)		ONE HOUR	✓	475	100.000
D - Ballyboden Way		ONE HOUR	✓	556	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A - Ballyboden Rd (N)	[ONEHOUR]	50.00
B - Taylor's Lane	[ONEHOUR]	50.00
C - Ballyboden Rd (S)		
D - Ballyboden Way		

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - Ballyboden Rd (N)	B - Taylor's Lane	C - Ballyboden Rd (S)	D - Ballyboden Way
From	A - Ballyboden Rd (N)	0	167	366	210
	B - Taylor's Lane	154	0	222	321
	C - Ballyboden Rd (S)	262	197	1	15
	D - Ballyboden Way	194	350	11	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - Ballyboden Rd (N)	B - Taylor's Lane	C - Ballyboden Rd (S)	D - Ballyboden Way
From	A - Ballyboden Rd (N)	10	10	10	10
	B - Taylor's Lane	10	10	10	10
	C - Ballyboden Rd (S)	10	10	10	10
	D - Ballyboden Way	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Ballyboden Rd (N)	0.77	16.42	3.6	C	682	1023
B - Taylor's Lane	1.08	166.92	37.8	F	640	959
C - Ballyboden Rd (S)	0.66	14.71	2.1	B	436	654
D - Ballyboden Way	0.78	22.06	3.6	C	510	765

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	559	140	478	37.64	1116	0.501	567	510	3.0	1.1	7.303	A
B - Taylor's Lane	525	131	450	37.64	802	0.654	525	595	2.0	2.0	14.237	B
C - Ballyboden Rd (S)	358	89	519		899	0.398	419	456	16.0	0.7	9.346	A
D - Ballyboden Way	419	105	521		867	0.483	466	416	13.0	1.0	11.089	B

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	668	167	502	44.95	1077	0.620	665	545	1.1	1.7	9.554	A
B - Taylor's Lane	627	157	528	44.95	782	0.802	619	640	2.0	4.0	23.264	C
C - Ballyboden Rd (S)	427	107	611		848	0.503	426	536	0.7	1.1	9.333	A
D - Ballyboden Way	500	125	549		852	0.587	498	487	1.0	1.5	11.126	B

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	818	205	610	55.05	1060	0.771	811	650	1.7	3.5	15.469	C
B - Taylor's Lane	767	192	643	55.05	716	1.071	693	778	4.0	22.7	86.363	F
C - Ballyboden Rd (S)	523	131	702		798	0.656	519	633	1.1	2.0	14.046	B
D - Ballyboden Way	612	153	656		793	0.772	605	566	1.5	3.4	20.284	C

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	818	205	616	55.05	1057	0.774	817	658	3.5	3.6	16.421	C
B - Taylor's Lane	767	192	648	55.05	714	1.076	707	785	22.7	37.8	166.917	F
C - Ballyboden Rd (S)	523	131	714		791	0.661	523	641	2.0	2.1	14.707	B
D - Ballyboden Way	612	153	662		789	0.776	611	574	3.4	3.6	22.055	C

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17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	668	167	510	44.95	1117	0.598	676	580	3.6	1.7	9.125	A
B - Taylor's Lane	627	157	536	44.95	777	0.807	751	650	37.8	6.7	113.432	F
C - Ballyboden Rd (S)	427	107	704		797	0.536	430	583	2.1	1.3	10.889	B
D - Ballyboden Way	500	125	582		833	0.600	507	551	3.6	1.7	12.421	B

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	559	140	424	37.64	1123	0.498	562	466	1.7	1.1	7.085	A
B - Taylor's Lane	525	131	445	37.64	828	0.634	544	541	6.7	2.0	14.792	B
C - Ballyboden Rd (S)	358	89	530		893	0.400	360	459	1.3	0.7	7.458	A
D - Ballyboden Way	419	105	469		896	0.467	421	421	1.7	1.0	8.389	A

Do Nothing - DN 2030, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set (s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Do Nothing	✓	✓	D1,D2,D5,D6,D9,D10,D13,D14	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Taylor's Lane Roundabout	Standard Roundabout		A, B, C, D	265.53	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
A	Ballyboden Rd (N)	
B	Taylor's Lane	
C	Ballyboden Rd (S)	
D	Ballyboden Way	

Capacity Options

Arm	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)	Assume flat start profile	Initial queue (PCU)
A - Ballyboden Rd (N)	0	99999		3.00
B - Taylor's Lane	0	99999		2.00
C - Ballyboden Rd (S)	0	99999		16.00
D - Ballyboden Way	0	99999		13.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
A - Ballyboden Rd (N)	3.57	5.70	14.8	20.8	38.0	53.2	
B - Taylor's Lane	3.25	6.00	21.0	16.5	38.0	53.2	
C - Ballyboden Rd (S)	3.20	5.80	16.5	21.4	38.0	54.8	
D - Ballyboden Way	4.70	4.82	14.0	26.0	38.0	54.5	

Pelican/Puffin Crossings

Arm	Space between crossing and junc. entry (Signalised) (PCU)	Amber time preceding red (s)	Amber time regarded as green (s)	Time from traffic red start to green man start (s)	Time period green man shown (s)	Clearance Period (s)	Traffic minimum green (s)
A - Ballyboden Rd (N)	16.00	3.00	2.90	1.00	7.00	6.00	7.00
B - Taylor's Lane	35.00	3.00	2.90	1.00	7.00	6.00	7.00

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Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - Ballyboden Rd (N)	0.563	1404
B - Taylor's Lane	0.564	1429
C - Ballyboden Rd (S)	0.555	1370
D - Ballyboden Way	0.554	1352

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct capacity adjustment (PCU/hr)
A - Ballyboden Rd (N)	Direct		0
B - Taylor's Lane	Direct	Calibrating Base Model	-350
C - Ballyboden Rd (S)	Direct	Calibrating Base Model	-183
D - Ballyboden Way	Direct	Calibrating Base Model	-196

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	DN 2030	AM	ONE HOUR	07:45	09:15	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Ballyboden Rd (N)		ONE HOUR	✓	571	100.000
B - Taylor's Lane		ONE HOUR	✓	750	100.000
C - Ballyboden Rd (S)		ONE HOUR	✓	863	100.000
D - Ballyboden Way		ONE HOUR	✓	689	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A - Ballyboden Rd (N)	[ONEHOUR]	50.00
B - Taylor's Lane	[ONEHOUR]	50.00
C - Ballyboden Rd (S)		
D - Ballyboden Way		

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - Ballyboden Rd (N)	B - Taylor's Lane	C - Ballyboden Rd (S)	D - Ballyboden Way
From	A - Ballyboden Rd (N)	0	220	201	150
	B - Taylor's Lane	218	0	186	346
	C - Ballyboden Rd (S)	534	276	0	53
	D - Ballyboden Way	195	430	63	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - Ballyboden Rd (N)	B - Taylor's Lane	C - Ballyboden Rd (S)	D - Ballyboden Way
From	A - Ballyboden Rd (N)	10	10	10	10
	B - Taylor's Lane	10	10	10	10
	C - Ballyboden Rd (S)	10	10	10	10
	D - Ballyboden Way	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Ballyboden Rd (N)	0.64	11.17	1.9	B	524	786
B - Taylor's Lane	1.00	90.58	20.5	F	688	1032
C - Ballyboden Rd (S)	1.25	446.58	103.2	F	792	1188
D - Ballyboden Way	1.20	439.99	74.5	F	632	948

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	430	107	623	37.64	1035	0.415	439	755	3.0	0.8	6.734	A
B - Taylor's Lane	565	141	321	37.64	869	0.649	565	741	2.0	2.0	12.984	B
C - Ballyboden Rd (S)	650	162	541		887	0.732	701	345	16.0	3.2	26.037	D
D - Ballyboden Way	519	130	822		701	0.740	557	420	13.0	3.4	32.880	D

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	513	128	668	44.95	975	0.526	512	829	0.8	1.2	8.509	A
B - Taylor's Lane	674	169	370	44.95	867	0.777	668	810	2.0	3.5	19.274	C
C - Ballyboden Rd (S)	776	194	638		833	0.931	753	400	3.2	9.0	40.484	E
D - Ballyboden Way	619	155	901		657	0.943	597	490	3.4	9.2	51.643	F

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	629	157	694	55.05	977	0.643	626	877	1.2	1.9	11.173	B
B - Taylor's Lane	826	206	443	55.05	829	0.996	781	877	3.5	14.6	56.336	F
C - Ballyboden Rd (S)	950	238	753		770	1.235	764	471	9.0	55.6	167.164	F
D - Ballyboden Way	759	190	944		633	1.198	627	573	9.2	42.1	164.749	F

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	629	157	695	55.05	992	0.634	629	882	1.9	1.9	10.897	B
B - Taylor's Lane	826	206	445	55.05	828	0.997	802	879	14.6	20.5	90.580	F
C - Ballyboden Rd (S)	950	238	769		760	1.250	760	478	55.6	103.2	380.720	F
D - Ballyboden Way	759	190	946		632	1.201	631	583	42.1	74.1	345.894	F

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08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	513	128	697	44.95	982	0.523	516	881	1.9	1.2	8.548	A
B - Taylor's Lane	674	169	375	44.95	868	0.777	739	839	20.5	4.3	40.223	E
C - Ballyboden Rd (S)	776	194	692		803	0.966	795	421	103.2	98.4	446.580	F
D - Ballyboden Way	619	155	961		624	0.993	618	526	74.1	74.5	439.985	F

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	430	107	710	37.64	964	0.446	431	878	1.2	0.9	7.456	A
B - Taylor's Lane	565	141	321	37.64	898	0.629	574	820	4.3	1.9	12.560	B
C - Ballyboden Rd (S)	650	162	546		884	0.735	875	349	98.4	42.2	292.729	F
D - Ballyboden Way	519	130	988		609	0.852	600	433	74.5	54.2	388.001	F

Do Nothing - DN 2030, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set (s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Do Nothing	✓	✓	D1,D2,D5,D6,D9,D10,D13,D14	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Taylor's Lane Roundabout	Standard Roundabout		A, B, C, D	126.92	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
A	Ballyboden Rd (N)	
B	Taylor's Lane	
C	Ballyboden Rd (S)	
D	Ballyboden Way	

Capacity Options

Arm	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)	Assume flat start profile	Initial queue (PCU)
A - Ballyboden Rd (N)	0	99999		3.00
B - Taylor's Lane	0	99999		2.00
C - Ballyboden Rd (S)	0	99999		16.00
D - Ballyboden Way	0	99999		13.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
A - Ballyboden Rd (N)	3.57	5.70	14.8	20.8	38.0	53.2	
B - Taylor's Lane	3.25	6.00	21.0	16.5	38.0	53.2	
C - Ballyboden Rd (S)	3.20	5.80	16.5	21.4	38.0	54.8	
D - Ballyboden Way	4.70	4.82	14.0	26.0	38.0	54.5	

Pelican/Puffin Crossings

Arm	Space between crossing and junc. entry (Signalised) (PCU)	Amber time preceding red (s)	Amber time regarded as green (s)	Time from traffic red start to green man start (s)	Time period green man shown (s)	Clearance Period (s)	Traffic minimum green (s)
A - Ballyboden Rd (N)	16.00	3.00	2.90	1.00	7.00	6.00	7.00
B - Taylor's Lane	35.00	3.00	2.90	1.00	7.00	6.00	7.00

Generated on 23/03/2023 17:54:47 using Junctions 9 (9.5.2.1013)

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - Ballyboden Rd (N)	0.563	1404
B - Taylor's Lane	0.564	1429
C - Ballyboden Rd (S)	0.555	1370
D - Ballyboden Way	0.554	1352

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct capacity adjustment (PCU/hr)
A - Ballyboden Rd (N)	Direct		0
B - Taylor's Lane	Direct	Calibrating Base Model	-350
C - Ballyboden Rd (S)	Direct	Calibrating Base Model	-183
D - Ballyboden Way	Direct	Calibrating Base Model	-196

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	DN 2030	PM	ONE HOUR	16:45	18:15	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Ballyboden Rd (N)		ONE HOUR	✓	809	100.000
B - Taylor's Lane		ONE HOUR	✓	760	100.000
C - Ballyboden Rd (S)		ONE HOUR	✓	517	100.000
D - Ballyboden Way		ONE HOUR	✓	605	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A - Ballyboden Rd (N)	[ONEHOUR]	50.00
B - Taylor's Lane	[ONEHOUR]	50.00
C - Ballyboden Rd (S)		
D - Ballyboden Way		

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - Ballyboden Rd (N)	B - Taylor's Lane	C - Ballyboden Rd (S)	D - Ballyboden Way
From	A - Ballyboden Rd (N)	0	182	398	229
	B - Taylor's Lane	168	0	241	351
	C - Ballyboden Rd (S)	286	214	1	16
	D - Ballyboden Way	211	381	12	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - Ballyboden Rd (N)	B - Taylor's Lane	C - Ballyboden Rd (S)	D - Ballyboden Way
From	A - Ballyboden Rd (N)	10	10	10	10
	B - Taylor's Lane	10	10	10	10
	C - Ballyboden Rd (S)	10	10	10	10
	D - Ballyboden Way	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Ballyboden Rd (N)	0.87	27.45	6.4	D	742	1114
B - Taylor's Lane	1.23	379.09	85.3	F	697	1046
C - Ballyboden Rd (S)	0.72	17.90	2.7	C	474	712
D - Ballyboden Way	0.87	36.34	6.3	E	555	833

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	609	152	514	37.64	1102	0.553	616	550	3.0	1.4	8.245	A
B - Taylor's Lane	572	143	489	37.64	793	0.722	569	641	2.0	2.7	17.473	C
C - Ballyboden Rd (S)	389	97	564		874	0.445	450	494	16.0	0.9	10.726	B
D - Ballyboden Way	455	114	562		845	0.539	502	452	13.0	1.3	13.146	B

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	727	182	545	44.95	1069	0.680	724	592	1.4	2.3	11.339	B
B - Taylor's Lane	683	171	573	44.95	756	0.904	665	695	2.7	7.3	37.634	E
C - Ballyboden Rd (S)	465	116	660		821	0.566	463	579	0.9	1.4	10.988	B
D - Ballyboden Way	544	136	595		826	0.658	541	527	1.3	2.0	13.744	B

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	891	223	659	55.05	1033	0.862	876	690	2.3	5.8	23.418	C
B - Taylor's Lane	837	209	694	55.05	687	1.217	680	841	7.3	46.3	158.240	F
C - Ballyboden Rd (S)	569	142	714		791	0.719	564	661	1.4	2.6	17.070	C
D - Ballyboden Way	666	167	697		770	0.865	652	581	2.0	5.7	30.345	D

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	891	223	669	55.05	1027	0.867	888	697	5.8	6.4	27.448	D
B - Taylor's Lane	837	209	704	55.05	682	1.227	681	853	46.3	85.3	351.414	F
C - Ballyboden Rd (S)	569	142	718		789	0.721	569	667	2.6	2.7	17.899	C
D - Ballyboden Way	666	167	702		767	0.868	664	585	5.7	6.3	36.338	E

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17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	727	182	560	44.95	1089	0.668	744	618	6.4	2.3	11.985	B
B - Taylor's Lane	683	171	589	44.95	747	0.915	737	714	85.3	71.8	379.087	F
C - Ballyboden Rd (S)	465	116	715		791	0.588	469	612	2.7	1.6	12.489	B
D - Ballyboden Way	544	136	618		814	0.668	560	566	6.3	2.3	16.469	C

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	609	152	462	37.64	1117	0.545	613	552	2.3	1.3	7.913	A
B - Taylor's Lane	572	143	486	37.64	805	0.711	793	589	71.8	16.6	206.408	F
C - Ballyboden Rd (S)	389	97	716		790	0.493	391	563	1.6	1.1	9.982	A
D - Ballyboden Way	455	114	555		849	0.537	460	553	2.3	1.3	10.276	B

Do Nothing - DN 2040, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set (s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Do Nothing	✓	✓	D1,D2,D5,D6,D9,D10,D13,D14	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Taylor's Lane Roundabout	Standard Roundabout		A, B, C, D	406.05	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
A	Ballyboden Rd (N)	
B	Taylor's Lane	
C	Ballyboden Rd (S)	
D	Ballyboden Way	

Capacity Options

Arm	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)	Assume flat start profile	Initial queue (PCU)
A - Ballyboden Rd (N)	0	99999		3.00
B - Taylor's Lane	0	99999		2.00
C - Ballyboden Rd (S)	0	99999		16.00
D - Ballyboden Way	0	99999		13.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
A - Ballyboden Rd (N)	3.57	5.70	14.8	20.8	38.0	53.2	
B - Taylor's Lane	3.25	6.00	21.0	16.5	38.0	53.2	
C - Ballyboden Rd (S)	3.20	5.80	16.5	21.4	38.0	54.8	
D - Ballyboden Way	4.70	4.82	14.0	26.0	38.0	54.5	

Pelican/Puffin Crossings

Arm	Space between crossing and junc. entry (Signalised) (PCU)	Amber time preceding red (s)	Amber time regarded as green (s)	Time from traffic red start to green man start (s)	Time period green man shown (s)	Clearance Period (s)	Traffic minimum green (s)
A - Ballyboden Rd (N)	16.00	3.00	2.90	1.00	7.00	6.00	7.00
B - Taylor's Lane	35.00	3.00	2.90	1.00	7.00	6.00	7.00

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Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - Ballyboden Rd (N)	0.563	1404
B - Taylor's Lane	0.564	1429
C - Ballyboden Rd (S)	0.555	1370
D - Ballyboden Way	0.554	1352

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct capacity adjustment (PCU/hr)
A - Ballyboden Rd (N)	Direct		0
B - Taylor's Lane	Direct	Calibrating Base Model	-350
C - Ballyboden Rd (S)	Direct	Calibrating Base Model	-183
D - Ballyboden Way	Direct	Calibrating Base Model	-196

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D9	DN 2040	AM	ONE HOUR	07:45	09:15	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Ballyboden Rd (N)		ONE HOUR	✓	606	100.000
B - Taylor's Lane		ONE HOUR	✓	797	100.000
C - Ballyboden Rd (S)		ONE HOUR	✓	917	100.000
D - Ballyboden Way		ONE HOUR	✓	731	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A - Ballyboden Rd (N)	[ONEHOUR]	50.00
B - Taylor's Lane	[ONEHOUR]	50.00
C - Ballyboden Rd (S)		
D - Ballyboden Way		

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - Ballyboden Rd (N)	B - Taylor's Lane	C - Ballyboden Rd (S)	D - Ballyboden Way
From	A - Ballyboden Rd (N)	0	234	213	159
	B - Taylor's Lane	232	0	198	367
	C - Ballyboden Rd (S)	567	293	0	57
	D - Ballyboden Way	207	456	67	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - Ballyboden Rd (N)	B - Taylor's Lane	C - Ballyboden Rd (S)	D - Ballyboden Way
From	A - Ballyboden Rd (N)	10	10	10	10
	B - Taylor's Lane	10	10	10	10
	C - Ballyboden Rd (S)	10	10	10	10
	D - Ballyboden Way	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Ballyboden Rd (N)	0.68	12.13	2.2	B	556	834
B - Taylor's Lane	1.08	165.74	43.1	F	731	1097
C - Ballyboden Rd (S)	1.34	699.44	160.9	F	841	1262
D - Ballyboden Way	1.27	626.58	110.4	F	671	1006

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	456	114	651	37.64	1023	0.446	465	793	3.0	0.9	7.197	A
B - Taylor's Lane	600	150	339	37.64	866	0.693	599	776	2.0	2.4	14.702	B
C - Ballyboden Rd (S)	690	173	573		870	0.794	735	365	16.0	4.8	35.608	E
D - Ballyboden Way	550	138	864		677	0.812	580	444	13.0	5.5	46.740	E

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	545	136	686	44.95	971	0.561	543	859	0.9	1.4	9.196	A
B - Taylor's Lane	716	179	390	44.95	859	0.834	707	839	2.4	4.8	24.524	C
C - Ballyboden Rd (S)	824	206	675		813	1.014	776	422	4.8	17.0	65.908	F
D - Ballyboden Way	657	164	933		639	1.028	612	517	5.5	16.9	83.536	F

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	667	167	695	55.05	987	0.676	664	878	1.4	2.2	12.135	B
B - Taylor's Lane	878	219	466	55.05	816	1.075	793	893	4.8	25.8	85.470	F
C - Ballyboden Rd (S)	1010	252	771		759	1.330	757	488	17.0	80.1	244.250	F
D - Ballyboden Way	805	201	941		635	1.268	632	587	16.9	60.0	234.448	F

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	667	167	695	55.05	1005	0.664	667	880	2.2	2.2	11.736	B
B - Taylor's Lane	878	219	469	55.05	815	1.077	808	894	25.8	43.1	165.736	F
C - Ballyboden Rd (S)	1010	252	784		753	1.342	752	494	80.1	144.4	544.708	F
D - Ballyboden Way	805	201	941		635	1.268	634	595	60.0	102.7	474.960	F

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08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	545	136	691	44.95	993	0.549	548	889	2.2	1.4	8.968	A
B - Taylor's Lane	716	179	395	44.95	856	0.837	835	845	43.1	13.4	128.355	F
C - Ballyboden Rd (S)	824	206	772		759	1.086	758	458	144.4	160.9	699.437	F
D - Ballyboden Way	657	164	954		627	1.047	626	576	102.7	110.4	626.575	F

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	456	114	705	37.64	970	0.470	458	882	1.4	1.0	7.756	A
B - Taylor's Lane	600	150	337	37.64	889	0.675	644	825	13.4	2.4	18.886	C
C - Ballyboden Rd (S)	690	173	605		852	0.811	846	377	160.9	122.1	603.273	F
D - Ballyboden Way	550	138	981		613	0.898	607	470	110.4	96.3	613.746	F

Do Nothing - DN 2040, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set (s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Do Nothing	✓	✓	D1,D2,D5,D6,D9,D10,D13,D14	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Taylor's Lane Roundabout	Standard Roundabout		A, B, C, D	209.18	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
A	Ballyboden Rd (N)	
B	Taylor's Lane	
C	Ballyboden Rd (S)	
D	Ballyboden Way	

Capacity Options

Arm	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)	Assume flat start profile	Initial queue (PCU)
A - Ballyboden Rd (N)	0	99999		3.00
B - Taylor's Lane	0	99999		2.00
C - Ballyboden Rd (S)	0	99999		16.00
D - Ballyboden Way	0	99999		13.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
A - Ballyboden Rd (N)	3.57	5.70	14.8	20.8	38.0	53.2	
B - Taylor's Lane	3.25	6.00	21.0	16.5	38.0	53.2	
C - Ballyboden Rd (S)	3.20	5.80	16.5	21.4	38.0	54.8	
D - Ballyboden Way	4.70	4.82	14.0	26.0	38.0	54.5	

Pelican/Puffin Crossings

Arm	Space between crossing and junc. entry (Signalised) (PCU)	Amber time preceding red (s)	Amber time regarded as green (s)	Time from traffic red start to green man start (s)	Time period green man shown (s)	Clearance Period (s)	Traffic minimum green (s)
A - Ballyboden Rd (N)	16.00	3.00	2.90	1.00	7.00	6.00	7.00
B - Taylor's Lane	35.00	3.00	2.90	1.00	7.00	6.00	7.00

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Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - Ballyboden Rd (N)	0.563	1404
B - Taylor's Lane	0.564	1429
C - Ballyboden Rd (S)	0.555	1370
D - Ballyboden Way	0.554	1352

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct capacity adjustment (PCU/hr)
A - Ballyboden Rd (N)	Direct		0
B - Taylor's Lane	Direct	Calibrating Base Model	-350
C - Ballyboden Rd (S)	Direct	Calibrating Base Model	-183
D - Ballyboden Way	Direct	Calibrating Base Model	-196

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D10	DN 2040	PM	ONE HOUR	16:45	18:15	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Ballyboden Rd (N)		ONE HOUR	✓	860	100.000
B - Taylor's Lane		ONE HOUR	✓	808	100.000
C - Ballyboden Rd (S)		ONE HOUR	✓	549	100.000
D - Ballyboden Way		ONE HOUR	✓	642	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A - Ballyboden Rd (N)	[ONEHOUR]	50.00
B - Taylor's Lane	[ONEHOUR]	50.00
C - Ballyboden Rd (S)		
D - Ballyboden Way		

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - Ballyboden Rd (N)	B - Taylor's Lane	C - Ballyboden Rd (S)	D - Ballyboden Way
From	A - Ballyboden Rd (N)	0	194	422	244
	B - Taylor's Lane	179	0	256	373
	C - Ballyboden Rd (S)	303	228	1	17
	D - Ballyboden Way	224	405	12	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - Ballyboden Rd (N)	B - Taylor's Lane	C - Ballyboden Rd (S)	D - Ballyboden Way
From	A - Ballyboden Rd (N)	10	10	10	10
	B - Taylor's Lane	10	10	10	10
	C - Ballyboden Rd (S)	10	10	10	10
	D - Ballyboden Way	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Ballyboden Rd (N)	0.94	48.46	12.0	E	789	1184
B - Taylor's Lane	1.35	625.32	128.5	F	741	1112
C - Ballyboden Rd (S)	0.77	21.26	3.4	C	504	756
D - Ballyboden Way	0.94	61.44	11.3	F	589	884

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	647	162	542	37.64	1092	0.593	653	579	3.0	1.6	9.137	A
B - Taylor's Lane	608	152	517	37.64	787	0.773	603	677	2.0	3.4	20.778	C
C - Ballyboden Rd (S)	413	103	598		856	0.483	473	522	16.0	1.1	12.058	B
D - Ballyboden Way	483	121	592		828	0.584	529	479	13.0	1.6	15.236	C

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	773	193	578	44.95	1067	0.725	769	623	1.6	2.8	13.087	B
B - Taylor's Lane	726	182	608	44.95	736	0.987	688	739	3.4	12.9	58.140	F
C - Ballyboden Rd (S)	494	123	689		805	0.613	491	607	1.1	1.7	12.513	B
D - Ballyboden Way	577	144	628		808	0.714	573	552	1.6	2.6	16.570	C

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	947	237	693	55.05	1014	0.934	919	715	2.8	9.6	34.646	D
B - Taylor's Lane	890	222	727	55.05	669	1.330	666	885	12.9	68.7	235.904	F
C - Ballyboden Rd (S)	604	151	717		789	0.766	598	676	1.7	3.3	20.029	C
D - Ballyboden Way	707	177	727		753	0.938	681	588	2.6	9.1	43.889	E

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	947	237	706	55.05	1006	0.941	938	723	9.6	12.0	48.460	E
B - Taylor's Lane	890	222	741	55.05	661	1.346	661	903	68.7	126.0	525.041	F
C - Ballyboden Rd (S)	604	151	718		789	0.766	604	684	3.3	3.4	21.258	C
D - Ballyboden Way	707	177	732		751	0.942	698	591	9.1	11.3	61.440	F

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17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	773	193	606	44.95	1063	0.727	809	647	12.0	3.1	17.477	C
B - Taylor's Lane	726	182	639	44.95	718	1.011	716	775	126.0	128.5	625.318	F
C - Ballyboden Rd (S)	494	123	720		788	0.626	500	636	3.4	1.9	14.017	B
D - Ballyboden Way	577	144	643		800	0.722	610	577	11.3	3.1	23.876	C

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	647	162	492	37.64	1118	0.579	654	573	3.1	1.5	8.649	A
B - Taylor's Lane	608	152	517	37.64	788	0.772	781	629	128.5	85.3	494.416	F
C - Ballyboden Rd (S)	413	103	720		788	0.525	416	578	1.9	1.2	10.723	B
D - Ballyboden Way	483	121	576		837	0.578	489	560	3.1	1.5	11.586	B

Do Nothing - Base 2022, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set (s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Do Nothing	✓	✓	D1,D2,D5,D6,D9,D10,D13,D14	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Taylor's Lane Roundabout	Standard Roundabout		A, B, C, D	53.22	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
A	Ballyboden Rd (N)	
B	Taylor's Lane	
C	Ballyboden Rd (S)	
D	Ballyboden Way	

Capacity Options

Arm	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)	Assume flat start profile	Initial queue (PCU)
A - Ballyboden Rd (N)	0	99999		3.00
B - Taylor's Lane	0	99999		2.00
C - Ballyboden Rd (S)	0	99999		16.00
D - Ballyboden Way	0	99999		13.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
A - Ballyboden Rd (N)	3.57	5.70	14.8	20.8	38.0	53.2	
B - Taylor's Lane	3.25	6.00	21.0	16.5	38.0	53.2	
C - Ballyboden Rd (S)	3.20	5.80	16.5	21.4	38.0	54.8	
D - Ballyboden Way	4.70	4.82	14.0	26.0	38.0	54.5	

Pelican/Puffin Crossings

Arm	Space between crossing and junc. entry (Signalised) (PCU)	Amber time preceding red (s)	Amber time regarded as green (s)	Time from traffic red start to green man start (s)	Time period green man shown (s)	Clearance Period (s)	Traffic minimum green (s)
A - Ballyboden Rd (N)	16.00	3.00	2.90	1.00	7.00	6.00	7.00
B - Taylor's Lane	35.00	3.00	2.90	1.00	7.00	6.00	7.00

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Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - Ballyboden Rd (N)	0.563	1404
B - Taylor's Lane	0.564	1429
C - Ballyboden Rd (S)	0.555	1370
D - Ballyboden Way	0.554	1352

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct capacity adjustment (PCU/hr)
A - Ballyboden Rd (N)	Direct		0
B - Taylor's Lane	Direct	Calibrating Base Model	-350
C - Ballyboden Rd (S)	Direct	Calibrating Base Model	-183
D - Ballyboden Way	Direct	Calibrating Base Model	-196

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D13	Base 2022	AM	ONE HOUR	07:45	09:15	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Ballyboden Rd (N)		ONE HOUR	✓	484	100.000
B - Taylor's Lane		ONE HOUR	✓	637	100.000
C - Ballyboden Rd (S)		ONE HOUR	✓	728	100.000
D - Ballyboden Way		ONE HOUR	✓	566	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A - Ballyboden Rd (N)	[ONEHOUR]	50.00
B - Taylor's Lane	[ONEHOUR]	50.00
C - Ballyboden Rd (S)		
D - Ballyboden Way		

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - Ballyboden Rd (N)	B - Taylor's Lane	C - Ballyboden Rd (S)	D - Ballyboden Way
From	A - Ballyboden Rd (N)	0	191	166	127
	B - Taylor's Lane	189	0	155	293
	C - Ballyboden Rd (S)	451	233	0	44
	D - Ballyboden Way	160	352	53	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - Ballyboden Rd (N)	B - Taylor's Lane	C - Ballyboden Rd (S)	D - Ballyboden Way
From	A - Ballyboden Rd (N)	10	10	10	10
	B - Taylor's Lane	10	10	10	10
	C - Ballyboden Rd (S)	10	10	10	10
	D - Ballyboden Way	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Ballyboden Rd (N)	0.55	9.02	1.3	A	444	666
B - Taylor's Lane	0.81	23.76	4.4	C	585	877
C - Ballyboden Rd (S)	0.98	80.45	17.4	F	668	1002
D - Ballyboden Way	0.98	89.14	15.0	F	519	779

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	364	91	533	37.64	1079	0.338	374	652	3.0	0.6	5.693	A
B - Taylor's Lane	480	120	272	37.64	884	0.542	482	635	2.0	1.3	9.912	A
C - Ballyboden Rd (S)	548	137	464		930	0.589	606	290	16.0	1.6	14.413	B
D - Ballyboden Way	426	107	712		762	0.560	472	357	13.0	1.4	15.871	C

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	435	109	570	44.95	1015	0.429	434	714	0.6	0.8	6.812	A
B - Taylor's Lane	573	143	311	44.95	859	0.667	570	693	1.3	2.1	13.528	B
C - Ballyboden Rd (S)	654	164	546		884	0.740	649	335	1.6	2.9	16.466	C
D - Ballyboden Way	509	127	779		724	0.702	505	416	1.4	2.4	17.695	C

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	533	133	668	55.05	969	0.550	531	845	0.8	1.3	9.004	A
B - Taylor's Lane	701	175	378	55.05	866	0.810	693	821	2.1	4.2	21.875	C
C - Ballyboden Rd (S)	802	200	665		818	0.979	762	406	2.9	12.7	51.090	F
D - Ballyboden Way	623	156	922		645	0.966	591	505	2.4	10.4	54.756	F

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	533	133	684	55.05	972	0.548	533	864	1.3	1.3	9.024	A
B - Taylor's Lane	701	175	380	55.05	865	0.811	700	837	4.2	4.4	23.765	C
C - Ballyboden Rd (S)	802	200	671		815	0.983	783	410	12.7	17.4	80.446	F
D - Ballyboden Way	623	156	943		633	0.984	605	510	10.4	15.0	89.139	F

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	435	109	626	44.95	1001	0.435	437	770	1.3	0.9	7.048	A
B - Taylor's Lane	573	143	318	44.95	900	0.636	582	745	4.4	2.0	12.824	B
C - Ballyboden Rd (S)	654	164	556		879	0.745	710	344	17.4	3.5	29.592	D
D - Ballyboden Way	509	127	840		691	0.737	555	426	15.0	3.4	36.445	E

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	364	91	489	37.64	1067	0.341	366	610	0.9	0.6	5.654	A
B - Taylor's Lane	480	120	263	37.64	889	0.540	482	592	2.0	1.3	9.810	A
C - Ballyboden Rd (S)	548	137	462		931	0.589	556	283	3.5	1.6	10.748	B
D - Ballyboden Way	426	107	665		788	0.541	434	352	3.4	1.3	11.462	B

Do Nothing - Base 2022, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set (s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Do Nothing	✓	✓	D1,D2,D5,D6,D9,D10,D13,D14	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Taylor's Lane Roundabout	Standard Roundabout		A, B, C, D	29.62	D

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
A	Ballyboden Rd (N)	
B	Taylor's Lane	
C	Ballyboden Rd (S)	
D	Ballyboden Way	

Capacity Options

Arm	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)	Assume flat start profile	Initial queue (PCU)
A - Ballyboden Rd (N)	0	99999		3.00
B - Taylor's Lane	0	99999		2.00
C - Ballyboden Rd (S)	0	99999		16.00
D - Ballyboden Way	0	99999		13.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
A - Ballyboden Rd (N)	3.57	5.70	14.8	20.8	38.0	53.2	
B - Taylor's Lane	3.25	6.00	21.0	16.5	38.0	53.2	
C - Ballyboden Rd (S)	3.20	5.80	16.5	21.4	38.0	54.8	
D - Ballyboden Way	4.70	4.82	14.0	26.0	38.0	54.5	

Pelican/Puffin Crossings

Arm	Space between crossing and junc. entry (Signalised) (PCU)	Amber time preceding red (s)	Amber time regarded as green (s)	Time from traffic red start to green man start (s)	Time period green man shown (s)	Clearance Period (s)	Traffic minimum green (s)
A - Ballyboden Rd (N)	16.00	3.00	2.90	1.00	7.00	6.00	7.00
B - Taylor's Lane	35.00	3.00	2.90	1.00	7.00	6.00	7.00

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Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - Ballyboden Rd (N)	0.563	1404
B - Taylor's Lane	0.564	1429
C - Ballyboden Rd (S)	0.555	1370
D - Ballyboden Way	0.554	1352

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct capacity adjustment (PCU/hr)
A - Ballyboden Rd (N)	Direct		0
B - Taylor's Lane	Direct	Calibrating Base Model	-350
C - Ballyboden Rd (S)	Direct	Calibrating Base Model	-183
D - Ballyboden Way	Direct	Calibrating Base Model	-196

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D14	Base 2022	PM	ONE HOUR	16:45	18:15	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Ballyboden Rd (N)		ONE HOUR	✓	685	100.000
B - Taylor's Lane		ONE HOUR	✓	648	100.000
C - Ballyboden Rd (S)		ONE HOUR	✓	436	100.000
D - Ballyboden Way		ONE HOUR	✓	502	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A - Ballyboden Rd (N)	[ONEHOUR]	50.00
B - Taylor's Lane	[ONEHOUR]	50.00
C - Ballyboden Rd (S)		
D - Ballyboden Way		

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - Ballyboden Rd (N)	B - Taylor's Lane	C - Ballyboden Rd (S)	D - Ballyboden Way
From	A - Ballyboden Rd (N)	0	158	329	198
	B - Taylor's Lane	146	0	199	303
	C - Ballyboden Rd (S)	241	181	1	13
	D - Ballyboden Way	175	316	10	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - Ballyboden Rd (N)	B - Taylor's Lane	C - Ballyboden Rd (S)	D - Ballyboden Way
From	A - Ballyboden Rd (N)	10	10	10	10
	B - Taylor's Lane	10	10	10	10
	C - Ballyboden Rd (S)	10	10	10	10
	D - Ballyboden Way	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Ballyboden Rd (N)	0.71	12.38	2.6	B	629	943
B - Taylor's Lane	0.96	70.43	13.2	F	595	892
C - Ballyboden Rd (S)	0.60	12.51	1.6	B	400	600
D - Ballyboden Way	0.68	15.30	2.3	C	461	691

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	516	129	441	37.64	1133	0.455	524	474	3.0	0.9	6.588	A
B - Taylor's Lane	488	122	413	37.64	816	0.598	489	551	2.0	1.7	12.169	B
C - Ballyboden Rd (S)	328	82	491		915	0.359	390	411	16.0	0.6	8.483	A
D - Ballyboden Way	378	94	488		885	0.427	427	393	13.0	0.8	9.577	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	616	154	456	44.95	1091	0.565	614	503	0.9	1.4	8.273	A
B - Taylor's Lane	583	146	483	44.95	791	0.737	578	587	1.7	2.9	18.163	C
C - Ballyboden Rd (S)	392	98	579		866	0.453	391	482	0.6	0.9	8.313	A
D - Ballyboden Way	451	113	509		874	0.516	450	460	0.8	1.2	9.315	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	754	189	556	55.05	1065	0.708	750	609	1.4	2.6	12.383	B
B - Taylor's Lane	713	178	590	55.05	746	0.956	684	716	2.9	10.3	48.513	E
C - Ballyboden Rd (S)	480	120	691		804	0.597	477	582	0.9	1.6	12.029	B
D - Ballyboden Way	553	138	617		814	0.679	548	552	1.2	2.2	14.670	B

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	754	189	560	55.05	1088	0.693	754	616	2.6	2.5	11.887	B
B - Taylor's Lane	713	178	594	55.05	744	0.959	702	721	10.3	13.2	70.429	F
C - Ballyboden Rd (S)	480	120	705		796	0.603	480	590	1.6	1.6	12.511	B
D - Ballyboden Way	553	138	624		810	0.682	552	562	2.2	2.3	15.301	C

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17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	616	154	461	44.95	1117	0.551	620	517	2.5	1.4	8.041	A
B - Taylor's Lane	583	146	488	44.95	804	0.725	623	594	13.2	3.1	25.928	D
C - Ballyboden Rd (S)	392	98	612		848	0.462	395	499	1.6	1.0	8.791	A
D - Ballyboden Way	451	113	523		866	0.521	456	483	2.3	1.2	9.742	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	516	129	385	37.64	1136	0.454	518	426	1.4	0.9	6.423	A
B - Taylor's Lane	488	122	407	37.64	836	0.584	494	495	3.1	1.6	11.790	B
C - Ballyboden Rd (S)	328	82	493		914	0.359	330	409	1.0	0.6	6.795	A
D - Ballyboden Way	378	94	431		917	0.412	380	391	1.2	0.8	7.394	A

Do Something - DS 2025, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set (s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	Do Something	✓	✓	D3,D4,D7,D8,D11,D12	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Taylor's Lane Roundabout	Standard Roundabout		A, B, C, D	139.37	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
A	Ballyboden Rd (N)	
B	Taylor's Lane	
C	Ballyboden Rd (S)	
D	Ballyboden Way	

Capacity Options

Arm	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)	Assume flat start profile	Initial queue (PCU)
A - Ballyboden Rd (N)	0	99999		3.00
B - Taylor's Lane	0	99999		2.00
C - Ballyboden Rd (S)	0	99999		16.00
D - Ballyboden Way	0	99999		13.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
A - Ballyboden Rd (N)	3.57	5.70	14.8	20.8	38.0	53.2	
B - Taylor's Lane	3.25	6.00	21.0	16.5	38.0	53.2	
C - Ballyboden Rd (S)	3.20	5.80	16.5	21.4	38.0	54.8	
D - Ballyboden Way	4.70	4.82	14.0	26.0	38.0	54.5	

Pelican/Puffin Crossings

Arm	Space between crossing and junc. entry (Signalised) (PCU)	Amber time preceding red (s)	Amber time regarded as green (s)	Time from traffic red start to green man start (s)	Time period green man shown (s)	Clearance Period (s)	Traffic minimum green (s)
A - Ballyboden Rd (N)	16.00	3.00	2.90	1.00	7.00	6.00	7.00
B - Taylor's Lane	35.00	3.00	2.90	1.00	7.00	6.00	7.00

Generated on 23/03/2023 17:54:47 using Junctions 9 (9.5.2.1013)

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - Ballyboden Rd (N)	0.563	1404
B - Taylor's Lane	0.564	1429
C - Ballyboden Rd (S)	0.555	1370
D - Ballyboden Way	0.554	1352

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct capacity adjustment (PCU/hr)
A - Ballyboden Rd (N)	Direct		0
B - Taylor's Lane	Direct	Calibrating Base Model	-350
C - Ballyboden Rd (S)	Direct	Calibrating Base Model	-183
D - Ballyboden Way	Direct	Calibrating Base Model	-196

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	DS 2025	AM	ONE HOUR	07:45	09:15	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Ballyboden Rd (N)		ONE HOUR	✓	527	100.000
B - Taylor's Lane		ONE HOUR	✓	690	100.000
C - Ballyboden Rd (S)		ONE HOUR	✓	813	100.000
D - Ballyboden Way		ONE HOUR	✓	635	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A - Ballyboden Rd (N)	[ONEHOUR]	50.00
B - Taylor's Lane	[ONEHOUR]	50.00
C - Ballyboden Rd (S)		
D - Ballyboden Way		

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - Ballyboden Rd (N)	B - Taylor's Lane	C - Ballyboden Rd (S)	D - Ballyboden Way
From	A - Ballyboden Rd (N)	0	202	188	137
	B - Taylor's Lane	199	0	174	317
	C - Ballyboden Rd (S)	503	260	0	50
	D - Ballyboden Way	180	395	59	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - Ballyboden Rd (N)	B - Taylor's Lane	C - Ballyboden Rd (S)	D - Ballyboden Way
From	A - Ballyboden Rd (N)	10	10	10	10
	B - Taylor's Lane	10	10	10	10
	C - Ballyboden Rd (S)	10	10	10	10
	D - Ballyboden Way	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Ballyboden Rd (N)	0.60	10.09	1.6	B	484	725
B - Taylor's Lane	0.90	41.35	8.1	E	633	950
C - Ballyboden Rd (S)	1.13	226.40	60.9	F	746	1119
D - Ballyboden Way	1.12	241.74	44.8	F	583	874

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	397	99	587	37.64	1053	0.377	406	710	3.0	0.7	6.210	A
B - Taylor's Lane	519	130	300	37.64	875	0.594	521	693	2.0	1.7	11.237	B
C - Ballyboden Rd (S)	612	153	496		912	0.671	667	325	16.0	2.4	19.530	C
D - Ballyboden Way	478	120	776		726	0.658	521	387	13.0	2.2	22.968	C

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	474	118	632	44.95	988	0.480	472	782	0.7	1.0	7.661	A
B - Taylor's Lane	620	155	344	44.95	859	0.722	616	760	1.7	2.7	16.040	C
C - Ballyboden Rd (S)	731	183	584		863	0.847	720	376	2.4	5.2	25.747	D
D - Ballyboden Way	571	143	853		683	0.835	561	451	2.2	4.7	30.097	D

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	580	145	690	55.05	968	0.600	578	871	1.0	1.6	10.091	B
B - Taylor's Lane	760	190	414	55.05	845	0.899	742	854	2.7	7.2	33.517	D
C - Ballyboden Rd (S)	895	224	706		796	1.125	780	450	5.2	33.8	105.934	F
D - Ballyboden Way	699	175	946		632	1.107	615	540	4.7	25.7	107.373	F

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	580	145	698	55.05	977	0.594	580	881	1.6	1.6	9.971	A
B - Taylor's Lane	760	190	417	55.05	844	0.900	756	861	7.2	8.1	41.354	E
C - Ballyboden Rd (S)	895	224	717		789	1.134	787	455	33.8	60.9	226.398	F
D - Ballyboden Way	699	175	956		626	1.116	622	547	25.7	44.8	219.678	F

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08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	474	118	700	44.95	972	0.488	476	874	1.6	1.1	8.023	A
B - Taylor's Lane	620	155	351	44.95	881	0.704	642	826	8.1	2.8	17.838	C
C - Ballyboden Rd (S)	731	183	605		852	0.858	837	388	60.9	34.5	207.482	F
D - Ballyboden Way	571	143	970		619	0.923	604	471	44.8	36.6	241.744	F

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	397	99	676	37.64	976	0.406	398	783	1.1	0.8	6.863	A
B - Taylor's Lane	519	130	303	37.64	884	0.587	524	771	2.8	1.6	11.124	B
C - Ballyboden Rd (S)	612	153	496		912	0.671	740	331	34.5	2.4	40.677	E
D - Ballyboden Way	478	120	846		687	0.696	613	391	36.6	2.9	89.549	F

Do Something - DS 2025, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set (s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	Do Something	✓	✓	D3,D4,D7,D8,D11,D12	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Taylor's Lane Roundabout	Standard Roundabout		A, B, C, D	65.92	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
A	Ballyboden Rd (N)	
B	Taylor's Lane	
C	Ballyboden Rd (S)	
D	Ballyboden Way	

Capacity Options

Arm	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)	Assume flat start profile	Initial queue (PCU)
A - Ballyboden Rd (N)	0	99999		3.00
B - Taylor's Lane	0	99999		2.00
C - Ballyboden Rd (S)	0	99999		16.00
D - Ballyboden Way	0	99999		13.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
A - Ballyboden Rd (N)	3.57	5.70	14.8	20.8	38.0	53.2	
B - Taylor's Lane	3.25	6.00	21.0	16.5	38.0	53.2	
C - Ballyboden Rd (S)	3.20	5.80	16.5	21.4	38.0	54.8	
D - Ballyboden Way	4.70	4.82	14.0	26.0	38.0	54.5	

Pelican/Puffin Crossings

Arm	Space between crossing and junc. entry (Signalised) (PCU)	Amber time preceding red (s)	Amber time regarded as green (s)	Time from traffic red start to green man start (s)	Time period green man shown (s)	Clearance Period (s)	Traffic minimum green (s)
A - Ballyboden Rd (N)	16.00	3.00	2.90	1.00	7.00	6.00	7.00
B - Taylor's Lane	35.00	3.00	2.90	1.00	7.00	6.00	7.00

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Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - Ballyboden Rd (N)	0.563	1404
B - Taylor's Lane	0.564	1429
C - Ballyboden Rd (S)	0.555	1370
D - Ballyboden Way	0.554	1352

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct capacity adjustment (PCU/hr)
A - Ballyboden Rd (N)	Direct		0
B - Taylor's Lane	Direct	Calibrating Base Model	-350
C - Ballyboden Rd (S)	Direct	Calibrating Base Model	-183
D - Ballyboden Way	Direct	Calibrating Base Model	-196

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	DS 2025	PM	ONE HOUR	16:45	18:15	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Ballyboden Rd (N)		ONE HOUR	✓	753	100.000
B - Taylor's Lane		ONE HOUR	✓	703	100.000
C - Ballyboden Rd (S)		ONE HOUR	✓	485	100.000
D - Ballyboden Way		ONE HOUR	✓	556	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A - Ballyboden Rd (N)	[ONEHOUR]	50.00
B - Taylor's Lane	[ONEHOUR]	50.00
C - Ballyboden Rd (S)		
D - Ballyboden Way		

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - Ballyboden Rd (N)	B - Taylor's Lane	C - Ballyboden Rd (S)	D - Ballyboden Way
From	A - Ballyboden Rd (N)	0	167	376	210
	B - Taylor's Lane	154	0	228	321
	C - Ballyboden Rd (S)	268	201	1	15
	D - Ballyboden Way	194	350	11	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - Ballyboden Rd (N)	B - Taylor's Lane	C - Ballyboden Rd (S)	D - Ballyboden Way
From	A - Ballyboden Rd (N)	10	10	10	10
	B - Taylor's Lane	10	10	10	10
	C - Ballyboden Rd (S)	10	10	10	10
	D - Ballyboden Way	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Ballyboden Rd (N)	0.79	17.37	3.9	C	691	1036
B - Taylor's Lane	1.09	187.22	43.1	F	645	968
C - Ballyboden Rd (S)	0.67	15.10	2.2	C	445	668
D - Ballyboden Way	0.78	22.65	3.7	C	510	765

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	567	142	481	37.64	1115	0.508	574	514	3.0	1.2	7.416	A
B - Taylor's Lane	529	132	458	37.64	799	0.662	529	598	2.0	2.1	14.600	B
C - Ballyboden Rd (S)	365	91	518		900	0.406	426	468	16.0	0.8	9.503	A
D - Ballyboden Way	419	105	529		863	0.485	466	416	13.0	1.1	11.214	B

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	677	169	505	44.95	1077	0.628	674	550	1.2	1.8	9.761	A
B - Taylor's Lane	632	158	536	44.95	776	0.814	623	643	2.1	4.2	24.546	C
C - Ballyboden Rd (S)	436	109	610		849	0.514	435	550	0.8	1.1	9.526	A
D - Ballyboden Way	500	125	558		847	0.590	498	487	1.1	1.5	11.277	B

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	829	207	614	55.05	1058	0.784	822	655	1.8	3.7	16.237	C
B - Taylor's Lane	774	194	653	55.05	710	1.089	690	782	4.2	25.2	93.998	F
C - Ballyboden Rd (S)	534	133	697		801	0.667	530	647	1.1	2.1	14.423	B
D - Ballyboden Way	612	153	665		788	0.777	604	562	1.5	3.5	20.766	C

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	829	207	620	55.05	1055	0.786	828	662	3.7	3.9	17.367	C
B - Taylor's Lane	774	194	659	55.05	707	1.094	702	790	25.2	43.1	187.215	F
C - Ballyboden Rd (S)	534	133	707		795	0.672	534	655	2.1	2.2	15.101	C
D - Ballyboden Way	612	153	671		784	0.781	611	569	3.5	3.7	22.645	C

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17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	677	169	514	44.95	1115	0.607	685	585	3.9	1.7	9.398	A
B - Taylor's Lane	632	158	545	44.95	771	0.819	752	654	43.1	13.0	141.091	F
C - Ballyboden Rd (S)	436	109	700		799	0.546	439	597	2.2	1.4	11.121	B
D - Ballyboden Way	500	125	591		829	0.603	508	549	3.7	1.7	12.614	B

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	567	142	427	37.64	1123	0.505	569	476	1.7	1.1	7.185	A
B - Taylor's Lane	529	132	453	37.64	824	0.643	573	544	13.0	2.1	18.421	C
C - Ballyboden Rd (S)	365	91	547		884	0.413	367	479	1.4	0.8	7.701	A
D - Ballyboden Way	419	105	482		889	0.471	422	433	1.7	1.0	8.519	A

Do Something - DS 2030, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set (s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	Do Something	✓	✓	D3,D4,D7,D8,D11,D12	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Taylor's Lane Roundabout	Standard Roundabout		A, B, C, D	335.65	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
A	Ballyboden Rd (N)	
B	Taylor's Lane	
C	Ballyboden Rd (S)	
D	Ballyboden Way	

Capacity Options

Arm	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)	Assume flat start profile	Initial queue (PCU)
A - Ballyboden Rd (N)	0	99999		3.00
B - Taylor's Lane	0	99999		2.00
C - Ballyboden Rd (S)	0	99999		16.00
D - Ballyboden Way	0	99999		13.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
A - Ballyboden Rd (N)	3.57	5.70	14.8	20.8	38.0	53.2	
B - Taylor's Lane	3.25	6.00	21.0	16.5	38.0	53.2	
C - Ballyboden Rd (S)	3.20	5.80	16.5	21.4	38.0	54.8	
D - Ballyboden Way	4.70	4.82	14.0	26.0	38.0	54.5	

Pelican/Puffin Crossings

Arm	Space between crossing and junc. entry (Signalised) (PCU)	Amber time preceding red (s)	Amber time regarded as green (s)	Time from traffic red start to green man start (s)	Time period green man shown (s)	Clearance Period (s)	Traffic minimum green (s)
A - Ballyboden Rd (N)	16.00	3.00	2.90	1.00	7.00	6.00	7.00
B - Taylor's Lane	35.00	3.00	2.90	1.00	7.00	6.00	7.00

Generated on 23/03/2023 17:54:47 using Junctions 9 (9.5.2.1013)

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - Ballyboden Rd (N)	0.563	1404
B - Taylor's Lane	0.564	1429
C - Ballyboden Rd (S)	0.555	1370
D - Ballyboden Way	0.554	1352

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct capacity adjustment (PCU/hr)
A - Ballyboden Rd (N)	Direct		0
B - Taylor's Lane	Direct	Calibrating Base Model	-350
C - Ballyboden Rd (S)	Direct	Calibrating Base Model	-183
D - Ballyboden Way	Direct	Calibrating Base Model	-196

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	DS 2030	AM	ONE HOUR	07:45	09:15	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Ballyboden Rd (N)		ONE HOUR	✓	577	100.000
B - Taylor's Lane		ONE HOUR	✓	756	100.000
C - Ballyboden Rd (S)		ONE HOUR	✓	923	100.000
D - Ballyboden Way		ONE HOUR	✓	691	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A - Ballyboden Rd (N)	[ONEHOUR]	50.00
B - Taylor's Lane	[ONEHOUR]	50.00
C - Ballyboden Rd (S)		
D - Ballyboden Way		

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - Ballyboden Rd (N)	B - Taylor's Lane	C - Ballyboden Rd (S)	D - Ballyboden Way
From	A - Ballyboden Rd (N)	0	220	207	150
	B - Taylor's Lane	218	0	192	346
	C - Ballyboden Rd (S)	571	295	0	57
	D - Ballyboden Way	195	430	65	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - Ballyboden Rd (N)	B - Taylor's Lane	C - Ballyboden Rd (S)	D - Ballyboden Way
From	A - Ballyboden Rd (N)	10	10	10	10
	B - Taylor's Lane	10	10	10	10
	C - Ballyboden Rd (S)	10	10	10	10
	D - Ballyboden Way	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Ballyboden Rd (N)	0.65	11.35	2.0	B	529	794
B - Taylor's Lane	1.01	101.37	23.5	F	694	1041
C - Ballyboden Rd (S)	1.33	633.47	148.0	F	847	1270
D - Ballyboden Way	1.21	464.95	78.7	F	634	951

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	434	109	636	37.64	1029	0.422	443	780	3.0	0.8	6.858	A
B - Taylor's Lane	569	142	327	37.64	867	0.657	569	752	2.0	2.1	13.265	B
C - Ballyboden Rd (S)	695	174	540		887	0.783	741	356	16.0	4.4	32.866	D
D - Ballyboden Way	520	130	860		680	0.765	556	422	13.0	4.0	37.987	E

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	519	130	677	44.95	972	0.534	517	849	0.8	1.2	8.670	A
B - Taylor's Lane	680	170	376	44.95	867	0.784	673	818	2.1	3.7	19.802	C
C - Ballyboden Rd (S)	830	207	638		834	0.995	788	412	4.4	14.9	58.620	F
D - Ballyboden Way	621	155	933		639	0.972	593	492	4.0	11.2	61.627	F

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	635	159	695	55.05	978	0.649	632	878	1.2	2.0	11.347	B
B - Taylor's Lane	832	208	451	55.05	825	1.009	782	877	3.7	16.2	60.611	F
C - Ballyboden Rd (S)	1016	254	749		772	1.317	769	484	14.9	76.6	227.901	F
D - Ballyboden Way	761	190	947		631	1.205	626	571	11.2	44.9	178.266	F

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	635	159	696	55.05	994	0.639	635	881	2.0	2.0	11.047	B
B - Taylor's Lane	832	208	453	55.05	823	1.011	803	878	16.2	23.5	101.366	F
C - Ballyboden Rd (S)	1016	254	765		763	1.332	762	491	76.6	140.1	512.363	F
D - Ballyboden Way	761	190	947		631	1.205	630	581	44.9	77.5	363.673	F

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08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	519	130	698	44.95	983	0.528	522	885	2.0	1.3	8.628	A
B - Taylor's Lane	680	170	382	44.95	864	0.787	755	838	23.5	4.7	48.828	E
C - Ballyboden Rd (S)	830	207	700		799	1.038	798	437	140.1	148.0	633.472	F
D - Ballyboden Way	621	155	967		621	1.001	616	531	77.5	78.7	464.952	F

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	434	109	710	37.64	964	0.451	436	879	1.3	0.9	7.518	A
B - Taylor's Lane	569	142	327	37.64	895	0.636	580	819	4.7	2.0	12.968	B
C - Ballyboden Rd (S)	695	174	547		884	0.786	877	360	148.0	102.4	514.873	F
D - Ballyboden Way	520	130	990		607	0.856	599	434	78.7	59.0	415.219	F

Do Something - DS 2030, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set (s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	Do Something	✓	✓	D3,D4,D7,D8,D11,D12	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Taylor's Lane Roundabout	Standard Roundabout		A, B, C, D	161.85	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
A	Ballyboden Rd (N)	
B	Taylor's Lane	
C	Ballyboden Rd (S)	
D	Ballyboden Way	

Capacity Options

Arm	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)	Assume flat start profile	Initial queue (PCU)
A - Ballyboden Rd (N)	0	99999		3.00
B - Taylor's Lane	0	99999		2.00
C - Ballyboden Rd (S)	0	99999		16.00
D - Ballyboden Way	0	99999		13.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
A - Ballyboden Rd (N)	3.57	5.70	14.8	20.8	38.0	53.2	
B - Taylor's Lane	3.25	6.00	21.0	16.5	38.0	53.2	
C - Ballyboden Rd (S)	3.20	5.80	16.5	21.4	38.0	54.8	
D - Ballyboden Way	4.70	4.82	14.0	26.0	38.0	54.5	

Pelican/Puffin Crossings

Arm	Space between crossing and junc. entry (Signalised) (PCU)	Amber time preceding red (s)	Amber time regarded as green (s)	Time from traffic red start to green man start (s)	Time period green man shown (s)	Clearance Period (s)	Traffic minimum green (s)
A - Ballyboden Rd (N)	16.00	3.00	2.90	1.00	7.00	6.00	7.00
B - Taylor's Lane	35.00	3.00	2.90	1.00	7.00	6.00	7.00

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Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - Ballyboden Rd (N)	0.563	1404
B - Taylor's Lane	0.564	1429
C - Ballyboden Rd (S)	0.555	1370
D - Ballyboden Way	0.554	1352

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct capacity adjustment (PCU/hr)
A - Ballyboden Rd (N)	Direct		0
B - Taylor's Lane	Direct	Calibrating Base Model	-350
C - Ballyboden Rd (S)	Direct	Calibrating Base Model	-183
D - Ballyboden Way	Direct	Calibrating Base Model	-196

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	DS 2030	PM	ONE HOUR	16:45	18:15	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Ballyboden Rd (N)		ONE HOUR	✓	837	100.000
B - Taylor's Lane		ONE HOUR	✓	777	100.000
C - Ballyboden Rd (S)		ONE HOUR	✓	538	100.000
D - Ballyboden Way		ONE HOUR	✓	605	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A - Ballyboden Rd (N)	[ONEHOUR]	50.00
B - Taylor's Lane	[ONEHOUR]	50.00
C - Ballyboden Rd (S)		
D - Ballyboden Way		

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - Ballyboden Rd (N)	B - Taylor's Lane	C - Ballyboden Rd (S)	D - Ballyboden Way
From	A - Ballyboden Rd (N)	0	182	426	229
	B - Taylor's Lane	168	0	258	351
	C - Ballyboden Rd (S)	297	223	1	17
	D - Ballyboden Way	211	381	12	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - Ballyboden Rd (N)	B - Taylor's Lane	C - Ballyboden Rd (S)	D - Ballyboden Way
From	A - Ballyboden Rd (N)	10	10	10	10
	B - Taylor's Lane	10	10	10	10
	C - Ballyboden Rd (S)	10	10	10	10
	D - Ballyboden Way	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Ballyboden Rd (N)	0.90	35.10	8.4	E	768	1152
B - Taylor's Lane	1.29	493.07	103.9	F	713	1069
C - Ballyboden Rd (S)	0.74	18.84	3.0	C	494	741
D - Ballyboden Way	0.88	38.98	6.7	E	555	833

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	630	158	521	37.64	1100	0.573	636	558	3.0	1.5	8.637	A
B - Taylor's Lane	585	146	509	37.64	787	0.744	581	647	2.0	3.0	18.877	C
C - Ballyboden Rd (S)	405	101	563		875	0.463	465	528	16.0	1.0	11.163	B
D - Ballyboden Way	455	114	576		837	0.544	502	452	13.0	1.4	13.488	B

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	752	188	553	44.95	1072	0.702	749	600	1.5	2.5	12.093	B
B - Taylor's Lane	699	175	598	44.95	742	0.942	673	703	3.0	9.4	45.941	E
C - Ballyboden Rd (S)	484	121	655		824	0.587	481	616	1.0	1.5	11.493	B
D - Ballyboden Way	544	136	612		817	0.666	541	525	1.4	2.1	14.175	B

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	922	230	668	55.05	1028	0.897	902	695	2.5	7.3	27.980	D
B - Taylor's Lane	855	214	721	55.05	672	1.272	668	849	9.4	56.3	192.880	F
C - Ballyboden Rd (S)	592	148	694		802	0.738	587	695	1.5	2.9	17.933	C
D - Ballyboden Way	666	167	713		761	0.875	651	568	2.1	6.0	32.027	D

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	922	230	678	55.05	1022	0.902	917	702	7.3	8.4	35.100	E
B - Taylor's Lane	855	214	733	55.05	666	1.285	665	862	56.3	103.9	432.330	F
C - Ballyboden Rd (S)	592	148	696		801	0.740	592	702	2.9	3.0	18.840	C
D - Ballyboden Way	666	167	717		759	0.878	663	571	6.0	6.7	38.977	E

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17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	752	188	569	44.95	1084	0.694	776	622	8.4	2.6	13.745	B
B - Taylor's Lane	699	175	620	44.95	729	0.958	722	725	103.9	98.1	493.072	F
C - Ballyboden Rd (S)	484	121	695		802	0.603	489	646	3.0	1.7	12.858	B
D - Ballyboden Way	544	136	629		807	0.674	561	555	6.7	2.4	17.112	C

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	630	158	469	37.64	1120	0.563	635	555	2.6	1.4	8.238	A
B - Taylor's Lane	585	146	507	37.64	793	0.738	784	596	98.1	48.3	338.972	F
C - Ballyboden Rd (S)	405	101	698		800	0.506	407	593	1.7	1.2	10.146	B
D - Ballyboden Way	455	114	564		844	0.540	460	542	2.4	1.3	10.429	B

Do Something - DS 2040, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set (s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	Do Something	✓	✓	D3,D4,D7,D8,D11,D12	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Taylor's Lane Roundabout	Standard Roundabout		A, B, C, D	485.27	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
A	Ballyboden Rd (N)	
B	Taylor's Lane	
C	Ballyboden Rd (S)	
D	Ballyboden Way	

Capacity Options

Arm	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)	Assume flat start profile	Initial queue (PCU)
A - Ballyboden Rd (N)	0	99999		3.00
B - Taylor's Lane	0	99999		2.00
C - Ballyboden Rd (S)	0	99999		16.00
D - Ballyboden Way	0	99999		13.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
A - Ballyboden Rd (N)	3.57	5.70	14.8	20.8	38.0	53.2	
B - Taylor's Lane	3.25	6.00	21.0	16.5	38.0	53.2	
C - Ballyboden Rd (S)	3.20	5.80	16.5	21.4	38.0	54.8	
D - Ballyboden Way	4.70	4.82	14.0	26.0	38.0	54.5	

Pelican/Puffin Crossings

Arm	Space between crossing and junc. entry (Signalised) (PCU)	Amber time preceding red (s)	Amber time regarded as green (s)	Time from traffic red start to green man start (s)	Time period green man shown (s)	Clearance Period (s)	Traffic minimum green (s)
A - Ballyboden Rd (N)	16.00	3.00	2.90	1.00	7.00	6.00	7.00
B - Taylor's Lane	35.00	3.00	2.90	1.00	7.00	6.00	7.00

Generated on 23/03/2023 17:54:47 using Junctions 9 (9.5.2.1013)

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - Ballyboden Rd (N)	0.563	1404
B - Taylor's Lane	0.564	1429
C - Ballyboden Rd (S)	0.555	1370
D - Ballyboden Way	0.554	1352

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct capacity adjustment (PCU/hr)
A - Ballyboden Rd (N)	Direct		0
B - Taylor's Lane	Direct	Calibrating Base Model	-350
C - Ballyboden Rd (S)	Direct	Calibrating Base Model	-183
D - Ballyboden Way	Direct	Calibrating Base Model	-196

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D11	DS 2040	AM	ONE HOUR	07:45	09:15	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Ballyboden Rd (N)		ONE HOUR	✓	612	100.000
B - Taylor's Lane		ONE HOUR	✓	803	100.000
C - Ballyboden Rd (S)		ONE HOUR	✓	976	100.000
D - Ballyboden Way		ONE HOUR	✓	733	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A - Ballyboden Rd (N)	[ONEHOUR]	50.00
B - Taylor's Lane	[ONEHOUR]	50.00
C - Ballyboden Rd (S)		
D - Ballyboden Way		

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - Ballyboden Rd (N)	B - Taylor's Lane	C - Ballyboden Rd (S)	D - Ballyboden Way
From	A - Ballyboden Rd (N)	0	234	219	159
	B - Taylor's Lane	232	0	204	367
	C - Ballyboden Rd (S)	604	312	0	60
	D - Ballyboden Way	207	456	69	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - Ballyboden Rd (N)	B - Taylor's Lane	C - Ballyboden Rd (S)	D - Ballyboden Way
From	A - Ballyboden Rd (N)	10	10	10	10
	B - Taylor's Lane	10	10	10	10
	C - Ballyboden Rd (S)	10	10	10	10
	D - Ballyboden Way	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Ballyboden Rd (N)	0.68	12.33	2.3	B	562	842
B - Taylor's Lane	1.09	181.91	47.9	F	737	1105
C - Ballyboden Rd (S)	1.42	905.14	214.4	F	896	1343
D - Ballyboden Way	1.27	653.39	115.2	F	673	1009

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	461	115	660	37.64	1018	0.452	469	814	3.0	0.9	7.317	A
B - Taylor's Lane	605	151	345	37.64	864	0.700	603	784	2.0	2.4	15.025	C
C - Ballyboden Rd (S)	735	184	572		870	0.845	770	375	16.0	7.1	45.753	E
D - Ballyboden Way	552	138	897		659	0.837	577	445	13.0	6.8	53.968	F

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	550	138	690	44.95	971	0.567	548	869	0.9	1.4	9.333	A
B - Taylor's Lane	722	180	397	44.95	855	0.844	711	842	2.4	5.1	25.728	D
C - Ballyboden Rd (S)	877	219	674		813	1.079	795	434	7.1	27.7	95.400	F
D - Ballyboden Way	659	165	952		629	1.048	608	517	6.8	19.5	96.013	F

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	674	168	696	55.05	988	0.682	670	878	1.4	2.3	12.330	B
B - Taylor's Lane	884	221	474	55.05	812	1.089	792	892	5.1	28.2	91.644	F
C - Ballyboden Rd (S)	1075	269	766		762	1.409	762	500	27.7	105.9	328.019	F
D - Ballyboden Way	807	202	943		633	1.274	631	584	19.5	63.5	251.878	F

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	674	168	696	55.05	1007	0.669	674	880	2.3	2.3	11.906	B
B - Taylor's Lane	884	221	477	55.05	810	1.091	805	894	28.2	47.9	181.913	F
C - Ballyboden Rd (S)	1075	269	777		756	1.421	756	505	105.9	185.5	699.749	F
D - Ballyboden Way	807	202	942		634	1.273	634	590	63.5	106.9	497.348	F

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08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	550	138	693	44.95	994	0.554	554	889	2.3	1.4	9.064	A
B - Taylor's Lane	722	180	402	44.95	852	0.847	833	844	47.9	20.0	151.595	F
C - Ballyboden Rd (S)	877	219	766		762	1.151	762	469	185.5	214.4	905.138	F
D - Ballyboden Way	659	165	956		627	1.052	626	572	106.9	115.2	653.391	F

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	461	115	703	37.64	971	0.474	462	884	1.4	1.0	7.802	A
B - Taylor's Lane	605	151	344	37.64	885	0.683	675	822	20.0	2.5	24.711	C
C - Ballyboden Rd (S)	735	184	624		841	0.874	837	394	214.4	188.9	868.163	F
D - Ballyboden Way	552	138	980		613	0.900	607	481	115.2	101.4	642.587	F

Do Something - DS 2040, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set (s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	Do Something	✓	✓	D3,D4,D7,D8,D11,D12	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Taylor's Lane Roundabout	Standard Roundabout		A, B, C, D	253.47	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
A	Ballyboden Rd (N)	
B	Taylor's Lane	
C	Ballyboden Rd (S)	
D	Ballyboden Way	

Capacity Options

Arm	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)	Assume flat start profile	Initial queue (PCU)
A - Ballyboden Rd (N)	0	99999		3.00
B - Taylor's Lane	0	99999		2.00
C - Ballyboden Rd (S)	0	99999		16.00
D - Ballyboden Way	0	99999		13.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
A - Ballyboden Rd (N)	3.57	5.70	14.8	20.8	38.0	53.2	
B - Taylor's Lane	3.25	6.00	21.0	16.5	38.0	53.2	
C - Ballyboden Rd (S)	3.20	5.80	16.5	21.4	38.0	54.8	
D - Ballyboden Way	4.70	4.82	14.0	26.0	38.0	54.5	

Pelican/Puffin Crossings

Arm	Space between crossing and junc. entry (Signalised) (PCU)	Amber time preceding red (s)	Amber time regarded as green (s)	Time from traffic red start to green man start (s)	Time period green man shown (s)	Clearance Period (s)	Traffic minimum green (s)
A - Ballyboden Rd (N)	16.00	3.00	2.90	1.00	7.00	6.00	7.00
B - Taylor's Lane	35.00	3.00	2.90	1.00	7.00	6.00	7.00

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Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - Ballyboden Rd (N)	0.563	1404
B - Taylor's Lane	0.564	1429
C - Ballyboden Rd (S)	0.555	1370
D - Ballyboden Way	0.554	1352

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct capacity adjustment (PCU/hr)
A - Ballyboden Rd (N)	Direct		0
B - Taylor's Lane	Direct	Calibrating Base Model	-350
C - Ballyboden Rd (S)	Direct	Calibrating Base Model	-183
D - Ballyboden Way	Direct	Calibrating Base Model	-196

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D12	DS 2040	PM	ONE HOUR	16:45	18:15	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Ballyboden Rd (N)		ONE HOUR	✓	888	100.000
B - Taylor's Lane		ONE HOUR	✓	825	100.000
C - Ballyboden Rd (S)		ONE HOUR	✓	570	100.000
D - Ballyboden Way		ONE HOUR	✓	643	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A - Ballyboden Rd (N)	[ONEHOUR]	50.00
B - Taylor's Lane	[ONEHOUR]	50.00
C - Ballyboden Rd (S)		
D - Ballyboden Way		

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - Ballyboden Rd (N)	B - Taylor's Lane	C - Ballyboden Rd (S)	D - Ballyboden Way
From	A - Ballyboden Rd (N)	0	194	450	244
	B - Taylor's Lane	179	0	273	373
	C - Ballyboden Rd (S)	315	236	1	18
	D - Ballyboden Way	224	405	13	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - Ballyboden Rd (N)	B - Taylor's Lane	C - Ballyboden Rd (S)	D - Ballyboden Way
From	A - Ballyboden Rd (N)	10	10	10	10
	B - Taylor's Lane	10	10	10	10
	C - Ballyboden Rd (S)	10	10	10	10
	D - Ballyboden Way	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Ballyboden Rd (N)	0.98	65.88	17.3	F	815	1222
B - Taylor's Lane	1.40	759.40	157.8	F	757	1136
C - Ballyboden Rd (S)	0.78	22.61	3.8	C	523	785
D - Ballyboden Way	0.95	68.06	12.7	F	590	885

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	669	167	548	37.64	1091	0.613	673	588	3.0	1.8	9.600	A
B - Taylor's Lane	621	155	539	37.64	775	0.801	613	683	2.0	3.9	23.354	C
C - Ballyboden Rd (S)	429	107	596		856	0.501	489	556	16.0	1.1	12.594	B
D - Ballyboden Way	484	121	606		820	0.590	530	479	13.0	1.6	15.721	C

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	798	200	586	44.95	1071	0.746	793	631	1.8	3.0	14.008	B
B - Taylor's Lane	742	185	633	44.95	722	1.028	689	746	3.9	17.2	72.366	F
C - Ballyboden Rd (S)	512	128	680		810	0.632	510	642	1.1	1.8	13.051	B
D - Ballyboden Way	578	145	643		800	0.723	574	546	1.6	2.7	17.188	C

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	978	244	700	55.05	1010	0.968	939	721	3.0	12.7	42.295	E
B - Taylor's Lane	908	227	750	55.05	656	1.384	655	890	17.2	80.7	284.188	F
C - Ballyboden Rd (S)	628	157	697		801	0.784	620	707	1.8	3.6	21.155	C
D - Ballyboden Way	708	177	743		744	0.951	679	575	2.7	10.0	47.093	E

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	978	244	715	55.05	1001	0.976	959	730	12.7	17.3	65.875	F
B - Taylor's Lane	908	227	766	55.05	647	1.404	647	908	80.7	146.1	622.627	F
C - Ballyboden Rd (S)	628	157	697		800	0.784	627	715	3.6	3.8	22.605	C
D - Ballyboden Way	708	177	747		742	0.954	697	577	10.0	12.7	68.060	F

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17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	798	200	617	44.95	1056	0.756	853	652	17.3	3.7	23.753	C
B - Taylor's Lane	742	185	681	44.95	695	1.067	695	789	146.1	157.8	759.404	F
C - Ballyboden Rd (S)	512	128	700		799	0.641	519	675	3.8	2.0	14.502	B
D - Ballyboden Way	578	145	654		794	0.728	616	566	12.7	3.2	26.089	D

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Ballyboden Rd (N)	669	167	499	37.64	1123	0.595	677	576	3.7	1.7	9.029	A
B - Taylor's Lane	621	155	540	37.64	774	0.802	769	636	157.8	120.9	653.387	F
C - Ballyboden Rd (S)	429	107	701		798	0.538	432	608	2.0	1.3	10.901	B
D - Ballyboden Way	484	121	585		832	0.582	490	548	3.2	1.6	11.813	B

Appendix E : Public Transport Capacity Survey Raw Data

With the objective of establishing the available capacity on the local public transport network, IDASO Ltd, a specialist data collection firm, were commissioned to undertake surveys of the local bus routes. The surveys were undertaken on 9th of February 2023 at the closest bus stops to the subject site.

The following stops, buses and time periods were surveyed:

AM Peak Period (0700-1000)

- Ballyboden Road (Stop No. 2941) (Bus Routes 15B, 15D, and 61)
- Ballyboden Crescent (Stop No. 2948) (Bus Routes 15D, 61, 161, and 175)
- Ballyboden Crescent (Stop No. 7449) (Bus Routes 61, 161, and 175)

PM Peak Period (1600-1900)

- Ballyboden Crescent (Stop No. 2925) (Bus Routes 15B, 15D, and 61)
- Ballyboden Crescent (Stop No. 7449) (Bus Routes 61, 161, and 175)
- St Enda's GAA Club (Stop No.7444) (Bus Routes 15B and 175)

The recorded patronage levels (9th February 2023) for the bus services are detailed in **Table 6.5** below

15B Citybound (AM)

Time	Estimated # Seat Capacity	Estimated # Standing Capacity	Number of Boarders	Bus Occupancy Count on Arrival	Number of Alighters	Total Passengers on Departure	Rounded Reserve Capacity
07:10	67	28	3	23	2	24	74.74%
07:22	67	28	5	40	0	45	52.63%
07:31	67	28	6	41	0	47	50.53%
07:44	67	28	13	48	0	61	35.79%
07:52	67	28	4	36	1	39	58.95%
08:04	67	28	7	52	2	57	40.00%
08:14	67	28	0	17	0	17	82.11%
08:29	67	28	3	21	0	24	74.74%
08:43	67	28	5	21	0	26	72.63%
08:56	67	28	7	15	0	22	76.84%
09:15	67	28	1	7	0	8	91.58%
09:25	67	28	5	6	0	11	88.42%
09:38	67	28	2	4	0	6	93.68%
09:58	67	28	5	10	0	15	84.21%
10:09	67	28	5	12	0	17	82.11%
10:26	67	28	6	20	0	26	72.63%
10:40	67	28	2	10	0	12	87.37%
10:55	67	28	1	8	0	9	90.53%
0700-1100	**1206**	**504**	**80**	**391**	**5**	**466**	**72.75%**

15B Ballycullen-Bound (PM)

Time	Estimated # Seat Capacity	Estimated # Standing Capacity	Number of Boarders	Bus Occupancy Count on Arrival	Number of Alighters	Total Passengers on Departure	Rounded Reserve Capacity
15:42	67	28	4	28	7	25	73.68%
16:04	67	28	1	19	4	16	83.16%
16:33	67	28	0	29	1	28	70.53%
16:40	67	28	0	21	3	18	81.05%
16:58	67	28	0	25	11	14	85.26%
17:19	67	28	0	31	7	24	74.74%
17:32	67	28	0	28	3	25	73.68%
18:13	67	28	2	28	3	27	71.58%
18:13	67	28	0	37	7	30	68.42%
18:21	67	28	0	30	10	20	78.95%
18:35	67	28	0	25	2	23	75.79%
18:35	67	28	0	28	1	27	71.58%
19:01	67	28	0	35	4	31	67.37%
19:23	67	28	0	45	4	41	56.84%
19:32	67	28	0	37	3	34	64.21%
19:48	67	28	0	43	3	40	57.89%
1530-2000	**1072**	**448**	**7**	**489**	**73**	**423**	**72.17%**

15D City-Bound (AM)

Time	Estimated # Seat Capacity	Estimated # Standing Capacity	Number of Boarders	Bus Occupancy Count on Arrival	Number of Alighters	Total Passengers on Departure	Rounded Reserve Capacity
08:10	67	28	3	12	0	15	84.21%
0700-1100	**67**	**28**	**3**	**12**	**0**	**15**	**84.21%**

15D Whitechurch-Bound (PM)

Time	Estimated # Seat Capacity	Estimated # Standing Capacity	Number of Boarders	Bus Occupancy Count on Arrival	Number of Alighters	Total Passengers on Departure	Rounded Reserve Capacity
15:54	67	28	0	8	3	5	94.74%
17:55	67	28	0	26	11	15	84.21%
1530-2000	**134**	**56**	**0**	**34**	**14**	**20**	**89.47%**

61 City-Bound (AM)							
Time	Estimated # Seat Capacity	Estimated # Standing Capacity	Number of Boarders	Bus Occupancy Count on Arrival	Number of Alighters	Total Passengers on Departure	Rounded Reserve Capacity
07:17	67	28	6	15	0	21	77.89%
08:07	67	28	17	15	0	32	66.32%
09:34	67	28	1	16	0	17	82.11%
10:49	67	28	1	14	0	15	84.21%
0700-1100	**268**	**112**	**25**	**60**	**0**	**85**	**77.63%**

61 Whitechurch-Bound (PM)							
Time	Estimated # Seat Capacity	Estimated # Standing Capacity	Number of Boarders	Bus Occupancy Count on Arrival	Number of Alighters	Total Passengers on Departure	Rounded Reserve Capacity
15:34	67	28	0	17	0	17	82.11%
16:48	67	28	0	10	1	9	90.53%
19:23	67	28	0	43	1	42	55.79%
1530-2000	**201**	**84**	**0**	**70**	**2**	**68**	**76.14%**

161 Dundrum-Bound (AM)

Time	Estimated # Seat Capacity	Estimated # Standing Capacity	Number of Boarders	Bus Occupancy Count on Arrival	Number of Alighters	Total Passengers on Departure	Rounded Reserve Capacity
07:36	67	28	1	16	0	17	82.11%
09:03	67	28	3	8	0	11	88.42%
0700-1100	**134**	**56**	**4**	**24**	**0**	**28**	**85.26%**

161 Rockbrook-Bound (PM)

Time	Estimated # Seat Capacity	Estimated # Standing Capacity	Number of Boarders	Bus Occupancy Count on Arrival	Number of Alighters	Total Passengers on Departure	Rounded Reserve Capacity
16:25	67	28	1	7	4	4	95.79%
17:54	67	28	0	5	1	4	95.79%
19:22	67	28	0	0	0	0	100.00%
1530-2000	**201**	**84**	**1**	**12**	**5**	**8**	**97.19%**

175 UCD-Bound (AM)

Time	Estimated # Seat Capacity	Estimated # Standing Capacity	Number of Boarders	Bus Occupancy Count on Arrival	Number of Alighters	Total Passengers on Departure	Rounded Reserve Capacity
07:36	67	28	1	20	0	21	77.89%
08:20	67	28	6	64	7	63	33.68%
08:38	67	28	1	22	0	23	75.79%
09:03	67	28	0	33	1	32	66.32%
09:41	67	28	3	51	1	52	45.26%
10:12	67	28	2	52	1	53	44.21%
0700-1100	**402**	**168**	**13**	**242**	**10**	**244**	**57.19%**

175 Citywest-Bound (AM)

Time	Estimated # Seat Capacity	Estimated # Standing Capacity	Number of Boarders	Bus Occupancy Count on Arrival	Number of Alighters	Total Passengers on Departure	Rounded Reserve Capacity
07:47	67	28	2	40	0	42	55.79%
08:53	67	28	0	10	0	10	89.47%
09:59	67	28	0	15	0	15	84.21%
10:41	67	28	1	16	0	17	82.11%
0700-1100	**268**	**112**	**3**	**81**	**0**	**84**	**77.89%**

175 UCD-Bound (PM)

Time	Estimated # Seat Capacity	Estimated # Standing Capacity	Number of Boarders	Bus Occupancy Count on Arrival	Number of Alighters	Total Passengers on Departure	Rounded Reserve Capacity
16:30	67	28	1	7	0	8	91.58%
17:16	67	28	0	22	1	21	77.89%
18:27	67	28	0	18	0	18	81.05%
19:27	67	28	0	23	2	21	77.89%
1530-2000	**268**	**112**	**1**	**70**	**3**	**68**	**82.11%**

175 Citywest-Bound (PM)

Time	Estimated # Seat Capacity	Estimated # Standing Capacity	Number of Boarders	Bus Occupancy Count on Arrival	Number of Alighters	Total Passengers on Departure	Rounded Reserve Capacity
15:54	67	28	2	70	2	70	26.32%
16:56	67	28	1	80	0	81	14.74%
17:54	67	28	0	80	1	79	16.84%
18:54	67	28	5	90	6	89	6.32%
19:41	67	28	4	25	2	27	71.58%
1530-2000	**335**	**140**	**12**	**345**	**11**	**346**	**27.37%**

Appendix F : Go Car Letter

DBFL Consulting Engineers,
Ormond House,
Upper Ormond Quay,
Dublin 7

06/10/2022

To Whom It May Concern,

This is a letter to confirm that GoCar will look to provide a car sharing service at the proposed Residential development at Taylor's Lane, Ballyboden, Dublin 16. GoCar representatives have discussed the project with representatives of DBFL Consulting Engineers and are excited to provide a car sharing service at the proposed location. GoCar will aim to provide four (4) car sharing vehicles at the development. It is the intention for this vehicle to be used primarily by the residents of the development, but access will also be granted to the other GoCar users.

GoCar is Ireland's leading car sharing service with over 80,000 members and over 880 cars and vans on fleet.
Car sharing is a sustainable community service. Each GoCar which is placed in a community has the potential to replace the journeys of up to 15 private vehicles. With the addition of Electric Vehicles and Vans to the GoCar fleet it gives members the ability to choose from different vehicles depending on their journey needs.

The Department of Housing's Design Standards for New Apartments - Guidelines for Planning Authorities 2020 outline: "For all types of location, where it is sought to eliminate or reduce car parking provision, it is necessary to ensure... provision is also to be made for alternative mobility solutions including facilities for car sharing club vehicles."

By allowing multiple people to use the same vehicle at different times, car sharing reduces car ownership, car dependency, congestion, noise, and air pollution. It frees up land which would otherwise be used for additional parking spaces. Most GoCar users only use a car when necessary and walk and use public transport more often than car owners.

By having GoCar car sharing vehicles in a development such as this, the residents therein will have access to pay-as-you-go driving, near their homes, which will increase usership of the service.

I trust that this information is satisfactory. For any queries, please do not hesitate to contact me.

Rob Montgomery
Revenue and Growth Manager
GoCar Carsharing Ltd
Mobile: 086 609 7096
E: robert.montgomery@gocar.ie

Appendix G : Traffic Survey and Queue Length Raw Data



IDASO

Survey Name: 349 22513 Taylor's Lane Traffic Survey
Site: Site 1
Location: Ballyboden Road / Scholarstown Road
Date: Thu 22-Sep-2022

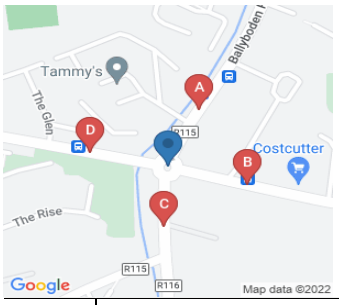
	A => A										A => B									
TIME	P/C	M/C	CAR	TAXI	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	TAXI	LGV	OGV1	OGV2	PSV	TOT	PCU
07:00	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0	0	3	2.2
07:15	0	0	0	0	0	0	0	0	0	0	2	0	10	0	2	0	0	0	14	12.4
07:30	0	0	0	0	0	0	0	0	0	0	1	0	15	0	1	0	0	0	17	16.2
07:45	0	0	0	0	0	0	0	0	0	0	0	0	11	0	1	0	0	0	12	12
H/TOT	0	0	0	0	0	0	0	0	0	0	4	0	37	0	5	0	0	0	46	42.8
08:00	0	0	0	0	0	0	0	0	0	0	0	1	19	0	1	1	0	0	22	21.9
08:15	0	0	0	0	0	0	0	0	0	0	2	0	39	0	2	0	0	0	43	41.4
08:30	0	0	0	0	0	0	0	0	0	0	1	0	23	0	1	0	0	2	27	28.2
08:45	0	0	0	0	0	0	0	0	0	0	1	0	34	0	1	0	0	0	36	35.2
H/TOT	0	0	0	0	0	0	0	0	0	0	4	1	115	0	5	1	0	2	128	126.7
09:00	0	0	0	0	0	0	0	0	0	0	0	0	26	1	1	1	0	0	29	29.5
09:15	0	0	0	0	0	0	0	0	0	0	0	0	18	1	3	0	0	0	22	22
09:30	0	0	0	0	0	0	0	0	0	0	0	0	18	0	1	1	0	1	21	22.5
09:45	0	0	0	0	0	0	0	0	0	0	1	0	17	0	5	0	0	3	26	28.2
H/TOT	0	0	0	0	0	0	0	0	0	0	1	0	79	2	10	2	0	4	98	102.2
10:00	0	0	0	0	0	0	0	0	0	0	1	0	16	0	5	0	0	1	23	23.2
10:15	0	0	0	0	0	0	0	0	0	0	0	0	10	1	5	3	0	1	20	22.5
10:30	0	0	0	0	0	0	0	0	0	0	0	0	22	0	1	0	0	2	25	27
10:45	0	0	0	0	0	0	0	0	0	0	1	0	25	0	2	0	0	0	28	27.2
H/TOT	0	0	0	0	0	0	0	0	0	0	2	0	73	1	13	3	0	4	96	99.9
11:00	0	0	0	0	0	0	0	0	0	0	1	0	16	0	4	0	0	0	21	20.2
11:15	0	0	0	0	0	0	0	0	0	0	0	0	22	0	6	0	0	0	28	28
11:30	0	0	0	0	0	0	0	0	0	0	0	0	34	1	6	0	0	0	41	41
11:45	0	0	0	0	0	0	0	0	0	0	0	0	33	0	5	0	0	2	40	42
H/TOT	0	0	0	0	0	0	0	0	0	0	1	0	105	1	21	0	0	2	130	131.2
12:00	0	0	0	0	0	0	0	0	0	0	0	0	59	1	6	3	1	0	70	72.8
12:15	0	0	0	0	0	0	0	0	0	0	2	0	35	2	2	0	0	0	41	39.4
12:30	0	0	0	0	0	0	0	0	0	0	0	0	25	0	2	0	0	1	28	29
12:45	0	0	0	0	0	0	0	0	0	0	0	0	29	0	1	1	0	0	31	31.5
H/TOT	0	0	0	0	0	0	0	0	0	0	2	0	148	3	11	4	1	1	170	172.7
13:00	0	0	0	0	0	0	0	0	0	0	0	0	33	2	3	0	0	0	38	38
13:15	0	0	0	0	0	0	0	0	0	0	0	0	41	1	3	0	0	2	47	49
13:30	0	0	0	0	0	0	0	0	0	0	1	0	45	3	3	0	0	0	52	51.2
13:45	0	0	0	0	0	0	0	0	0	0	0	0	38	0	3	0	0	0	41	41
H/TOT	0	0	0	0	0	0	0	0	0	0	1	0	157	6	12	0	0	2	178	179.2
14:00	0	0	0	0	0	0	0	0	0	0	0	0	20	0	5	0	0	0	25	25
14:15	0	0	0	0	0	0	0	0	0	0	0	0	33	0	2	0	0	0	35	35
14:30	0	0	0	0	0	0	0	0	0	0	0	0	26	0	1	0	0	0	27	27
14:45	0	0	0	0	0	0	0	0	0	0	0	0	36	1	6	3	0	2	48	51.5
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	115	1	14	3	0	2	135	138.5
15:00	0	0	0	0	0	0	0	0	0	0	0	0	26	0	1	0	0	0	27	27
15:15	0	0	0	0	1	0	0	0	1	1	1	0	21	0	2	1	0	0	25	24.7
15:30	0	0	0	0	0	0	0	0	0	0	0	0	24	0	1	1	0	0	26	26.5
15:45	0	0	0	0	0	0	0	0	0	0	1	1	44	1	3	0	0	0	50	48.6
H/TOT	0	0	0	0	1	0	0	0	1	1	2	1	115	1	7	2	0	0	128	126.8
16:00	0	0	0	0	0	0	0	0	0	0	2	0	37	1	3	0	0	0	43	41.4
16:15	0	0	0	0	0	0	0	0	0	0	2	0	45	0	4	0	0	2	53	53.4
16:30	0	0	0	0	0	0	0	0	0	0	1	0	26	1	0	0	0	0	28	27.2
16:45	0	0	0	0	0	0	0	0	0	0	4	0	33	1	6	0	0	0	44	40.8
H/TOT	0	0	0	0	0	0	0	0	0	0	9	0	141	3	13	0	0	2	168	162.8
17:00	0	0	0	0	0	0	0	0	0	0	1	0	25	0	3	0	0	0	29	28.2
17:15	0	0	0	0	0	0	0	0	0	0	2	0	39	1	2	1	0	0	45	43.9
17:30	0	0	0	0	0	0	0	0	0	0	1	0	34	1	0	0	0	1	37	37.2
17:45	0	0	0	0	0	0	0	0	0	0	2	1	42	2	2	1	0	1	51	50.3
H/TOT	0	0	0	0	0	0	0	0	0	0	6	1	140	4	7	2	0	2	162	159.6
18:00	0	0	0	0	0	0	0	0	0	0	4	1	50	1	3	0	0	1	60	57.2
18:15	0	0	0	0	0	0	0	0	0	0	9	0	51	2	2	1	1	0	66	60.6
18:30	0	0	0	0	0	0	0	0	0	0	3	0	37	4	1	0	0	2	47	46.6
18:45	0	0	0	0	0	0	0	0	0	0	7	0	33	2	3	0	0	1	46	41.4
H/TOT	0	0	0	0	0	0	0	0	0	0	23	1	171	9	9	1	1	4	219	205.8
12 TOT	0	0	0	0	1	0	0	0	1	1	55	4	1396	31	127	18	2	25	1658	1648.2

	A => C										B => A									
TIME	**P/C**	**M/C**	**CAR**	**TAXI**	**LGV**	**OGV1**	**OGV2**	**PSV**	**TOT**	**PCU**	**P/C**	**M/C**	**CAR**	**TAXI**	**LGV**	**OGV1**	**OGV2**	**PSV**	**TOT**	**PCU**
07:00	1	0	5	0	0	0	0	0	6	5.2	2	0	15	1	8	0	0	1	27	26.4
07:15	0	0	12	1	0	1	0	1	15	16.5	2	0	24	0	5	0	0	1	32	31.4
07:30	2	0	27	0	1	1	0	0	31	29.9	1	0	45	1	3	0	0	0	50	49.2
07:45	1	1	35	3	0	0	0	0	40	38.6	1	0	35	0	9	0	0	0	45	44.2
H/TOT	4	1	79	4	1	2	0	1	92	90.2	6	0	119	2	25	0	0	2	154	151.2
08:00	0	0	34	3	3	0	0	1	41	42	5	0	73	0	6	0	1	0	85	82.3
08:15	2	0	57	0	1	0	0	0	60	58.4	5	0	98	1	2	0	0	0	106	102
08:30	1	0	54	0	4	0	0	0	59	58.2	4	0	68	0	2	0	0	0	74	70.8
08:45	0	0	82	1	1	3	0	0	87	88.5	0	0	45	0	1	0	0	0	46	46
H/TOT	3	0	227	4	9	3	0	1	247	247.1	14	0	284	1	11	0	1	0	311	301.1
09:00	1	0	82	0	2	1	0	0	86	85.7	1	0	28	1	2	1	0	1	34	34.7
09:15	0	0	58	0	3	0	0	0	61	61	0	0	32	0	2	1	0	0	35	35.5
09:30	1	1	30	0	2	0	0	0	34	32.6	0	0	26	1	0	1	0	1	29	30.5
09:45	1	0	22	1	1	0	0	0	25	24.2	2	0	15	0	2	0	0	0	19	17.4
H/TOT	3	1	192	1	8	1	0	0	206	203.5	3	0	101	2	6	3	0	2	117	118.1
10:00	0	1	31	2	4	0	0	0	38	37.4	1	0	17	0	2	0	0	0	20	19.2
10:15	0	0	19	0	2	2	0	0	23	24	0	0	24	0	2	0	0	0	26	26
10:30	0	0	28	1	1	0	0	0	30	30	0	0	23	1	3	2	0	1	30	32
10:45	1	0	31	0	1	1	0	0	34	33.7	1	0	34	0	4	0	0	1	40	40.2
H/TOT	1	1	109	3	8	3	0	0	125	125.1	2	0	98	1	11	2	0	2	116	117.4
11:00	0	0	21	1	2	2	0	0	26	27	0	0	25	1	6	0	0	1	33	34
11:15	0	0	30	0	5	1	0	0	36	36.5	0	0	21	1	6	0	0	0	28	28
11:30	1	1	33	0	1	0	0	0	36	34.6	0	0	25	1	6	0	0	1	33	34
11:45	0	0	43	1	1	1	0	0	46	46.5	0	0	24	1	4	0	0	1	30	31
H/TOT	1	1	127	2	9	4	0	0	144	144.6	0	0	95	4	22	0	0	3	124	127
12:00	0	0	28	0	1	0	0	0	29	29	1	0	26	2	2	2	0	1	34	35.2
12:15	1	0	25	1	4	0	0	0	31	30.2	0	0	33	0	5	2	0	0	40	41
12:30	0	0	35	1	2	1	0	0	39	39.5	0	0	31	0	7	0	0	0	38	38
12:45	0	0	32	4	0	0	0	0	36	36	0	0	24	0	3	0	0	0	27	27
H/TOT	1	0	120	6	7	1	0	0	135	134.7	1	0	114	2	17	4	0	1	139	141.2
13:00	1	0	45	0	3	1	0	0	50	49.7	0	0	36	1	1	0	0	0	38	38
13:15	0	1	32	1	4	0	0	0	38	37.4	0	0	23	0	2	0	1	1	27	29.3
13:30	0	0	36	0	3	0	0	0	39	39	0	0	26	1	3	1	0	2	33	35.5
13:45	1	0	52	0	1	1	0	0	55	54.7	0	0	26	1	0	0	0	1	28	29
H/TOT	2	1	165	1	11	2	0	0	182	180.8	0	0	111	3	6	1	1	4	126	131.8
14:00	0	0	43	3	4	0	0	0	50	50	1	0	29	1	2	0	0	0	33	32.2
14:15	1	0	39	1	2	0	0	0	43	42.2	0	0	25	1	2	0	0	1	29	30
14:30	0	0	67	2	4	1	0	0	74	74.5	0	0	38	0	2	0	0	0	40	40
14:45	0	1	68	1	3	0	0	0	73	72.4	0	0	22	0	1	1	0	0	24	24.5
H/TOT	1	1	217	7	13	1	0	0	240	239.1	1	0	114	2	7	1	0	1	126	126.7
15:00	0	0	60	2	1	0	0	1	64	65	0	0	29	0	6	0	0	1	36	37
15:15	1	0	51	2	1	1	0	0	56	55.7	0	0	33	0	0	0	0	0	33	33
15:30	0	1	75	2	3	1	0	0	82	81.9	1	0	35	0	1	0	0	0	37	36.2
15:45	0	2	89	0	4	0	0	0	95	93.8	0	3	23	0	1	1	0	0	28	26.7
H/TOT	1	3	275	6	9	2	0	1	297	296.4	1	3	120	0	8	1	0	1	134	132.9
16:00	0	1	94	2	5	2	0	0	104	104.4	0	0	29	0	2	0	0	2	33	35
16:15	1	1	87	2	5	0	0	0	96	94.6	2	0	41	1	1	0	0	0	45	43.4
16:30	0	0	81	2	9	0	0	0	92	92	1	0	24	1	3	1	0	0	30	29.7
16:45	2	0	82	2	6	1	0	0	93	91.9	1	0	24	0	1	0	0	2	28	29.2
H/TOT	3	2	344	8	25	3	0	0	385	382.9	4	0	118	2	7	1	0	4	136	137.3
17:00	0	0	87	3	4	0	0	0	94	94	0	0	38	3	1	0	0	0	42	42
17:15	0	0	85	1	7	0	0	0	93	93	1	0	30	2	1	0	0	0	34	33.2
17:30	4	1	89	0	3	1	0	0	98	94.7	2	0	30	1	3	0	0	0	36	34.4
17:45	4	1	97	1	1	0	0	0	104	100.2	1	0	31	1	0	0	0	0	33	32.2
H/TOT	8	2	358	5	15	1	0	0	389	381.9	4	0	129	7	5	0	0	0	145	141.8
18:00	3	0	94	2	4	0	0	0	103	100.6	0	1	36	1	2	1	0	0	41	40.9
18:15	2	1	74	2	3	0	0	0	82	79.8	0	0	39	0	3	0	0	1	43	44
18:30	0	1	57	2	1	0	0	0	61	60.4	2	0	49	4	1	0	0	0	56	54.4
18:45	7	1	78	2	1	1	0	0	90	84.3	0	0	34	1	1	1	0	0	37	37.5
H/TOT	12	3	303	8	9	1	0	0	336	325.1	2	1	158	6	7	2	0	1	177	176.8
12 TOT	40	16	2516	55	124	24	0	3	2778	2751.4	38	4	1561	32	132	15	2	21	1805	1803.3

	B => B										B => C									
TIME	**P/C**	**M/C**	**CAR**	**TAXI**	**LGV**	**OGV1**	**OGV2**	**PSV**	**TOT**	**PCU**	**P/C**	**M/C**	**CAR**	**TAXI**	**LGV**	**OGV1**	**OGV2**	**PSV**	**TOT**	**PCU**
07:00	0	0	0	0	0	0	0	0	0	0	0	0	4	0	1	0	0	0	5	5
07:15	0	0	0	0	0	0	0	0	0	0	0	0	7	0	4	0	0	0	11	11
07:30	0	0	0	0	0	0	0	0	0	0	2	0	7	0	2	0	1	0	12	11.7
07:45	0	0	0	0	0	0	0	0	0	0	0	0	15	2	2	0	0	0	19	19
H/TOT	0	0	0	0	0	0	0	0	0	0	2	0	33	2	9	0	1	0	47	46.7
08:00	0	0	0	0	0	0	0	0	0	0	1	0	10	0	0	0	0	0	11	10.2
08:15	0	0	0	0	0	0	0	0	0	0	1	0	21	0	1	0	0	0	23	22.2
08:30	0	0	0	0	0	0	0	0	0	0	0	0	4	0	2	0	0	0	6	6
08:45	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	0	11	11
H/TOT	0	0	0	0	0	0	0	0	0	0	2	0	46	0	3	0	0	0	51	49.4
09:00	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	10	10
09:15	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	5	5
09:30	0	0	0	0	0	0	0	0	0	0	1	0	3	0	1	0	0	0	5	4.2
09:45	0	0	0	0	0	0	0	0	0	0	0	0	6	0	1	0	0	0	7	7
H/TOT	0	0	0	0	0	0	0	0	0	0	1	0	24	0	2	0	0	0	27	26.2
10:00	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	6	6
10:15	0	0	0	0	0	0	0	0	0	0	0	0	7	0	3	0	0	0	10	10
10:30	0	0	0	0	0	0	0	0	0	0	0	0	5	0	1	1	0	0	7	7.5
10:45	0	0	0	0	0	0	0	0	0	0	0	0	5	1	0	0	0	0	6	6
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	23	1	4	1	0	0	29	29.5
11:00	0	0	0	0	0	0	0	0	0	0	0	2	8	0	2	0	0	0	12	10.8
11:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	2
11:30	0	0	0	0	0	0	0	0	0	0	1	0	4	1	0	1	0	0	7	6.7
11:45	0	0	0	0	0	0	0	0	0	0	0	0	13	0	0	0	0	1	14	15
H/TOT	0	0	0	0	0	0	0	0	0	0	1	2	25	1	4	1	0	1	35	34.5
12:00	0	0	0	0	0	0	0	0	0	0	0	0	10	0	4	0	0	0	14	14
12:15	0	0	0	0	0	0	0	0	0	0	0	0	6	0	1	0	0	0	7	7
12:30	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	9	9
12:45	0	0	0	0	0	0	0	0	0	0	0	0	9	0	1	0	0	0	10	10
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	34	0	6	0	0	0	40	40
13:00	0	0	0	0	0	0	0	0	0	0	0	0	6	0	1	1	0	0	8	8.5
13:15	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	9	9
13:30	0	0	0	0	0	0	0	0	0	0	0	0	16	0	0	0	0	0	16	16
13:45	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	8	8
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	39	0	1	1	0	0	41	41.5
14:00	0	0	0	0	0	0	0	0	0	0	0	0	4	1	1	1	0	0	7	7.5
14:15	0	0	0	0	0	0	0	0	0	0	0	0	13	0	0	0	0	0	13	13
14:30	0	0	0	0	0	0	0	0	0	0	0	0	27	0	0	0	0	1	28	29
14:45	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	0	11	11
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	55	1	1	1	0	1	59	60.5
15:00	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	1	0	0	6	6.5
15:15	0	0	0	0	0	0	0	0	0	0	0	0	18	0	0	0	0	0	18	18
15:30	0	0	0	0	0	0	0	0	0	0	0	0	6	1	1	0	0	0	8	8
15:45	0	0	0	0	0	0	0	0	0	0	1	0	11	0	0	1	0	0	13	12.7
H/TOT	0	0	0	0	0	0	0	0	0	0	1	0	40	1	1	2	0	0	45	45.2
16:00	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	1	0	0	21	21.5
16:15	0	0	0	0	0	0	0	0	0	0	0	0	13	0	2	0	0	0	15	15
16:30	0	0	0	0	0	0	0	0	0	0	1	0	10	0	0	0	0	0	11	10.2
16:45	0	0	0	0	0	0	0	0	0	0	0	0	14	0	1	0	0	0	15	15
H/TOT	0	0	0	0	0	0	0	0	0	0	1	0	57	0	3	1	0	0	62	61.7
17:00	0	0	0	0	0	0	0	0	0	0	1	0	10	0	2	0	0	0	13	12.2
17:15	0	0	0	0	0	0	0	0	0	0	0	0	13	0	0	0	0	0	13	13
17:30	0	0	0	0	0	0	0	0	0	0	0	1	6	0	0	0	0	0	7	6.4
17:45	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	0	11	11
H/TOT	0	0	0	0	0	0	0	0	0	0	1	1	40	0	2	0	0	0	44	42.6
18:00	0	0	0	0	0	0	0	0	0	0	0	0	11	0	1	0	0	0	12	12
18:15	0	0	0	0	0	0	0	0	0	0	1	0	8	0	1	0	0	0	10	9.2
18:30	0	0	0	0	0	0	0	0	0	0	1	1	18	0	1	0	0	0	21	19.6
18:45	0	0	0	0	0	0	0	0	0	0	0	0	13	2	0	0	0	0	15	15
H/TOT	0	0	0	0	0	0	0	0	0	0	2	1	50	2	3	0	0	0	58	55.8
12 TOT	0	0	0	0	0	0	0	0	0	0	11	4	466	8	39	7	1	2	538	533.6

	C => A										C => B									
TIME	**P/C**	**M/C**	**CAR**	**TAXI**	**LGV**	**OGV1**	**OGV2**	**PSV**	**TOT**	**PCU**	**P/C**	**M/C**	**CAR**	**TAXI**	**LGV**	**OGV1**	**OGV2**	**PSV**	**TOT**	**PCU**
07:00	5	0	35	1	2	1	1	0	45	42.8	0	0	1	0	0	0	0	0	1	1
07:15	2	0	61	0	2	1	0	0	66	64.9	0	0	3	0	0	0	0	0	3	3
07:30	3	0	120	2	7	0	0	0	132	129.6	0	0	2	0	4	0	0	0	6	6
07:45	4	1	128	5	10	0	0	1	149	146.2	0	1	8	0	0	0	0	0	9	8.4
H/TOT	14	1	344	8	21	2	1	1	392	383.5	0	1	14	0	4	0	0	0	19	18.4
08:00	7	1	96	3	5	0	0	0	112	105.8	0	0	5	1	0	0	0	0	6	6
08:15	5	0	88	0	4	0	0	0	97	93	0	0	7	0	0	0	0	0	7	7
08:30	3	1	123	2	3	1	0	0	133	130.5	1	0	7	0	3	0	0	0	11	10.2
08:45	0	2	82	2	3	0	0	0	89	87.8	0	0	25	0	2	0	0	0	27	27
H/TOT	15	4	389	7	15	1	0	0	431	417.1	1	0	44	1	5	0	0	0	51	50.2
09:00	0	0	56	0	3	1	0	0	60	60.5	0	0	11	0	1	1	1	0	14	15.8
09:15	1	0	70	3	2	1	0	0	77	76.7	0	0	8	0	1	0	0	0	9	9
09:30	1	0	31	0	5	1	0	0	38	37.7	0	0	5	0	1	0	0	0	6	6
09:45	2	1	54	3	2	2	0	0	64	62.8	0	0	5	0	2	0	0	0	7	7
H/TOT	4	1	211	6	12	5	0	0	239	237.7	0	0	29	0	5	1	1	0	36	37.8
10:00	0	1	27	3	6	1	0	0	38	37.9	0	0	10	0	3	1	0	0	14	14.5
10:15	0	1	33	3	4	2	0	0	43	43.4	0	0	2	0	3	0	0	0	5	5
10:30	0	0	34	2	3	1	0	0	40	40.5	0	0	4	0	0	0	0	0	4	4
10:45	1	0	29	1	2	0	0	0	33	32.2	1	0	5	1	1	0	0	0	8	7.2
H/TOT	1	2	123	9	15	4	0	0	154	154	1	0	21	1	7	1	0	0	31	30.7
11:00	1	0	29	0	2	0	0	0	32	31.2	0	0	6	0	0	0	0	0	6	6
11:15	0	0	24	0	3	3	0	0	30	31.5	0	0	5	0	0	0	0	0	5	5
11:30	0	1	33	0	1	0	0	0	35	34.4	0	1	9	0	1	0	0	0	11	10.4
11:45	0	0	41	0	1	0	0	0	42	42	0	0	6	1	1	0	0	0	8	8
H/TOT	1	1	127	0	7	3	0	0	139	139.1	0	1	26	1	2	0	0	0	30	29.4
12:00	1	1	41	0	0	0	0	0	43	41.6	0	0	16	0	2	1	0	0	19	19.5
12:15	0	0	38	0	2	0	0	0	40	40	0	0	13	0	3	0	0	1	17	18
12:30	0	0	37	0	0	0	0	0	37	37	0	0	6	0	1	0	0	0	7	7
12:45	0	0	28	2	3	0	0	0	33	33	0	0	11	1	0	0	0	0	12	12
H/TOT	1	1	144	2	5	0	0	0	153	151.6	0	0	46	1	6	1	0	1	55	56.5
13:00	0	0	41	1	1	2	0	0	45	46	1	0	10	1	4	1	0	0	17	16.7
13:15	0	0	51	1	2	0	0	0	54	54	0	0	16	0	0	0	0	0	16	16
13:30	1	1	46	2	4	0	0	0	54	52.6	0	0	11	0	1	0	0	0	12	12
13:45	0	0	29	1	5	0	0	0	35	35	0	0	12	0	2	0	0	0	14	14
H/TOT	1	1	167	5	12	2	0	0	188	187.6	1	0	49	1	7	1	0	0	59	58.7
14:00	0	0	65	1	3	1	0	0	70	70.5	1	0	10	2	0	0	0	0	13	12.2
14:15	0	0	69	2	2	2	0	0	75	76	0	0	12	0	1	0	0	0	13	13
14:30	0	0	53	2	1	0	0	0	56	56	0	0	12	0	2	0	0	0	14	14
14:45	0	1	41	4	3	1	0	1	51	51.9	0	0	13	0	0	0	0	0	13	13
H/TOT	0	1	228	9	9	4	0	1	252	254.4	1	0	47	2	3	0	0	0	53	52.2
15:00	0	0	52	1	2	1	0	0	56	56.5	1	0	13	0	1	0	0	0	15	14.2
15:15	0	3	71	0	2	0	0	0	76	74.2	0	0	5	0	1	0	0	0	6	6
15:30	0	1	47	2	5	0	0	0	55	54.4	0	0	6	1	0	0	1	1	9	11.3
15:45	0	1	55	2	2	0	0	0	60	59.4	1	1	20	0	1	0	0	0	23	21.6
H/TOT	0	5	225	5	11	1	0	0	247	244.5	2	1	44	1	3	0	1	1	53	53.1
16:00	0	0	46	1	0	0	0	0	47	47	1	0	21	0	1	0	0	0	23	22.2
16:15	0	0	59	3	1	1	0	0	64	64.5	0	0	18	0	0	0	0	1	19	20
16:30	0	0	51	3	3	0	0	0	57	57	0	0	8	1	0	0	0	0	9	9
16:45	2	1	47	2	4	0	0	0	56	53.8	0	0	16	1	4	0	0	0	21	21
H/TOT	2	1	203	9	8	1	0	0	224	222.3	1	0	63	2	5	0	0	1	72	72.2
17:00	0	0	64	1	1	1	0	0	67	67.5	0	0	12	0	1	0	0	0	13	13
17:15	0	1	72	0	2	0	0	0	75	74.4	1	0	12	0	0	0	0	1	14	14.2
17:30	1	0	62	1	3	0	0	0	67	66.2	0	0	16	0	1	0	0	0	17	17
17:45	0	0	76	4	0	0	0	0	80	80	1	0	23	0	3	0	0	0	27	26.2
H/TOT	1	1	274	6	6	1	0	0	289	288.1	2	0	63	0	5	0	0	1	71	70.4
18:00	0	1	61	2	3	0	0	0	67	66.4	0	0	13	0	3	0	0	0	16	16
18:15	2	1	60	6	2	0	0	0	71	68.8	0	0	22	0	2	0	0	0	24	24
18:30	1	1	71	1	1	0	0	0	75	73.6	0	0	20	0	1	0	0	0	21	21
18:45	1	0	62	0	1	0	0	1	65	65.2	0	0	12	2	1	0	0	1	16	17
H/TOT	4	3	254	9	7	0	0	1	278	274	0	0	67	2	7	0	0	1	77	78
12 TOT	44	22	2689	75	128	24	1	3	2986	2953.9	9	3	513	12	59	4	2	5	607	607.6

	C => C									
TIME	**P/C**	**M/C**	**CAR**	**TAXI**	**LGV**	**OGV1**	**OGV2**	**PSV**	**TOT**	**PCU**
07:00	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0
09:00	0	0	0	0	0	0	0	0	0	0
09:15	0	0	0	0	0	0	0	0	0	0
09:30	0	0	0	0	0	0	0	0	0	0
09:45	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0
10:00	0	0	0	0	0	0	0	0	0	0
10:15	0	0	0	0	0	0	0	0	0	0
10:30	0	0	0	0	0	0	0	0	0	0
10:45	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0
11:00	0	0	0	0	0	0	0	0	0	0
11:15	0	0	0	0	0	0	0	0	0	0
11:30	0	0	0	0	0	0	0	0	0	0
11:45	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0
12:00	0	0	0	0	0	0	0	0	0	0
12:15	0	0	0	0	0	0	0	0	0	0
12:30	0	0	0	0	0	0	0	0	0	0
12:45	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0
13:00	0	0	0	0	0	0	0	0	0	0
13:15	0	0	0	0	0	0	0	0	0	0
13:30	0	0	0	0	0	0	0	0	0	0
13:45	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0
14:00	0	0	0	0	0	0	0	0	0	0
14:15	0	0	0	0	0	0	0	0	0	0
14:30	0	0	0	0	0	0	0	0	0	0
14:45	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0
15:00	0	0	0	0	0	0	0	0	0	0
15:15	0	0	0	0	0	0	0	0	0	0
15:30	0	0	0	0	0	0	0	0	0	0
15:45	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0
16:00	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0
18:00	0	0	0	0	0	0	0	0	0	0
18:15	0	0	0	0	0	0	0	0	0	0
18:30	0	0	0	0	0	0	0	0	0	0
18:45	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0
12 TOT	0	0	0	0	0	0	0	0	0	0



IDASO

Survey Name: 349 22513 Taylor's Lane Traffic Survey
Site: Site 2
Location: Ballyboden Way / Taylor's Lane Roundabout
Date: Thu 22-Sep-2022

	A => A										A => B									
TIME	P/C	M/C	CAR	TAXI	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	TAXI	LGV	OGV1	OGV2	PSV	TOT	PCU
07:00	0	0	0	0	0	1	0	0	1	1.5	0	0	13	0	3	0	0	0	16	16
07:15	0	0	0	0	0	0	0	1	1	2	0	0	25	1	1	0	0	0	27	27
07:30	0	0	0	0	0	0	0	0	0	0	1	1	23	1	7	0	0	2	35	35.6
07:45	0	0	0	0	0	0	0	0	0	0	1	0	32	0	4	1	0	0	38	37.7
H/TOT	0	0	0	0	0	1	0	1	2	3.5	2	1	93	2	15	1	0	2	116	116.3
08:00	0	0	0	0	0	0	0	0	0	0	1	0	43	2	2	0	0	1	49	49.2
08:15	0	0	0	0	0	0	0	0	0	0	1	0	53	0	3	0	0	1	58	58.2
08:30	0	0	0	0	0	0	0	0	0	0	0	1	40	0	1	4	0	0	46	47.4
08:45	0	0	0	0	0	0	0	0	0	0	1	0	35	0	1	0	0	0	37	36.2
H/TOT	0	0	0	0	0	0	0	0	0	0	3	1	171	2	7	4	0	2	190	191
09:00	0	0	0	0	0	0	0	0	0	0	0	0	49	0	3	0	0	1	53	54
09:15	0	0	0	0	0	0	0	0	0	0	0	0	32	1	4	2	0	0	39	40
09:30	0	0	0	0	0	0	0	0	0	0	0	0	26	0	4	0	0	0	30	30
09:45	0	0	0	0	0	0	0	0	0	0	0	0	33	1	3	0	0	1	38	39
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	140	2	14	2	0	2	160	163
10:00	0	0	0	0	0	0	0	0	0	0	0	1	17	1	2	2	0	0	23	23.4
10:15	0	0	0	0	0	0	0	0	0	0	0	0	22	1	4	1	0	1	29	30.5
10:30	0	0	0	0	0	0	0	0	0	0	0	0	28	0	8	3	0	0	39	40.5
10:45	0	0	0	0	0	0	0	0	0	0	0	0	20	1	2	0	0	0	23	23
H/TOT	0	0	0	0	0	0	0	0	0	0	0	1	87	3	16	6	0	1	114	117.4
11:00	0	0	0	0	0	0	0	0	0	0	0	0	24	2	4	2	0	0	32	33
11:15	0	0	0	0	0	0	0	0	0	0	1	0	35	1	4	1	0	0	42	41.7
11:30	0	0	0	0	0	0	0	0	0	0	0	0	28	2	5	1	0	1	37	38.5
11:45	0	0	0	0	0	0	0	0	0	0	0	1	28	1	2	1	0	0	33	32.9
H/TOT	0	0	0	0	0	0	0	0	0	0	1	1	115	6	15	5	0	1	144	146.1
12:00	0	0	0	0	0	0	0	0	0	0	0	0	30	1	4	0	0	0	35	35
12:15	0	0	0	0	0	0	0	0	0	0	0	1	34	1	5	2	0	0	43	43.4
12:30	0	0	0	0	0	0	0	0	0	0	0	1	29	4	4	1	0	1	40	40.9
12:45	0	0	0	0	0	0	0	0	0	0	0	0	33	0	5	2	0	1	41	43
H/TOT	0	0	0	0	0	0	0	0	0	0	0	2	126	6	18	5	0	2	159	162.3
13:00	0	0	0	0	0	0	0	0	0	0	0	0	31	0	5	0	0	0	36	36
13:15	0	0	0	0	0	0	0	0	0	0	0	0	33	1	4	0	0	0	38	38
13:30	0	0	0	0	0	0	0	0	0	0	0	1	22	2	3	1	0	0	29	28.9
13:45	0	0	0	0	0	0	0	0	0	0	1	0	33	0	1	1	0	0	36	35.7
H/TOT	0	0	0	0	0	0	0	0	0	0	1	1	119	3	13	2	0	0	139	138.6
14:00	0	0	0	0	0	0	0	0	0	0	0	0	30	1	4	0	0	1	36	37
14:15	0	0	0	0	0	0	0	0	0	0	0	0	25	3	0	1	0	0	29	29.5
14:30	0	0	0	0	0	0	0	0	0	0	0	0	36	0	2	0	0	0	38	38
14:45	0	0	0	0	0	0	0	0	0	0	0	0	35	1	2	0	0	0	38	38
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	126	5	8	1	0	1	141	142.5
15:00	0	0	0	0	0	0	0	0	0	0	1	0	30	1	0	0	0	0	32	31.2
15:15	0	0	0	0	0	0	0	0	0	0	0	0	22	1	2	0	0	0	25	25
15:30	0	0	0	0	0	0	0	0	0	0	1	0	42	1	1	0	0	1	46	46.2
15:45	0	0	0	0	0	0	0	0	0	0	0	1	47	0	2	1	0	0	51	50.9
H/TOT	0	0	0	0	0	0	0	0	0	0	2	1	141	3	5	1	0	1	154	153.3
16:00	0	0	0	0	0	0	0	0	0	0	1	1	30	1	1	0	0	1	35	34.6
16:15	0	0	0	0	0	0	0	0	0	0	0	0	35	0	5	1	0	0	41	41.5
16:30	0	0	0	0	0	0	0	0	0	0	0	0	40	0	2	0	0	1	43	44
16:45	0	0	0	0	0	1	0	0	1	1.5	1	0	32	0	2	0	0	0	35	34.2
H/TOT	0	0	0	0	0	1	0	0	1	1.5	2	1	137	1	10	1	0	2	154	154.3
17:00	0	0	0	0	0	0	0	0	0	0	1	0	31	0	3	0	0	1	36	36.2
17:15	0	0	0	0	0	0	0	0	0	0	0	0	41	1	0	0	0	0	42	42
17:30	0	0	0	0	0	0	0	0	0	0	1	0	35	0	0	1	0	0	37	36.7
17:45	0	0	0	0	0	0	0	0	0	0	1	0	40	1	2	0	0	0	44	43.2
H/TOT	0	0	0	0	0	0	0	0	0	0	3	0	147	2	5	1	0	1	159	158.1
18:00	0	0	0	0	0	0	0	0	0	0	1	0	32	0	0	0	0	0	33	32.2
18:15	0	0	0	0	0	0	0	0	0	0	3	1	41	1	1	0	1	1	49	48.3
18:30	0	0	0	0	0	0	0	0	0	0	1	0	34	1	2	0	0	0	38	37.2
18:45	0	0	0	0	0	0	0	0	0	0	0	0	34	1	0	0	0	1	36	37
H/TOT	0	0	0	0	0	0	0	0	0	0	5	1	141	3	3	0	1	2	156	154.7
12 TOT	0	0	0	0	0	2	0	1	3	5	19	10	1543	38	129	29	1	17	1786	1797.6

	A => C										A => D									
TIME	**P/C**	**M/C**	**CAR**	**TAXI**	**LGV**	**OGV1**	**OGV2**	**PSV**	**TOT**	**PCU**	**P/C**	**M/C**	**CAR**	**TAXI**	**LGV**	**OGV1**	**OGV2**	**PSV**	**TOT**	**PCU**
07:00	2	0	3	0	0	0	0	0	5	3.4	0	0	6	0	2	0	0	2	10	12
07:15	3	0	12	1	1	1	0	1	19	18.1	0	0	19	2	2	0	1	0	24	25.3
07:30	2	0	21	0	1	0	0	0	24	22.4	0	0	17	0	1	2	0	1	21	23
07:45	1	0	23	3	1	0	0	0	28	27.2	0	0	23	2	1	0	0	1	27	28
H/TOT	8	0	59	4	3	1	0	1	76	71.1	0	0	65	4	6	2	1	4	82	88.3
08:00	0	1	15	0	2	0	0	0	18	17.4	0	0	43	0	1	0	0	3	47	50
08:15	4	0	50	1	1	0	0	0	56	52.8	0	0	25	0	4	0	0	1	30	31
08:30	1	0	41	0	0	0	0	1	43	43.2	0	0	13	0	2	0	0	0	15	15
08:45	2	0	48	1	0	2	0	0	53	52.4	0	0	27	0	2	0	0	1	30	31
H/TOT	7	1	154	2	3	2	0	1	170	165.8	0	0	108	0	9	0	0	5	122	127
09:00	0	0	64	1	1	2	0	0	68	69	0	0	17	0	0	0	0	1	18	19
09:15	0	0	47	1	3	0	0	0	51	51	0	0	16	1	0	0	0	2	19	21
09:30	1	1	27	0	0	0	0	1	30	29.6	0	1	25	1	3	1	0	0	31	30.9
09:45	2	0	17	1	0	0	0	1	21	20.4	0	0	18	0	5	1	0	0	24	24.5
H/TOT	3	1	155	3	4	2	0	2	170	170	0	1	76	2	8	2	0	3	92	95.4
10:00	1	1	29	2	1	0	0	0	34	32.6	0	0	20	2	1	0	0	1	24	25
10:15	0	0	20	0	3	1	0	1	25	26.5	0	0	10	0	6	0	0	1	17	18
10:30	0	0	26	1	1	0	0	0	28	28	0	0	26	2	5	0	1	1	35	37.3
10:45	1	0	29	0	1	1	0	0	32	31.7	1	0	18	2	4	1	0	1	27	27.7
H/TOT	2	1	104	3	6	2	0	1	119	118.8	1	0	74	6	16	1	1	4	103	108
11:00	0	0	22	1	2	2	0	0	27	28	0	0	20	0	1	1	0	2	24	26.5
11:15	0	0	28	0	7	1	0	0	36	36.5	0	0	28	0	2	0	1	0	31	32.3
11:30	0	0	43	1	2	0	0	0	46	46	0	0	17	0	4	0	0	0	21	21
11:45	0	0	46	2	2	0	0	1	51	52	1	0	24	0	8	1	1	1	36	38
H/TOT	0	0	139	4	13	3	0	1	160	162.5	1	0	89	0	15	2	2	3	112	117.8
12:00	0	0	62	1	1	0	0	0	64	64	0	0	26	3	6	1	0	1	37	38.5
12:15	3	0	33	3	3	0	0	0	42	39.6	0	0	30	0	9	2	0	1	42	44
12:30	0	0	33	1	3	1	0	1	39	40.5	0	0	31	1	3	1	0	0	36	36.5
12:45	0	0	40	1	0	1	0	0	42	42.5	0	0	17	1	4	1	0	2	25	27.5
H/TOT	3	0	168	6	7	2	0	1	187	186.6	0	0	104	5	22	5	0	4	140	146.5
13:00	0	0	44	1	0	1	0	0	46	46.5	0	0	29	1	2	0	0	0	32	32
13:15	0	0	43	1	3	0	0	0	47	47	0	0	23	4	3	0	0	1	31	32
13:30	1	0	37	3	2	0	0	0	43	42.2	0	0	24	1	1	1	0	1	28	29.5
13:45	0	0	51	0	2	1	0	0	54	54.5	1	0	28	0	3	0	0	1	33	33.2
H/TOT	1	0	175	5	7	2	0	0	190	190.2	1	0	104	6	9	1	0	3	124	126.7
14:00	0	0	36	2	5	0	0	0	43	43	0	0	27	1	3	0	0	0	31	31
14:15	0	0	33	1	1	0	0	0	35	35	0	1	22	1	0	0	0	1	25	25.4
14:30	0	0	40	2	1	1	0	0	44	44.5	0	0	34	2	5	1	0	1	43	44.5
14:45	0	0	53	2	5	3	0	1	64	66.5	0	0	29	0	2	0	0	2	33	35
H/TOT	0	0	162	7	12	4	0	1	186	189	0	1	112	4	10	1	0	4	132	135.9
15:00	0	0	49	2	2	0	0	0	53	53	1	0	31	2	2	1	0	1	38	38.7
15:15	1	0	34	2	3	2	0	0	42	42.2	0	0	30	1	2	1	0	1	35	36.5
15:30	0	0	61	1	4	0	0	0	66	66	1	0	31	1	4	0	0	2	39	40.2
15:45	0	3	66	1	2	0	0	0	72	70.2	0	0	23	0	4	0	0	0	27	27
H/TOT	1	3	210	6	11	2	0	0	233	231.4	2	0	115	4	12	2	0	4	139	142.4
16:00	0	1	64	3	4	2	0	0	74	74.4	1	0	31	1	1	1	0	0	35	34.7
16:15	3	0	79	1	4	0	0	1	88	86.6	1	0	32	3	4	1	0	1	42	42.7
16:30	1	0	57	3	9	0	0	0	70	69.2	0	0	26	1	5	0	1	1	34	36.3
16:45	4	0	82	1	4	1	0	0	92	89.3	1	0	28	2	0	0	0	1	32	32.2
H/TOT	8	1	282	8	21	3	0	1	324	319.5	3	0	117	7	10	2	1	3	143	145.9
17:00	0	0	48	2	5	1	0	0	56	56.5	1	0	37	1	0	2	0	1	42	43.2
17:15	1	0	85	2	8	0	0	0	96	95.2	2	0	48	2	4	0	0	0	56	54.4
17:30	5	1	77	1	2	0	0	0	86	81.4	2	1	54	2	1	0	0	1	61	59.8
17:45	4	2	91	2	1	0	0	0	100	95.6	0	0	37	2	2	0	0	0	41	41
H/TOT	10	3	301	7	16	1	0	0	338	328.7	5	1	176	7	7	2	0	2	200	198.4
18:00	5	1	80	2	4	0	0	0	92	87.4	1	1	39	1	0	0	0	2	44	44.6
18:15	5	1	71	3	2	0	0	0	82	77.4	1	0	42	1	2	0	0	1	47	47.2
18:30	3	1	68	7	2	0	0	2	83	82	1	0	48	0	1	0	0	2	52	53.2
18:45	9	1	79	2	1	0	0	0	92	84.2	2	0	56	0	2	0	0	2	62	62.4
H/TOT	22	4	298	14	9	0	0	2	349	331	5	1	185	2	5	0	0	7	205	207.4
12 TOT	65	14	2207	69	112	24	0	11	2502	2464.6	18	4	1325	47	129	20	5	46	1594	1639.7

	B => A										B => B									
TIME	**P/C**	**M/C**	**CAR**	**TAXI**	**LGV**	**OGV1**	**OGV2**	**PSV**	**TOT**	**PCU**	**P/C**	**M/C**	**CAR**	**TAXI**	**LGV**	**OGV1**	**OGV2**	**PSV**	**TOT**	**PCU**
07:00	0	1	9	0	1	1	0	0	12	11.9	0	0	0	0	0	0	0	0	0	23.9
07:15	1	0	14	0	1	1	0	1	18	18.7	0	0	0	0	0	0	0	0	0	37.1
07:30	0	1	21	0	0	2	0	0	24	24.4	0	0	0	0	0	0	0	0	0	48.4
07:45	6	0	52	0	0	0	0	0	58	53.2	0	0	0	0	0	0	0	0	0	111.2
H/TOT	7	2	96	0	2	4	0	1	112	108.2	0	0	0	0	0	0	0	0	0	220.6
08:00	3	0	56	0	2	0	0	2	63	62.6	0	0	0	0	0	0	0	0	0	126.4
08:15	2	0	45	1	5	1	0	0	54	52.9	0	0	0	0	0	0	0	0	0	106.9
08:30	0	0	48	0	4	0	0	0	52	52	0	0	0	0	0	0	0	0	0	104
08:45	3	0	20	1	0	0	0	0	24	21.6	0	0	0	0	0	0	0	0	0	45.6
H/TOT	8	0	169	2	11	1	0	2	193	189.1	0	0	0	0	0	0	0	0	0	382.9
09:00	1	0	39	0	1	0	0	0	41	40.2	0	0	0	0	0	0	0	0	0	81.2
09:15	0	0	36	0	0	0	0	0	36	36	0	0	0	0	0	0	0	0	0	72
09:30	1	0	26	0	4	0	0	1	32	32.2	0	0	2	0	0	0	0	0	2	69.2
09:45	0	0	43	0	1	0	0	0	44	44	0	0	0	0	0	0	0	0	0	88
H/TOT	2	0	144	0	6	0	0	1	153	152.4	0	0	2	0	0	0	0	0	2	310.4
10:00	0	0	29	0	2	1	0	0	32	32.5	0	0	0	0	0	0	0	0	0	64.5
10:15	0	0	31	0	3	1	0	0	35	35.5	0	0	1	0	0	0	0	0	1	72.8
10:30	0	0	27	1	0	0	0	0	28	28	0	0	0	0	0	0	0	0	0	56
10:45	0	1	28	0	1	1	0	1	32	32.9	0	0	0	0	0	0	0	0	0	65.3
H/TOT	0	1	115	1	6	3	0	1	127	128.9	0	0	1	0	0	0	0	0	1	258.6
11:00	0	0	28	2	2	3	0	0	35	36.5	0	0	1	0	0	0	0	0	1	73.8
11:15	0	1	23	0	3	0	0	0	27	26.4	0	0	0	0	0	0	0	0	0	53.4
11:30	0	0	14	0	1	0	0	0	15	15	0	0	0	0	0	0	0	0	0	30
11:45	0	0	30	1	2	0	0	0	33	33	0	0	0	0	0	0	0	0	0	66
H/TOT	0	1	95	3	8	3	0	0	110	110.9	0	0	1	0	0	0	0	0	1	223.2
12:00	0	0	27	0	1	3	0	1	32	34.5	0	0	0	0	0	0	0	0	0	66.9
12:15	0	0	28	1	1	0	0	0	30	30	0	0	0	0	0	0	0	0	0	60
12:30	0	1	25	0	2	0	0	0	28	27.4	0	0	0	0	0	0	0	0	0	55.4
12:45	0	0	24	3	2	1	0	0	30	30.5	0	0	0	0	0	0	0	1	1	60.5
H/TOT	0	1	104	4	6	4	0	1	120	122.4	0	0	0	0	0	0	0	1	1	242.8
13:00	0	0	21	0	5	0	0	0	26	26	0	0	1	0	1	0	0	0	2	54.3
13:15	0	0	37	1	0	1	0	1	40	41.5	0	0	0	0	0	0	0	0	0	81.9
13:30	0	0	31	2	2	0	0	0	35	35	0	0	1	0	0	0	0	0	1	72.3
13:45	0	0	42	0	1	1	0	0	44	44.5	0	0	2	0	0	0	0	0	2	93.1
H/TOT	0	0	131	3	8	2	0	1	145	147	0	0	4	0	1	0	0	0	5	301.6
14:00	0	1	27	0	4	0	0	0	32	31.4	0	0	0	0	0	0	0	0	0	63.4
14:15	0	0	38	0	1	0	0	0	39	39	0	0	0	0	0	0	0	0	0	78
14:30	0	2	28	1	1	0	0	1	33	32.8	0	0	0	0	1	0	0	0	1	66.2
14:45	0	0	39	1	0	1	0	0	41	41.5	0	0	0	0	0	0	0	0	0	82.5
H/TOT	0	3	132	2	6	1	0	1	145	144.7	0	0	0	0	1	0	0	0	1	290.1
15:00	1	0	37	0	0	1	0	0	39	38.7	0	0	0	0	0	0	0	0	0	77.7
15:15	0	0	36	1	6	0	0	0	43	43	0	0	0	0	0	0	0	0	0	86
15:30	1	0	31	0	1	0	0	0	33	32.2	0	0	0	0	0	0	0	0	0	65.2
15:45	2	1	34	0	1	0	0	1	39	37.8	0	0	2	0	0	0	0	0	2	81.8
H/TOT	4	1	138	1	8	1	0	1	154	151.7	0	0	2	0	0	0	0	0	2	310.7
16:00	0	0	45	1	0	1	1	0	48	49.8	0	0	0	0	0	0	0	0	0	98
16:15	0	0	35	1	4	0	1	2	43	46.3	0	0	0	0	0	0	0	0	0	90.3
16:30	0	1	29	1	3	0	0	0	34	33.4	0	0	1	0	0	0	0	0	1	69.7
16:45	0	0	40	0	1	1	0	1	43	44.5	0	0	0	0	0	0	0	0	0	87.9
H/TOT	0	1	149	3	8	2	2	3	168	174	0	0	1	0	0	0	0	0	1	345.9
17:00	0	0	29	0	1	0	0	1	31	32	0	0	0	0	0	0	0	0	0	63.4
17:15	2	1	31	0	2	1	0	0	37	35.3	0	0	0	0	0	0	0	0	0	72.3
17:30	0	0	37	0	4	0	0	0	41	41	0	0	0	0	0	0	0	0	0	82
17:45	0	0	35	2	1	0	0	0	38	38	0	0	0	0	0	0	0	0	0	76
H/TOT	2	1	132	2	8	1	0	1	147	146.3	0	0	0	0	0	0	0	0	0	293.7
18:00	1	0	30	2	0	0	0	0	33	32.2	0	0	0	0	0	0	0	0	0	65.2
18:15	1	0	26	0	0	0	0	0	27	26.2	0	0	0	0	0	0	0	0	0	53.2
18:30	2	1	30	1	0	0	0	0	34	31.8	0	0	0	0	0	0	0	0	0	65.8
18:45	0	0	24	1	2	0	0	0	27	27	0	1	0	0	0	0	0	0	1	55.5
H/TOT	4	1	110	4	2	0	0	0	121	117.2	0	1	0	0	0	0	0	0	1	239.7
12 TOT	27	12	1515	25	79	22	2	13	1695	1692.8	0	1	11	0	2	0	0	1	15	3420.2

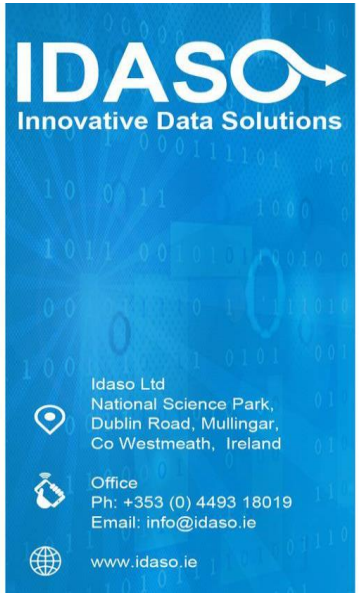
	B => C										B => D									
TIME	**P/C**	**M/C**	**CAR**	**TAXI**	**LGV**	**OGV1**	**OGV2**	**PSV**	**TOT**	**PCU**	**P/C**	**M/C**	**CAR**	**TAXI**	**LGV**	**OGV1**	**OGV2**	**PSV**	**TOT**	**PCU**
07:00	0	0	4	0	0	0	0	0	4	4	1	0	30	4	4	0	0	0	39	38.2
07:15	0	0	8	0	1	0	0	0	9	9	3	0	42	2	12	1	0	0	60	58.1
07:30	0	0	20	0	0	0	0	0	20	20	3	1	90	1	6	2	0	0	103	101
07:45	0	1	20	0	0	0	0	0	21	20.4	0	0	63	4	20	2	2	1	92	96.6
H/TOT	0	1	52	0	1	0	0	0	54	53.4	7	1	225	11	42	5	2	1	294	293.9
08:00	0	0	25	3	2	1	0	1	32	33.5	0	0	76	0	9	1	0	0	86	86.5
08:15	0	0	35	0	4	0	0	0	39	39	2	0	93	1	2	1	0	0	99	97.9
08:30	0	0	40	0	2	1	0	0	43	43.5	4	0	50	2	3	1	0	0	60	57.3
08:45	0	0	38	0	1	0	0	0	39	39	1	0	44	1	5	1	0	0	52	51.7
H/TOT	0	0	138	3	9	2	0	1	153	155	7	0	263	4	19	4	0	0	297	293.4
09:00	1	0	37	0	2	0	0	0	40	39.2	0	1	58	3	7	2	0	2	73	75.4
09:15	0	0	29	0	2	0	0	0	31	31	0	1	39	5	12	2	0	0	59	59.4
09:30	0	0	20	0	2	0	0	0	22	22	0	0	44	3	6	1	0	0	54	54.5
09:45	0	0	17	0	3	0	0	2	22	24	0	0	38	4	7	4	0	0	53	55
H/TOT	1	0	103	0	9	0	0	2	115	116.2	0	2	179	15	32	9	0	2	239	244.3
10:00	0	0	16	0	7	0	0	1	24	25	0	1	36	3	6	1	0	0	47	46.9
10:15	0	0	6	1	3	2	0	0	12	13	0	0	47	2	7	1	0	0	57	57.5
10:30	0	0	21	0	1	0	0	1	23	24	0	0	43	1	7	1	0	1	53	54.5
10:45	1	0	24	0	0	0	0	0	25	24.2	0	0	41	0	6	1	0	1	49	50.5
H/TOT	1	0	67	1	11	2	0	2	84	86.2	0	1	167	6	26	4	0	2	206	209.4
11:00	1	0	14	0	3	0	0	0	18	17.2	0	0	37	3	9	3	0	0	52	53.5
11:15	0	0	22	0	2	0	0	0	24	24	2	0	43	5	7	0	0	0	57	55.4
11:30	1	1	26	0	5	0	0	0	33	31.6	0	0	55	2	8	3	0	1	69	71.5
11:45	0	0	24	0	2	1	0	1	28	29.5	0	0	42	1	7	2	0	0	52	53
H/TOT	2	1	86	0	12	1	0	1	103	102.3	2	0	177	11	31	8	0	1	230	233.4
12:00	0	0	18	0	5	1	0	0	24	24.5	1	0	47	0	7	4	0	0	59	60.2
12:15	0	0	22	0	3	0	0	0	25	25	2	0	47	0	13	0	0	0	62	60.4
12:30	0	0	22	0	1	0	0	0	23	23	0	0	43	4	8	0	0	1	56	57
12:45	0	0	20	3	1	0	0	0	24	24	0	0	60	2	5	2	1	0	70	72.3
H/TOT	0	0	82	3	10	1	0	0	96	96.5	3	0	197	6	33	6	1	1	247	249.9
13:00	1	0	32	0	5	0	0	0	38	37.2	0	2	61	1	6	3	0	0	73	73.3
13:15	0	1	25	0	3	0	0	1	30	30.4	0	0	51	2	10	4	0	0	67	69
13:30	0	0	33	0	3	0	0	0	36	36	0	2	50	0	9	2	1	1	65	67.1
13:45	1	0	34	0	2	0	0	0	37	36.2	0	1	63	2	14	1	0	0	81	80.9
H/TOT	2	1	124	0	13	0	0	1	141	139.8	0	5	225	5	39	10	1	1	286	290.3
14:00	0	0	23	1	5	0	0	0	29	29	0	0	62	4	10	4	0	0	80	82
14:15	1	0	29	0	2	0	0	0	32	31.2	0	0	64	0	7	0	0	0	71	71
14:30	0	0	38	0	2	0	0	0	40	40	0	0	62	2	9	1	1	0	75	76.8
14:45	0	0	51	0	2	0	0	1	54	55	0	0	50	2	8	1	0	1	62	63.5
H/TOT	1	0	141	1	11	0	0	1	155	155.2	0	0	238	8	34	6	1	1	288	293.3
15:00	0	0	36	1	0	0	0	1	38	39	3	0	70	3	11	4	0	0	91	90.6
15:15	1	0	31	0	1	0	0	0	33	32.2	0	1	69	6	12	1	0	0	89	88.9
15:30	0	1	34	1	1	1	0	0	38	37.9	0	0	75	3	7	0	0	0	85	85
15:45	2	0	47	0	5	0	0	0	54	52.4	2	0	66	2	12	1	0	1	84	83.9
H/TOT	3	1	148	2	7	1	0	1	163	161.5	5	1	280	14	42	6	0	1	349	348.4
16:00	1	0	65	0	3	0	0	0	69	68.2	0	1	56	3	11	1	1	1	74	76.2
16:15	0	1	49	0	3	0	0	1	54	54.4	3	0	67	0	15	2	0	1	88	87.6
16:30	0	0	52	0	2	0	0	0	54	54	1	0	71	3	11	0	0	0	86	85.2
16:45	1	0	33	1	7	0	0	0	42	41.2	1	0	60	3	7	3	0	1	75	76.7
H/TOT	2	1	199	1	15	0	0	1	219	217.8	5	1	254	9	44	6	1	3	323	325.7
17:00	1	0	56	1	1	0	0	0	59	58.2	0	2	59	4	4	1	1	0	71	71.6
17:15	1	0	41	0	1	0	0	0	43	42.2	3	1	59	1	10	0	0	0	74	71
17:30	1	0	44	0	2	1	0	0	48	47.7	1	0	77	2	5	0	1	0	86	86.5
17:45	1	0	45	0	2	1	0	1	50	50.7	5	0	64	0	9	0	0	0	78	74
H/TOT	4	0	186	1	6	2	0	1	200	198.8	9	3	259	7	28	1	2	0	309	303.1
18:00	1	0	58	0	3	0	0	0	62	61.2	0	0	55	0	10	1	0	1	67	68.5
18:15	4	0	55	1	3	0	1	0	64	62.1	1	0	61	0	6	0	0	0	68	67.2
18:30	1	0	28	0	1	0	0	0	30	29.2	3	0	57	2	6	0	0	0	68	65.6
18:45	4	0	32	1	2	0	0	1	40	37.8	3	2	57	2	1	0	0	1	66	63.4
H/TOT	10	0	173	2	9	0	1	1	196	190.3	7	2	230	4	23	1	0	2	269	264.7
12 TOT	26	5	1499	14	113	9	1	12	1679	1673	45	16	2694	100	393	66	8	15	3337	3349.8

	C => A										C => B									
TIME	**P/C**	**M/C**	**CAR**	**TAXI**	**LGV**	**OGV1**	**OGV2**	**PSV**	**TOT**	**PCU**	**P/C**	**M/C**	**CAR**	**TAXI**	**LGV**	**OGV1**	**OGV2**	**PSV**	**TOT**	**PCU**
07:00	6	0	39	2	1	0	0	0	48	43.2	0	0	12	0	7	1	0	1	21	22.5
07:15	4	0	51	0	1	0	0	0	56	52.8	0	0	29	3	5	1	0	0	38	38.5
07:30	4	0	94	1	9	0	0	0	108	104.8	0	0	59	3	0	0	0	0	62	62
07:45	4	0	99	3	8	0	0	0	114	110.8	1	1	66	2	8	0	0	1	79	78.6
H/TOT	18	0	283	6	19	0	0	0	326	311.6	1	1	166	8	20	2	0	2	200	201.6
08:00	9	1	97	4	5	0	0	0	116	108.2	0	0	54	0	5	0	0	0	59	59
08:15	8	0	118	0	2	0	0	0	128	121.6	2	0	64	1	4	0	0	0	71	69.4
08:30	5	1	113	2	4	1	0	0	126	121.9	2	0	74	0	0	0	0	0	76	74.4
08:45	0	0	95	1	3	0	0	0	99	99	0	2	28	1	0	0	0	0	31	29.8
H/TOT	22	2	423	7	14	1	0	0	469	450.7	4	2	220	2	9	0	0	0	237	232.6
09:00	0	0	48	0	1	2	0	1	52	54	1	0	31	1	4	0	0	0	37	36.2
09:15	1	0	58	1	2	0	0	0	62	61.2	0	0	41	0	2	2	0	0	45	46
09:30	1	0	28	1	1	0	0	1	32	32.2	0	0	27	0	3	1	0	0	31	31.5
09:45	3	0	34	2	2	1	0	0	42	40.1	0	1	32	1	2	1	0	0	37	36.9
H/TOT	5	0	168	4	6	3	0	2	188	187.5	1	1	131	2	11	4	0	0	150	150.6
10:00	1	1	20	2	2	1	0	0	27	26.1	0	0	16	1	6	0	0	0	23	23
10:15	0	0	30	2	1	2	0	0	35	36	0	1	27	1	3	0	0	0	32	31.4
10:30	0	0	37	0	3	2	0	0	42	43	0	0	16	3	1	0	0	1	21	22
10:45	1	0	39	1	2	0	0	1	44	44.2	1	0	23	0	2	0	0	0	26	25.2
H/TOT	2	1	126	5	8	5	0	1	148	149.3	1	1	82	5	12	0	0	1	102	101.6
11:00	1	0	26	1	0	0	0	0	28	27.2	0	0	30	0	1	0	0	0	31	31
11:15	0	0	27	1	0	2	0	0	30	31	0	0	18	0	4	1	0	0	23	23.5
11:30	0	0	32	1	2	0	0	0	35	35	0	1	19	0	2	0	0	1	23	23.4
11:45	0	0	40	1	2	0	0	1	44	45	0	0	20	2	2	0	0	0	24	24
H/TOT	1	0	125	4	4	2	0	1	137	138.2	0	1	87	2	9	1	0	1	101	101.9
12:00	1	1	42	1	1	0	0	0	46	44.6	1	0	18	0	2	1	0	1	23	23.7
12:15	0	0	29	0	2	0	0	0	31	31	0	0	34	0	3	1	0	0	38	38.5
12:30	0	0	37	0	3	0	0	0	40	40	0	0	31	0	1	0	0	0	32	32
12:45	0	0	28	1	3	0	0	0	32	32	0	0	25	1	1	0	0	0	27	27
H/TOT	1	1	136	2	9	0	0	0	149	147.6	1	0	108	1	7	2	0	1	120	121.2
13:00	0	0	40	2	0	0	0	0	42	42	0	0	34	0	2	2	0	0	38	39
13:15	1	0	47	1	1	0	0	1	51	51.2	0	0	20	0	1	0	0	0	21	21
13:30	0	0	35	2	6	0	0	0	43	43	1	1	33	0	1	0	0	2	38	38.6
13:45	0	0	29	3	1	0	0	1	34	35	0	0	23	1	4	0	0	0	28	28
H/TOT	1	0	151	8	8	0	0	2	170	171.2	1	1	110	1	8	2	0	2	125	126.6
14:00	0	0	54	2	2	0	0	0	58	58	0	0	32	0	2	1	0	0	35	35.5
14:15	0	0	45	2	2	1	0	0	50	50.5	0	0	39	0	3	1	0	0	43	43.5
14:30	0	0	36	0	0	0	0	0	36	36	0	0	48	1	3	0	0	0	52	52
14:45	0	1	30	3	2	1	0	0	37	36.9	0	0	27	1	2	1	0	1	32	33.5
H/TOT	0	1	165	7	6	2	0	0	181	181.4	0	0	146	2	10	3	0	1	162	164.5
15:00	0	0	42	1	2	0	0	0	45	45	0	0	31	0	2	1	0	1	35	36.5
15:15	0	3	63	0	1	0	0	0	67	65.2	0	0	34	0	1	0	0	0	35	35
15:30	0	1	32	2	5	0	0	0	40	39.4	1	0	43	0	2	0	0	0	46	45.2
15:45	0	3	41	0	0	1	0	0	45	43.7	0	1	34	2	1	0	0	0	38	37.4
H/TOT	0	7	178	3	8	1	0	0	197	193.3	1	1	142	2	6	1	0	1	154	154.1
16:00	0	0	42	1	2	0	0	0	45	45	0	0	29	0	0	0	0	1	30	31
16:15	0	0	54	3	1	1	0	0	59	59.5	1	0	38	1	0	0	0	0	40	39.2
16:30	0	0	49	3	3	1	0	0	56	56.5	0	0	26	0	1	0	0	0	27	27
16:45	3	1	40	1	3	0	0	0	48	45	0	0	27	1	1	0	0	2	31	33
H/TOT	3	1	185	8	9	2	0	0	208	206	1	0	120	2	2	0	0	3	128	130.2
17:00	0	0	60	4	1	1	0	0	66	66.5	1	0	39	0	3	0	0	0	43	42.2
17:15	0	0	55	2	1	0	0	0	58	58	1	1	46	0	1	0	0	0	49	47.6
17:30	2	0	56	1	3	0	0	0	62	60.4	0	0	36	0	2	0	0	0	38	38
17:45	0	0	53	3	0	0	0	0	56	56	1	0	53	0	0	0	0	0	54	53.2
H/TOT	2	0	224	10	5	1	0	0	242	240.9	3	1	174	0	6	0	0	0	184	181
18:00	0	2	44	2	2	0	0	0	50	48.8	1	0	43	1	0	0	0	0	45	44.2
18:15	1	1	61	0	3	0	0	0	66	64.6	0	0	35	3	2	0	0	1	41	42
18:30	0	1	65	2	1	0	0	0	69	68.4	1	0	52	2	0	0	0	0	55	54.2
18:45	1	0	48	1	0	0	0	1	51	51.2	0	0	36	0	2	1	0	0	39	39.5
H/TOT	2	4	218	5	6	0	0	1	236	233	2	0	166	6	4	1	0	1	180	179.9
12 TOT	57	17	2382	69	102	17	0	7	2651	2610.7	16	9	1652	33	104	16	0	13	1843	1845.8

	C => C										C => D									
TIME	**P/C**	**M/C**	**CAR**	**TAXI**	**LGV**	**OGV1**	**OGV2**	**PSV**	**TOT**	**PCU**	**P/C**	**M/C**	**CAR**	**TAXI**	**LGV**	**OGV1**	**OGV2**	**PSV**	**TOT**	**PCU**
07:00	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	3.3
07:15	0	0	0	0	0	0	0	0	0	0	1	0	1	0	2	0	0	1	5	5.2
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	2	2
07:45	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	2	2
H/TOT	0	0	0	0	0	0	0	0	0	0	1	0	3	1	4	0	1	1	11	12.5
08:00	0	0	0	0	0	0	0	0	0	0	3	0	9	0	4	0	1	0	17	15.9
08:15	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	0	11	11
08:30	0	0	0	0	0	0	0	0	0	0	0	0	10	0	1	0	0	0	11	11
08:45	0	0	0	0	0	0	0	0	0	0	0	0	5	0	1	0	0	0	6	6
H/TOT	0	0	0	0	0	0	0	0	0	0	3	0	35	0	6	0	1	0	45	43.9
09:00	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	5	5
09:15	0	0	0	0	0	0	0	0	0	0	0	0	3	1	0	0	0	0	4	4
09:30	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	3	3.5
09:45	0	0	0	0	0	0	0	0	0	0	1	0	4	0	0	0	0	0	5	4.2
H/TOT	0	0	0	0	0	0	0	0	0	0	1	0	13	1	1	1	0	0	17	16.7
10:00	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	8	8
10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	2
10:30	0	0	0	0	0	0	0	0	0	0	0	0	4	0	2	1	0	0	7	7.5
10:45	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0	0	0	3	3
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	13	0	6	1	0	0	20	20.5
11:00	0	0	0	0	0	0	0	0	0	0	0	0	1	0	3	0	0	1	5	6
11:15	0	0	0	0	0	0	0	0	0	0	0	0	3	1	1	0	0	0	5	5
11:30	0	0	0	0	0	0	0	0	0	0	0	0	8	0	3	0	0	0	11	11
11:45	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	0	0	0	3	3
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	14	1	8	0	0	1	24	25
12:00	0	0	0	0	0	0	0	0	0	0	0	0	4	1	1	1	0	0	7	7.5
12:15	0	0	0	0	0	0	0	0	0	0	0	0	5	0	2	1	0	0	8	8.5
12:30	0	0	0	0	0	0	0	0	0	0	0	0	4	0	3	0	0	0	7	7
12:45	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	4	4
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	15	1	8	2	0	0	26	27
13:00	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	5	5
13:15	0	0	0	0	0	0	0	0	0	0	0	0	6	0	2	0	1	0	9	10.3
13:30	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	1	0	0	5	5.5
13:45	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	0	0	0	3	3
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	17	0	3	1	1	0	22	23.8
14:00	0	0	0	0	0	0	0	0	0	0	0	0	9	0	1	0	0	0	10	10
14:15	0	0	0	0	0	0	0	0	0	0	0	0	8	1	1	0	0	1	11	12
14:30	0	0	0	0	0	0	0	0	0	0	0	0	6	0	1	0	0	0	7	7
14:45	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	5	5
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	28	1	3	0	0	1	33	34
15:00	0	0	0	0	0	0	0	0	0	0	0	0	8	0	4	0	0	0	12	12
15:15	0	0	0	0	0	0	0	0	0	0	0	0	6	0	1	0	0	0	7	7
15:30	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	4	4
15:45	0	0	0	0	0	0	0	0	0	0	0	0	7	0	2	0	0	0	9	9
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	25	0	7	0	0	0	32	32
16:00	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	1	7	8
16:15	0	0	0	0	0	0	0	0	0	0	1	0	6	0	1	0	0	0	8	7.2
16:30	0	0	0	0	0	0	0	0	0	0	1	0	3	0	2	0	0	0	6	5.2
16:45	0	0	1	0	0	0	0	0	1	1	0	0	1	0	0	0	0	0	1	1
H/TOT	0	0	1	0	0	0	0	0	1	1	2	0	16	0	3	0	0	1	22	21.4
17:00	0	0	0	0	0	0	0	0	0	0	0	0	4	0	1	0	0	0	5	5
17:15	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	3	3
17:30	0	0	1	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	2	2
17:45	0	0	0	0	0	0	0	0	0	0	1	0	2	1	0	0	0	0	4	3.2
H/TOT	0	0	1	0	0	0	0	0	1	1	1	0	11	1	1	0	0	0	14	13.2
18:00	0	0	0	0	0	0	0	0	0	0	0	0	5	0	3	1	0	0	9	9.5
18:15	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	6	6
18:30	0	0	2	0	0	0	0	0	2	2	2	0	6	0	1	0	0	0	9	7.4
18:45	0	0	0	0	0	0	0	0	0	0	0	0	7	0	1	0	0	0	8	8
H/TOT	0	0	2	0	0	0	0	0	2	2	2	0	24	0	5	1	0	0	32	30.9
12 TOT	0	0	4	0	0	0	0	0	4	4	10	0	214	6	55	6	3	4	298	300.9

	D => A										D => B									
TIME	**P/C**	**M/C**	**CAR**	**TAXI**	**LGV**	**OGV1**	**OGV2**	**PSV**	**TOT**	**PCU**	**P/C**	**M/C**	**CAR**	**TAXI**	**LGV**	**OGV1**	**OGV2**	**PSV**	**TOT**	**PCU**
07:00	1	0	19	3	1	0	0	1	25	25.2	2	0	19	1	8	0	0	2	32	32.4
07:15	1	0	29	1	4	1	0	1	37	37.7	0	0	51	0	10	2	0	1	64	66
07:30	1	0	40	2	4	0	1	2	50	52.5	1	1	64	1	22	2	0	0	91	90.6
07:45	0	1	28	1	4	1	0	1	36	36.9	5	0	67	1	18	1	1	1	94	92.8
H/TOT	3	1	116	7	13	2	1	5	148	152.3	8	1	201	3	58	5	1	4	281	281.8
08:00	4	0	36	0	2	0	0	1	43	40.8	3	0	65	2	13	2	1	2	88	89.9
08:15	5	0	34	1	1	0	0	0	41	37	2	0	64	0	6	2	0	1	75	75.4
08:30	0	0	35	1	2	0	0	1	39	40	2	0	60	1	6	3	1	1	74	76.2
08:45	2	0	29	0	4	2	0	3	40	42.4	1	0	94	4	9	1	0	1	110	110.7
H/TOT	11	0	134	2	9	2	0	5	163	160.2	8	0	283	7	34	8	2	5	347	352.2
09:00	1	0	34	0	5	1	0	1	42	42.7	1	0	83	3	17	3	0	1	108	109.7
09:15	2	0	30	0	4	1	0	2	39	39.9	0	0	67	2	17	1	0	0	87	87.5
09:30	1	0	34	1	1	1	0	2	40	41.7	1	0	47	3	16	4	0	1	72	74.2
09:45	0	0	37	1	4	1	1	1	45	47.8	1	0	36	4	13	2	0	0	56	56.2
H/TOT	4	0	135	2	14	4	1	6	166	172.1	3	0	233	12	63	10	0	2	323	327.6
10:00	0	0	22	2	5	1	0	1	31	32.5	0	0	38	3	12	2	0	2	57	60
10:15	0	0	32	1	6	2	0	1	42	44	0	1	55	2	7	3	0	0	68	68.9
10:30	1	0	19	1	4	0	0	1	26	26.2	0	0	42	0	19	5	0	0	66	68.5
10:45	0	0	28	2	3	1	0	1	35	36.5	3	0	37	3	10	3	0	0	56	55.1
H/TOT	1	0	101	6	18	4	0	4	134	139.2	3	1	172	8	48	13	0	2	247	252.5
11:00	0	0	28	2	4	0	0	1	35	36	0	0	43	4	5	1	0	1	54	55.5
11:15	1	1	25	0	5	1	0	1	34	34.1	0	1	50	2	6	2	0	1	62	63.4
11:30	0	0	27	1	4	2	0	1	35	37	1	0	51	4	8	1	0	0	65	64.7
11:45	1	0	25	0	7	1	0	1	35	35.7	0	0	50	1	6	1	0	0	58	58.5
H/TOT	2	1	105	3	20	4	0	4	139	142.8	1	1	194	11	25	5	0	2	239	242.1
12:00	1	0	33	2	7	0	0	0	43	42.2	0	0	50	1	11	0	0	1	63	64
12:15	0	0	29	0	1	3	0	1	34	36.5	0	0	55	4	9	2	0	0	70	71
12:30	0	0	19	0	2	0	0	1	22	23	0	0	64	0	3	3	0	1	71	73.5
12:45	0	0	28	2	2	0	0	1	33	34	0	0	59	2	7	5	1	0	74	77.8
H/TOT	1	0	109	4	12	3	0	3	132	135.7	0	0	228	7	30	10	1	2	278	286.3
13:00	0	0	29	2	1	2	0	1	35	37	0	2	39	3	3	1	0	1	49	49.3
13:15	0	0	24	0	8	2	0	1	35	37	0	0	66	1	10	1	0	0	78	78.5
13:30	0	0	29	0	3	1	0	1	34	35.5	1	2	59	3	11	1	0	0	77	75.5
13:45	0	0	34	0	4	0	0	1	39	40	1	0	68	3	6	0	0	0	78	77.2
H/TOT	0	0	116	2	16	5	0	4	143	149.5	2	4	232	10	30	3	0	1	282	280.5
14:00	1	0	36	0	2	0	0	1	40	40.2	0	0	52	2	6	1	0	0	61	61.5
14:15	0	0	21	2	3	1	0	1	28	29.5	0	0	57	0	7	2	1	1	68	71.3
14:30	0	0	17	0	6	0	1	0	24	25.3	0	0	55	1	8	2	0	0	66	67
14:45	0	0	33	0	2	0	0	1	36	37	0	1	69	2	10	2	1	0	85	86.7
H/TOT	1	0	107	2	13	1	1	3	128	132	0	1	233	5	31	7	2	1	280	286.5
15:00	0	1	32	0	9	1	0	0	43	42.9	0	0	66	1	7	1	0	0	75	75.5
15:15	0	0	33	1	3	0	0	2	39	41	1	1	44	1	4	1	1	3	56	59.4
15:30	0	0	36	0	4	0	0	1	41	42	0	0	67	4	6	0	0	0	77	77
15:45	1	0	41	3	0	0	0	1	46	46.2	3	0	89	3	12	1	0	0	108	106.1
H/TOT	1	1	142	4	16	1	0	4	169	172.1	4	1	266	9	29	3	1	3	316	318
16:00	0	0	36	0	2	1	0	1	40	41.5	1	0	70	2	6	3	1	0	83	85
16:15	0	0	37	2	2	0	1	0	42	43.3	0	0	63	2	9	1	0	2	77	79.5
16:30	1	0	28	0	4	0	0	1	34	34.2	1	0	60	0	7	1	0	0	69	68.7
16:45	1	0	37	1	4	0	0	1	44	44.2	0	0	66	2	3	0	0	0	71	71
H/TOT	2	0	138	3	12	1	1	3	160	163.2	2	0	259	6	25	5	1	2	300	304.2
17:00	0	0	34	2	2	1	0	1	40	41.5	1	1	69	3	6	1	1	0	82	82.4
17:15	0	0	46	1	3	0	0	1	51	52	2	1	76	0	8	0	0	1	88	86.8
17:30	0	1	36	3	0	1	0	1	42	42.9	2	1	69	1	7	0	0	0	80	77.8
17:45	0	0	36	1	2	0	0	0	39	39	1	0	63	1	5	0	0	0	70	69.2
H/TOT	0	1	152	7	7	2	0	3	172	175.4	6	3	277	5	26	1	1	1	320	316.2
18:00	1	0	51	0	2	0	0	1	55	55.2	3	0	70	3	4	1	0	0	81	79.1
18:15	0	0	37	0	1	0	0	0	38	38	3	0	62	2	6	0	0	0	73	70.6
18:30	1	0	42	1	1	0	0	2	47	48.2	0	1	78	1	9	0	0	1	90	90.4
18:45	2	0	34	3	0	1	0	1	41	40.9	1	1	71	2	2	0	0	0	77	75.6
H/TOT	4	0	164	4	4	1	0	4	181	182.3	7	2	281	8	21	1	0	1	321	315.7
12 TOT	30	4	1519	46	154	30	4	48	1835	1876.8	44	14	2859	91	420	71	9	26	3534	3563.6

	D => C										D => D									
TIME	**P/C**	**M/C**	**CAR**	**TAXI**	**LGV**	**OGV1**	**OGV2**	**PSV**	**TOT**	**PCU**	**P/C**	**M/C**	**CAR**	**TAXI**	**LGV**	**OGV1**	**OGV2**	**PSV**	**TOT**	**PCU**
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	0	2	0	0	0	0	0	2	2	0	0	1	0	0	0	0	0	1	1
07:30	1	0	1	0	0	1	0	0	3	2.7	0	0	0	0	0	0	0	0	0	0
07:45	0	0	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0
H/TOT	1	0	3	0	1	1	0	0	6	5.7	0	0	1	0	0	0	0	0	1	1
08:00	0	0	8	0	0	0	0	0	8	8	0	0	0	0	0	0	0	0	0	0
08:15	0	0	9	0	0	0	0	0	9	9	0	0	0	0	0	0	0	0	0	0
08:30	1	0	4	0	1	0	0	1	7	7.2	0	0	1	0	0	0	0	0	1	1
08:45	0	0	28	0	1	0	0	0	29	29	0	0	0	0	0	0	0	0	0	0
H/TOT	1	0	49	0	2	0	0	1	53	53.2	0	0	1	0	0	0	0	0	1	1
09:00	0	0	3	0	1	0	0	0	4	4	0	0	0	0	0	0	0	0	0	0
09:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30	0	0	1	0	1	1	0	0	3	3.5	0	0	1	0	0	0	0	0	1	1
09:45	0	0	6	0	2	0	0	0	8	8	0	0	1	0	0	0	0	0	1	1
H/TOT	0	0	10	0	4	1	0	0	15	15.5	0	0	2	0	0	0	0	0	2	2
10:00	0	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0
10:15	0	0	3	0	1	2	0	0	6	7	0	0	0	0	0	0	0	0	0	0
10:30	0	0	3	0	0	0	0	1	4	5	0	0	0	0	0	0	0	0	0	0
10:45	0	0	2	0	2	0	0	0	4	4	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	9	0	3	2	0	1	15	17	0	0	0	0	0	0	0	0	0	0
11:00	0	0	1	0	1	0	0	0	2	2	0	0	0	0	1	0	0	0	1	1
11:15	0	0	2	0	1	0	0	0	3	3	0	0	0	0	1	0	0	0	1	1
11:30	0	0	1	0	1	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0
11:45	0	0	4	0	1	0	0	0	5	5	0	0	1	0	0	0	0	0	1	1
H/TOT	0	0	8	0	4	0	0	0	12	12	0	0	1	0	2	0	0	0	3	3
12:00	0	0	7	0	1	2	1	0	11	13.3	0	0	1	0	0	0	0	0	1	1
12:15	0	0	7	0	0	0	0	0	7	7	0	0	0	0	0	0	0	0	0	0
12:30	0	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0
12:45	0	0	5	0	0	0	0	0	5	5	0	0	1	0	0	0	0	0	1	1
H/TOT	0	0	20	0	1	2	1	0	24	26.3	0	0	2	0	0	0	0	0	2	2
13:00	0	0	2	0	1	0	0	0	3	3	0	0	1	0	0	0	0	0	1	1
13:15	0	0	6	0	1	0	0	1	8	9	0	0	0	0	0	0	0	0	0	0
13:30	0	0	11	0	1	0	0	0	12	12	0	0	1	0	0	0	0	0	1	1
13:45	0	0	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	19	0	4	0	0	1	24	25	0	0	2	0	0	0	0	0	2	2
14:00	0	0	3	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0
14:15	0	0	8	0	2	0	0	0	10	10	0	0	0	0	0	0	0	0	0	0
14:30	0	0	17	0	2	0	0	0	19	19	0	0	2	0	0	0	0	0	2	2
14:45	0	1	4	0	2	0	0	0	7	6.4	0	0	0	0	0	0	0	0	0	0
H/TOT	0	1	32	0	6	0	0	0	39	38.4	0	0	2	0	0	0	0	0	2	2
15:00	0	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0
15:15	0	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0
15:30	0	0	9	0	0	1	0	0	10	10.5	0	0	1	0	0	0	0	0	1	1
15:45	0	0	19	0	0	0	0	0	19	19	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	30	0	0	1	0	0	31	31.5	0	0	1	0	0	0	0	0	1	1
16:00	0	0	1	0	1	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0
16:15	0	0	3	0	1	0	0	0	4	4	0	0	0	0	0	0	0	0	0	0
16:30	0	0	3	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0
16:45	0	0	1	0	1	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	8	0	3	0	0	0	11	11	0	0	0	0	0	0	0	0	0	0
17:00	0	0	2	0	1	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0
17:15	0	0	2	0	0	0	0	0	2	2	0	0	1	0	0	0	0	0	1	1
17:30	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0
17:45	0	0	2	1	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	6	1	1	0	0	1	9	10	0	0	1	0	0	0	0	0	1	1
18:00	0	0	4	0	0	0	0	1	5	6	0	0	0	0	0	0	0	0	0	0
18:15	1	0	1	0	1	1	0	0	4	3.7	0	0	0	0	0	0	0	0	0	0
18:30	0	0	2	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0
18:45	0	0	1	0	0	1	0	0	2	2.5	0	0	1	0	0	0	0	0	1	1
H/TOT	1	0	8	0	1	2	0	1	13	14.2	0	0	1	0	0	0	0	0	1	1
12 TOT	3	1	202	1	30	9	1	5	252	259.8	0	0	14	0	2	0	0	0	16	16



Data Analysis Services
Traffic-Transportation- Commercial-Innovation

349 22513 Taylor's Lane Traffic Survey Queue Report

with compliments



IDASO

Survey Name: 349 22513 Taylor's Lane Traffic Survey Queue Report
Site: Site 1
Location: Ballyboden Road / Scholarstown Road
Date: Thu 22-Sep-2022

TIME	A1	A2	B	C
07:00	0	0	5	10
07:05	0	0	10	10
07:10	0	0	5	25
07:15	0	0	20	15
07:20	0	0	15	15
07:25	10	0	10	20
07:30	10	0	35	70
07:35	25	0	35	80
07:40	10	0	45	85
07:45	20	0	35	130+
07:50	25	0	30	80
07:55	15	0	50	130+
08:00	10	5	80	130+
08:05	20	0	90	130+
08:10	25	5	125	130+
08:15	25	30	160+	130+
08:20	30	15	160+	130+
08:25	35	30	95	130+
08:30	25	10	65	130+
08:35	35	100#	60	130+
08:40	35	100#	35	130+
08:45	30	15	35	130+
08:50	35	35	50	85
08:55	35	30	25	70
09:00	25	15	20	30
09:05	35	25	15	25
09:10	35	10	20	55
09:15	25	10	15	30
09:20	25	5	20	20
09:25	20	5	15	45
09:30	10	5	5	30
09:35	15	5	10	10
09:40	10	5	10	15
09:45	10	10	5	25
09:50	10	5	5	15
09:55	25	5	10	15

TIME	A1	A2	B	C
10:00	10	10	10	15
10:05	20	5	5	20
10:10	10	20	5	25
10:15	5	5	15	15
10:20	5	10	5	15
10:25	5	15	15	40
10:30	15	5	10	15
10:35	5	5	10	20
10:40	10	10	10	15
10:45	20	5	10	10
10:50	20	25	20	20
10:55	10	15	5	10
11:00	20	5	15	25
11:05	15	5	10	15
11:10	5	15	15	5
11:15	5	5	15	10
11:20	10	5	5	10
11:25	15	0	5	5
11:30	10	20	10	25
11:35	15	35	25	10
11:40	10	10	15	15
11:45	20	0	15	15
11:50	20	20	15	10
11:55	20	20	20	20
12:00	20	20	25	20
12:05	10	15	10	10
12:10	5	10	15	15
12:15	25	20	20	10
12:20	15	10	15	20
12:25	10	5	25	10
12:30	20	25	10	10
12:35	25	5	15	15
12:40	25	15	15	15
12:45	5	25	5	15
12:50	5	5	10	15
12:55	15	20	15	20

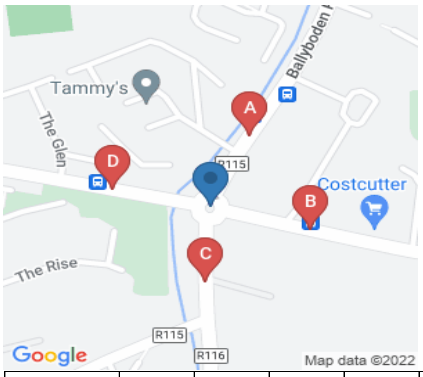
TIME	A1	A2	B	C
13:00	15	10	10	15
13:05	15	10	15	45
13:10	30	15	20	25
13:15	15	25	20	25
13:20	5	40	10	25
13:25	15	10	20	20
13:30	10	15	20	20
13:35	15	10	25	20
13:40	10	15	15	10
13:45	10	20	10	20
13:50	15	10	5	10
13:55	5	10	15	15
14:00	15	10	15	25
14:05	5	20	25	50
14:10	15	10	5	15
14:15	15	10	15	70
14:20	15	20	15	65
14:25	15	10	35	15
14:30	25	10	20	20
14:35	30	5	50	55
14:40	35	25	20	40
14:45	10	15	20	50
14:50	20	10	15	20
14:55	20	25	20	30
15:00	25	5	15	25
15:05	35	20	30	25
15:10	15	15	15	25
15:15	25	20	25	15
15:20	20	5	10	20
15:25	20	5	15	55
15:30	35	5	25	20
15:35	25	5	15	35
15:40	35	15	50	40
15:45	20	20	10	40
15:50	30	20	20	40
15:55	35	25	25	25

Queue's are measured in meters

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

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

TIME	A1	A2	B	C
16:00	35	100#	25	30
16:05	35	30	30	30
16:10	35	100#	50	20
16:15	30	45	25	50
16:20	35	20	30	55
16:25	35	35	80	60
16:30	30	20	30	20
16:35	15	10	5	25
16:40	35	30	15	55
16:45	35	25	20	25
16:50	30	10	15	30
16:55	35	20	20	55
17:00	35	30	25	20
17:05	35	100#	30	65
17:10	35	100#	20	75
17:15	20	15	25	50
17:20	25	10	25	70
17:25	35	30	25	40
17:30	15	5	10	20
17:35	35	15	25	50
17:40	35	100#	30	25
17:45	35	100#	15	60
17:50	35	100#	40	80
17:55	20	45	45	40
18:00	35	20	30	45
18:05	35	100#	50	65
18:10	30	10	40	50
18:15	30	10	25	30
18:20	35	100#	50	60
18:25	25	40	25	40
18:30	20	15	20	70
18:35	20	15	25	65
18:40	35	15	25	20
18:45	35	40	25	50
18:50	35	10	50	30
18:55	35	20	45	40



IDASO

Survey Name: 349 22513 Taylor's Lane Traffic Survey Queue Report
Site: Site 2
Location: Ballyboden Way / Taylor's Lane Roundabout
Date: Thu 22-Sep-2022

TIME	A1	A2	B1	B2	C1	C2	D1	D2
07:00	0	5	0	0	0	0	5	0
07:05	5	0	0	0	5	0	20	0
07:10	5	0	0	0	0	0	20	0
07:15	0	5	10	0	5	0	5	0
07:20	10	0	5	0	10	0	25	0
07:25	10	5	10	0	5	10	15	0
07:30	5	5	15	0	10	10	25	0
07:35	15	10	10	0	10	10	80	0
07:40	20	0	5	0	25	10	85	0
07:45	20	10	15	5	100#	10	75	5
07:50	10	5	15	20M	100#	10	80	5
07:55	20	5	5	10	100#	10	85	0
08:00	15	10	10	10	100#	10	80	0
08:05	15	10	10	15	100#	10	70	0
08:10	15	10	15	15	100#	10	90	0
08:15	15	5	30	10	100#	10	65	5
08:20	5	5	45	10	100#	10	90	5
08:25	25	5	5	10	100#	15M	80	10
08:30	15	0	0	5	55	10	75	5
08:35	20	5	10	10	50	10	65	5
08:40	15	5	15	10	10	10	85	0
08:45	10	20	15	0	15	10	80	0
08:50	25	10	5	5	5	5	65	5
08:55	15	5	0	10	20	5	10	0
09:00	15	0	15	10	25	10	10	5
09:05	20	10	20	5	30	10	45	0
09:10	15	5	0	5	0	0	55	10
09:15	20	10	5	5	10	5	20	0
09:20	20	0	5	0	10	10	45	0
09:25	5	20	0	5	20	5	55	0
09:30	5	0	15	15	65	5	15	0
09:35	5	5	0	0	5	0	5	0
09:40	0	0	0	5	0	0	40	0
09:45	0	5	0	0	5	10	5	0
09:50	10	10	5	5	5	5	50	0
09:55	20	0	0	0	5	10	10	5

Queue's are measured in meters

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

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

TIME	A1	A2	B1	B2	C1	C2	D1	D2
10:00	5	0	5	5	5	0	15	0
10:05	10	5	0	5	0	0	10	0
10:10	0	0	0	5	0	5	15	0
10:15	20	5	0	0	10	5	15	5
10:20	10	0	0	0	15	0	10	0
10:25	5	5	0	5	5	5	10	0
10:30	15	5	5	0	5	5	10	0
10:35	10	15	5	5	5	10	10	0
10:40	20	5	5	5	10	0	15	0
10:45	0	5	0	0	5	5	5	0
10:50	0	0	5	5	10	0	25	0
10:55	25	10	0	5	10	0	10	0
11:00	10	0	0	5	5	10	15	0
11:05	0	5	20	20M	0	10	0	0
11:10	15	0	0	5	0	0	40	0
11:15	25	5	15	10	5	0	20	0
11:20	5	5	0	5	0	0	10	0
11:25	5	5	10	0	10	0	0	0
11:30	10	0	0	0	5	5	0	0
11:35	5	0	20	5	5	5	5	0
11:40	20	5	35	5	5	10	15	0
11:45	0	15	15	5	5	5	5	0
11:50	5	5	15	0	5	5	0	0
11:55	15	5	40	5	10	5	10	0
12:00	20	0	60	15	5	5	10	0
12:05	10	10	10	10	10	10	15	0
12:10	15	10	15	10	0	5	45	0
12:15	20	10	10	5	20	5	20	0
12:20	15	0	35	5	20	5	10	5
12:25	0	5	0	5	15	0	20	0
12:30	30	5	10	5	0	5	20	0
12:35	10	5	5	5	5	5	10	0
12:40	0	0	20	5	5	10	15	0
12:45	10	0	5	0	5	5	10	0
12:50	15	5	15	10	0	5	15	0
12:55	10	15	15	10	5	10	25	0

TIME	A1	A2	B1	B2	C1	C2	D1	D2
13:00	0	0	10	5	5	5	10	0
13:05	0	0	20	5	30	15M	10	0
13:10	0	5	20	5	10	15M	20	0
13:15	15	0	0	5	20	10	20	0
13:20	10	5	40	5	15	0	10	5
13:25	20	5	0	0	5	10	10	0
13:30	0	0	0	10	10	5	15	0
13:35	10	10	20	10	5	5	20	0
13:40	10	15	30	20M	10	10	25	10
13:45	5	5	20	20M	15	5	15	0
13:50	5	10	20	15	5	10	15	0
13:55	20	0	5	10	10	10	15	0
14:00	10	0	15	5	10	15M	5	0
14:05	10	5	15	0	10	10	15	5
14:10	25	5	0	0	10	5	20	0
14:15	0	10	15	5	5	10	15	0
14:20	20	5	25	5	10	10	20	0
14:25	0	5	5	5	5	0	10	0
14:30	15	15	10	5	5	10	10	0
14:35	20	10	60	10	5	10	25	0
14:40	15	0	20	5	10	15M	15	0
14:45	10	5	15	10	5	5	15	0
14:50	15	10	15	10	10	5	20	0
14:55	20	15	15	5	10	10	25	5
15:00	15	5	10	0	10	15	15	0
15:05	15	5	0	0	5	10	15	0
15:10	10	5	5	0	10	5	25	0
15:15	10	5	15	2	10	5	20	0
15:20	15	10	20	0	10	10	20	0
15:25	20	0	0	5	40	10	50	5
15:30	15	10	30	0	15	5	25	0
15:35	20	0	10	10	10	5	40	0
15:40	15	15	15	0	5	5	25	5
15:45	20	15	20	10	5	10	65	0
15:50	15	5	10	15	15	5	55	0
15:55	20	2	10	5	5	5	20	5

TIME	A1	A2	B1	B2	C1	C2	D1	D2
16:00	10	5	10	5	0	10	15	0
16:05	15	0	40	20	15	10	45	0
16:10	20	10	15	10	15	15M	40	0
16:15	15	10	35	5	25	10	15	0
16:20	10	0	25	10	5	10	15	0
16:25	20	5	40	15	30	15M	35	0
16:30	15	10	20	10	10	10	10	0
16:35	20	5	15	15	5	0	5	0
16:40	20	10	10	0	15	5	15	0
16:45	10	10	20	15	10	15M	25	0
16:50	20	10	20	15	10	5	15	0
16:55	15	0	25	5	10	10	5	0
17:00	15	5	15	0	10	10	35	5
17:05	20	5	40	20M	25	5	10	0
17:10	15	10	30	5	30	10	45	0
17:15	25	15	55	15	15	10	40	0
17:20	15	10	15	10	10	10	25	0
17:25	15	20	60	10	15	5	10	5
17:30	20	5	50	5	10	5	30	0
17:35	20	15	15	15	45	15M	30	5
17:40	20	15	50	15	50	10	45	0
17:45	0	10	20	20M	5	5	5	0
17:50	15	0	30	5	25	10	15	0
17:55	10	5	65	10	25	5	35	5
18:00	20	5	25	10	15	10	35	0
18:05	25	10	65	10	10	10	40	0
18:10	15	10	40	5	10	5	10	0
18:15	25	5	15	10	10	5	20	0
18:20	10	5	35	10	20	10	20	0
18:25	15	15	30	5	5	5	10	0
18:30	5	10	15	5	5	10	45	10
18:35	15	10	5	5	10	10	45	0
18:40	15	10	15	10	10	10	15	0
18:45	15	10	5	5	10	10	40	0
18:50	15	0	50	5	10	10	35	0
18:55	10	10	35	10	15	10	40	0

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