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Traffic Impact Assessment

Spencer Place Residential

Block 2, Spencer Dock, Dublin 1

Client: Spencer Place Development Company Limited

Job No. R043

August 2019

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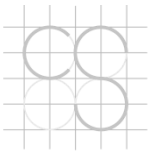

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TRAFFIC IMPACT ASSESSMENT

SPENCER PLACE RESIDENTIAL, BLOCK 2, SPENCER DOCK, DUBLIN 1

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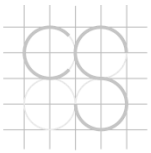
Job Ref.	Author	Reviewed By	Authorised By	Issue Date	Rev. No.
R043	GF	CT	NB	09.08.2019	A
R043	GF	CT	NB	27.04.2018	-



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1.0 INTRODUCTION

1.1 Scope

Cronin & Sutton Consulting (CS Consulting) have been commissioned by Spencer Place Development Company Limited to prepare a Traffic Impact Assessment for a proposed strategic housing development of 464no. apartment units and the change of use of the permitted aparthotel development to shared accommodation at Block 2, Spencer Dock, Dublin 1, bounded by Sheriff Street to the north, Mayor Street to the south and New Wapping Street to the east.

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

- Dublin City Development Plan 2016–2022
- North Lotts and Grand Canal Dock Planning Scheme 2014
- Sustainable Urban Housing: Design Standards for New Apartments (Guidelines for Planning Authorities)
- The Institute of Highways and Transportation Guidelines for Traffic Impact Assessment
- TII Project Appraisal Guidelines 2011
- TII Traffic and Transport Assessment Guidelines
- Trip Rate Information Computer System (TRICS)
- National Cycle Manual 2011
- Design Manual for Urban Roads and Streets
- IStructE Design Recommendations for Multi-Storey and Underground Car Parks (4th Edition, 2011)

1.2 Objective

The objective of this report is to examine the traffic implications associated with the proposed development, in terms of integration with existing traffic in the area. The report will determine the impact of the proposed development on the existing street network, in particular at the existing

junctions of New Wapping Street with Mayor Street Upper and with Sheriff Street Upper.

1.3 Study Methodology

The methodology adopted for this report is summarised as follows:

- Junction traffic count – A 12-hour classified vehicular traffic count survey was undertaken on Wednesday the 4th of October 2017 by Nationwide Data Collection (NDC), on behalf of CS Consulting. This survey was conducted between 07:00 and 19:00, at 2no. junctions on New Wapping Street. Refer to sub-sections 2.1 and 3.2 for junction locations. The survey report and results tables produced by NDC are contained in Appendix A.
- Trip generation – A development trip generation has been carried out using TRICS, to determine the potential vehicular trips to and from the proposed development site during peak hours. Trip generations have also been calculated for relevant other committed developments in the vicinity of the subject site.
- Trip distribution – Based upon existing traffic characteristics, the proposed development access arrangements, and the surrounding street network, an appropriate distribution has been assigned to site development vehicular trips across the road network, as described in sub-section 4.2.
- Existing junction assessment – A spreadsheet model was created which contains the 2017 survey year do-nothing traffic count data described above, as well as 2019 base year traffic flow data derived from these. The traffic count data were used to develop a TRANSYT model incorporating the 2no. existing surveyed junctions.
- Future junction operation assessments – Future year traffic forecasts were derived from TII growth factors and development trip generation

figures. These traffic flows were applied to the TRANSYT junction model, which was expanded to include the 2no. proposed vehicular accesses to the development. The performances of the 4no. junctions in this expanded model were assessed for the planned year of opening (2022), 5 years after opening, 10 years after opening and 15 years after opening (Design Year Assessment).

- Parking – Car parking and bicycle parking provisions for the proposed development were assessed with reference to the parking standards set out in the *Dublin City Development Plan 2016–2022* and the recommendations given in the *Design Standards for New Apartments*.

1.4 Structure of Report

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

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

- Section 2 describes the proposed development location, existing land use and the development proposals.
- Section 3 provides an overview of the existing traffic conditions and the local street network, identifying any existing issues related to traffic flow or road infrastructure with special relevance to this transport appraisal.
- Section 4 examines the trip generation and trip distribution associated with the proposed development and with relevant other committed developments in the vicinity of the subject site.

- Section 5 assesses the resulting operational performance of the existing adjacent New Wapping Street junctions, as well as the proposed development access junctions, with the development in place.
- Section 6 assesses the proposed car parking provision for the development, with reference to Local Authority standards and DoHPLG guidelines.
- Section 7 addresses the development's internal layout and access for motor vehicles, pedestrians and cyclists.
- Section 8 presents the conclusions of the report.

2.0 SITE LOCATION AND PROPOSED DEVELOPMENT

2.1 Site Location

The proposed development at City Block 2, bounded by Sheriff Street to the north, Mayor Street to the south and New Wapping Street to the east, Spencer Dock, Dublin 1; within the North Lotts and Grand Canal Dock Strategic Development Zone. The site is located in the administrative jurisdiction of Dublin City Council and has a total area of circa 1.26ha.

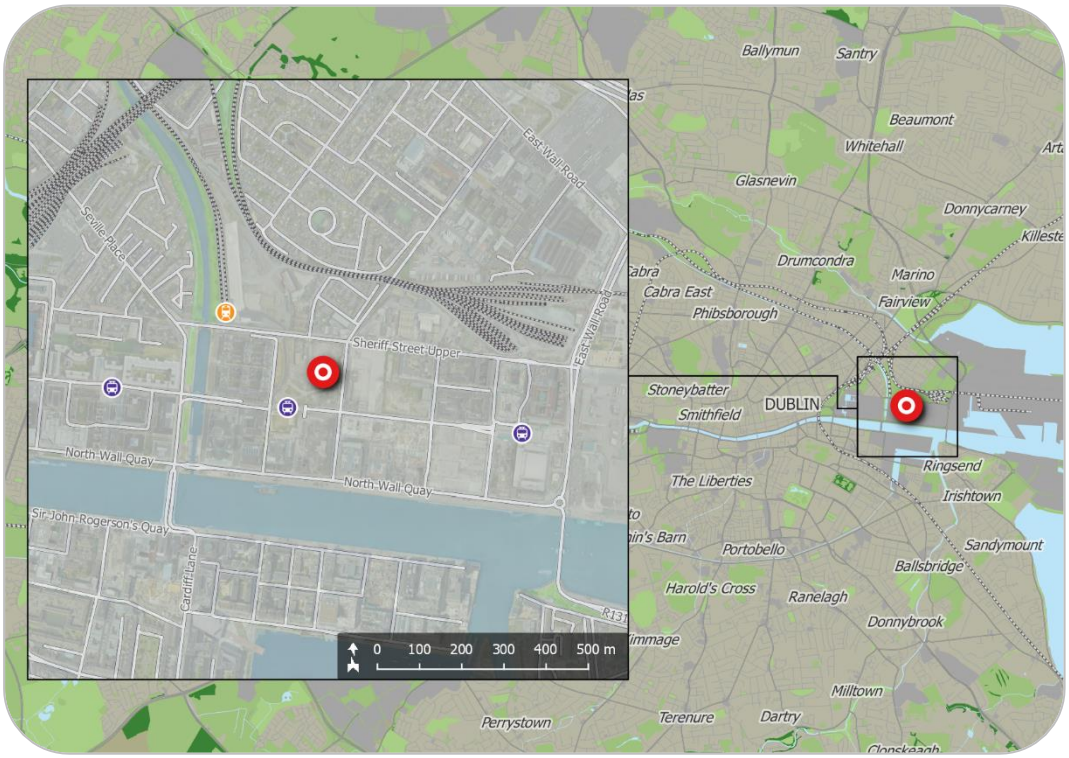


Figure 1 – Location of proposed development site
(*map data: EPA, NTA, OSi, OSM Contributors, Google*)

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

The development site is bound to the east by New Wapping Street, to the south by Mayor Street Upper, to the north by Sheriff Street Upper, and to the west by a vacant brownfield site.

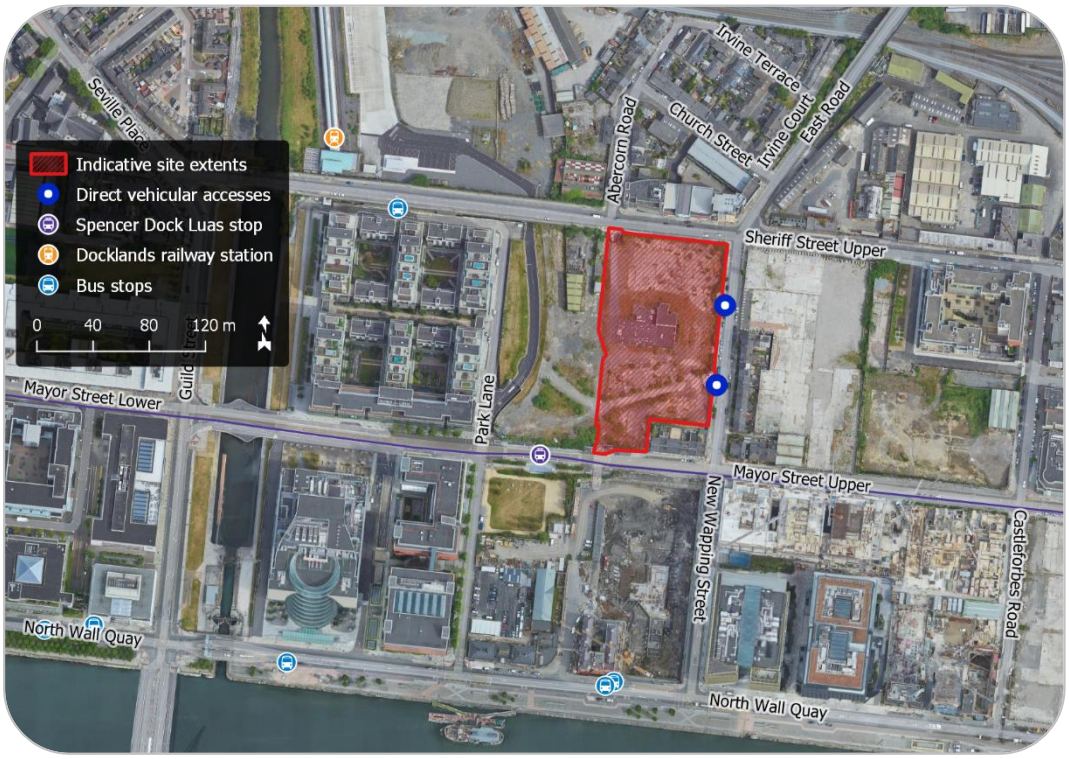


Figure 2 – Elements of surrounding street network
(*map data & imagery: NTA, OSi, OSM Contributors, Google*)

2.2 Existing Land Use

The development site is brownfield and is vacant with the exception of the North Lotts Pumping Station, which is located within the site. The existing pumping station shall be incorporated into the proposed development of the site, with service access to it being maintained.

2.3 Description of Proposed Development

The proposed development comprises an alteration to the permitted development Reg. Ref. DSDZ2896/18 and as amended by Reg. Ref. DSDZ4279/18 at Spencer Place North, City Block 2, Spencer Dock, Dublin 1.

The proposed development seeks revisions to the permitted Block 1 and 2 to provide for an increase in the number of residential units from 349no. to 464no. apartment units and the change of use of the permitted aparthotel development to shared accommodation.

The proposed development will increase the height of the permitted development, increasing the maximum height of Block 1 from 7no. storeys (27.5m) to a maximum height of 13no. storeys (46.8m) and increasing the maximum height of Block 2 (27.5m) to 11no. storeys (40.5m). The proposed development will also include the provision of a link bridge between Block 1 and Block 2 at 6th floor level, landscaping, the provision of communal open space, revised under croft level, provision of roof terraces, and all other associated site development works to facilitate the development.

3.0 EXISTING AND PREDICTED TRAFFIC CONDITIONS

3.1 Existing Road Network

3.1.1 New Wapping Street

Figure 3 – New Wapping St (view to south, past development site)

- New Wapping Street is a single carriageway street with a total pavement width of approx. 10m generally in the vicinity of the subject site.
- New Wapping Street is a local street with a north-south alignment, connecting to Sheriff Street Upper (R101) in the north and to North Wall Quay (R801) in the south.
- Raised footpaths are present along both sides of New Wapping Street. No cycle lanes or bus lanes are present.
- On-street parking is currently permitted along both sides of New Wapping Street in the vicinity of the subject site.
- New Wapping Street is subject to a 50km/h speed limit.

3.1.2 Mayor Street Upper

Figure 4 – Mayor St Upper (view to east, past development site)

- Mayor Street Upper is a single carriageway street with a total pavement width of approx. 8m generally in the vicinity of the subject site.
- Mayor Street Upper is a local street with an east-west alignment, running from the Point Village in the east to the Royal Canal in the west (there becoming Mayor Street Lower).
- Bi-directional Luas light rail traffic runs along Mayor Street Upper. The western section of Mayor Street Upper between New Wapping Street and Park Lane is closed to general traffic.
- Raised footpaths are present along both sides of Mayor Street Upper. No cycle lanes or bus lanes are present.
- Limited recessed on-street parking is in place on Mayor Street Upper in the vicinity of the subject site; this is restricted to residents' use.
- Mayor Street Upper is subject to a 50km/h speed limit.

3.1.3 Sheriff Street Upper

Figure 5 – Sheriff St Upper (view to east, past development site)

- Sheriff Street Upper is a single carriageway street with a total pavement width of approx. 11m generally in the vicinity of the subject site.
- Sheriff Street Upper forms part of regional road R101 and has an east-west alignment. It connects to East Wall Road (R131) in the east and to Seville Place (R101) in the west.
- Raised footpaths are present along both sides of Sheriff Street Upper. No cycle lanes or bus lanes are present in the vicinity of the subject site.
- On-street parking is permitted along both sides of Sheriff Street Upper in the vicinity of the subject site.
- Sheriff Street Upper is subject to a 50km/h speed limit.

3.2 Traffic Collision Data

Data on recorded road traffic collisions in the years 2005 to 2014, collated by the Road Safety Authority, show that no collisions resulting in serious injuries or fatalities occurred in proximity to the development site during this period. No road traffic collisions of any type were recorded in this period on the stretch of New Wapping Street on which the proposed development's vehicular accesses are to be located.

Two minor collisions were recorded in 2007 and in 2014 on Sheriff Street Upper near the northern boundary of the development site; neither of these involved pedestrians. The locations of all recorded collisions between 2005 and 2014 in the vicinity of the development site are shown in Figure 6.

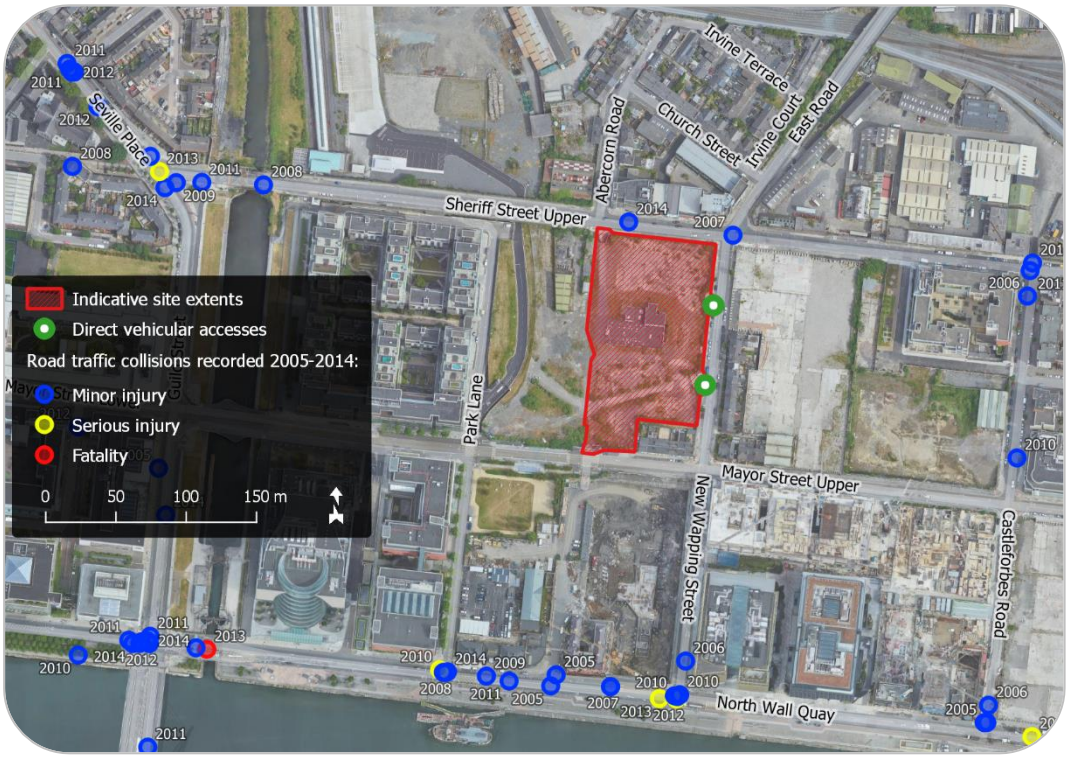


Figure 6 – Recorded road traffic collisions near development site
(map data & imagery: Road Safety Authority, OSM Contributors, Google)

3.3 Existing Traffic Flows

Full turning movement classified traffic counts were carried out by NDC, on behalf of CS Consulting, over a 12-hour period (07:00–19:00) on Wednesday the 4th of October 2017.

Count information was obtained at the following junctions (see Figure 2):

J1. New Wapping Street / Mayor Street Upper
(4-arm signal-controlled junction)

J2. East Road / Sheriff Street Upper / New Wapping Street
(4-arm signal-controlled junction)

Including Luas movements, the peak hour background traffic flows at this junction were found to occur between 07:45 and 08:45 (AM peak hour) and between 17:00 and 18:00 (PM peak hour). Raw data from these traffic counts are provided in Appendix A. The surveyed peak hourly flows for general vehicle traffic have been abstracted from the count data and are included in the traffic flow matrices given in Appendix C. Total peak hour flows at the surveyed junctions are also given in Table 1.

Table 1 – Total Peak Traffic Movements at Surveyed Junctions (2017)

Time Period	Total Junction Traffic Movements (Vehicles per Hour)			
	Junction 1 (New Wapping St / Mayor St)		Junction 2 (New Wapping St / Sheriff St)	Combined Totals
	General traffic	Light rail	General traffic	
AM Peak Hour (07:45–08:45)	472	11	1153	1636
PM Peak Hour (17:00–18:00)	290	13	927	1230

The surveyed peak hour traffic flows have been scaled up using TII growth factors (as described in sub-section 4.4), to provide Base Year Do-Nothing

traffic flow totals corresponding to the year 2019. These are given in Table 2.

Table 2 – Base Year Traffic Movements at Surveyed Junctions (2019)

Time Period	Total Junction Traffic Movements (Vehicles per Hour)			
	Junction 1 (New Wapping St / Mayor St)		Junction 2 (New Wapping St / Sheriff St)	Combined Totals
	General traffic	Light rail	General traffic	
AM Peak Hour (07:45–08:45)	474	11	1158	1643
PM Peak Hour (17:00–18:00)	291	13	931	1235

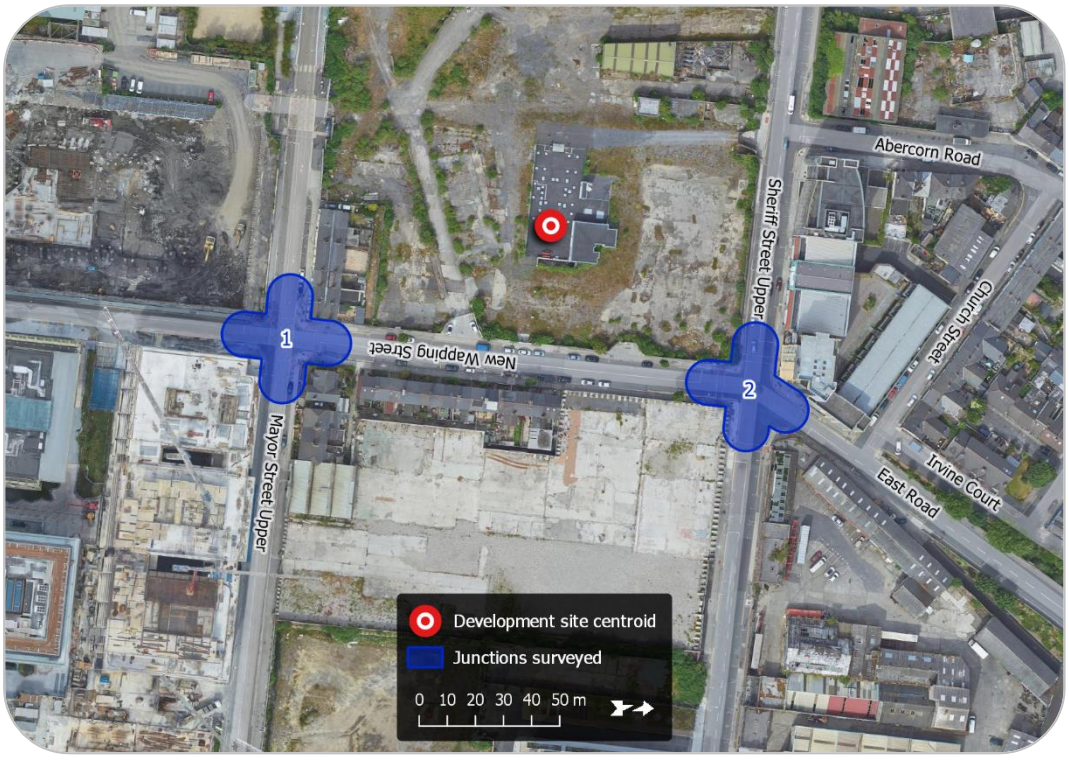


Figure 7 – Surveyed road junction sites
(*map data & imagery: OSM Contributors, Google*)

3.4 Proposed Local Infrastructure Improvements

No relevant transport-related objectives in the vicinity of the development site are given in the main body of the *Dublin City Development Plan 2016–2022*.

The *North Lotts and Grand Canal Dock Planning Scheme 2014* includes the provision of new north-south access roads through Blocks 2 and 7 of the North Lotts and Grand Canal Dock Strategic Development Zone; these will connect Sheriff Street Upper, Mayor Street Upper, and North Wall Quay. Previously granted applications for development within these blocks (refs. DSDZ3367/15 and DSDZ3368/15) incorporated these planned roads.

The proposed development includes the construction of the planned north-south access road through Block 2, between Sheriff Street Upper and Mayor Street Upper, the northern section of which was previously permitted under planning file ref. DSDZ3367/15.

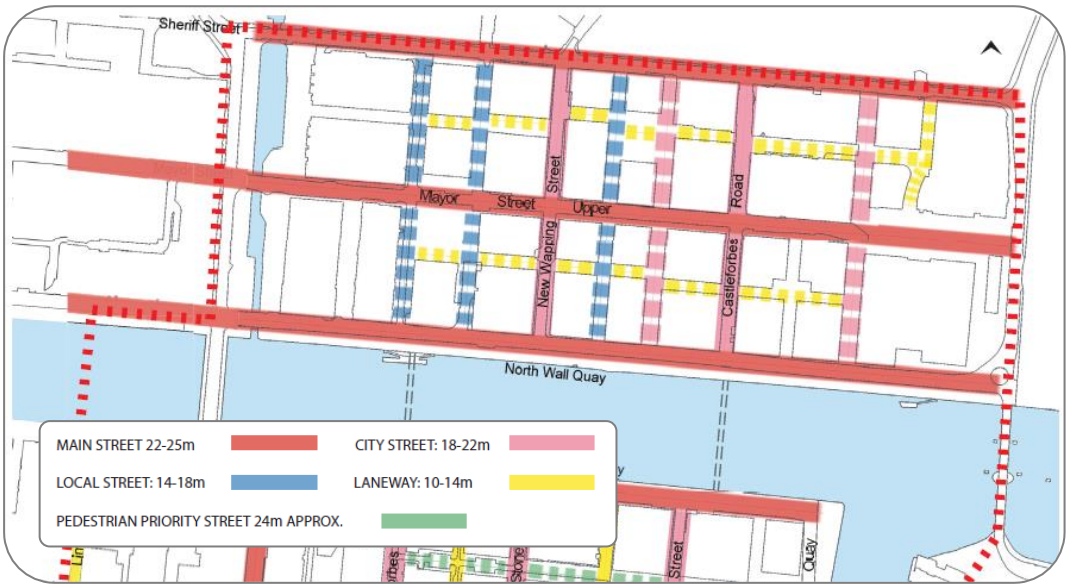


Figure 8 – Existing and proposed roads within Strategic Development Zone
(source: Dublin City Council)

In addition to the above-mentioned infrastructure improvements, a number of future improvements to public transport services and infrastructure are currently in planning or under consideration in the vicinity of the development site and in the wider Greater Dublin Area. These include the proposed BusConnects and MetroLink projects in preparation by the NTA and by TII. Further details of these proposed future transport improvements are given in the Mobility Management Plan Framework prepared by CS Consulting and submitted under separate cover in support of this planning application.

3.5 Nearby Committed Developments

Figure 9 – Relevant nearby committed developments
(*map data & imagery: Dublin City Council, OSM Contributors, Google*)

2no. active planning permissions have been identified that are considered sufficiently close to the subject development site to have a potential

influence on the traffic flows at the 4no. junctions considered in this report, if developed as permitted:

- DSDZ2661/17
  Mixed use development comprising 47,057m^2 office space and a hotel with a total GFA of 9,205m^2, with vehicular access to/from New Wapping Street, between Mayor Street Upper and North Wall Quay.
- DSDZ3357/17
  Residential development comprising 360no. apartments, with 283no. car parking spaces at basement level and vehicular access to/from New Wapping Street.

For the purposes of this Traffic Impact Assessment, it has been assumed that the above-listed permitted developments shall all proceed and shall be operational by the year 2022. The projected traffic to be generated by these developments has been included in the future year junction assessments, as described in sub-section 4.3 of this report.

4.0 TRAFFIC GENERATION & TRIP DISTRIBUTION

4.1 Subject Development Trip Generation

The TRICS database has been used to predict the trip generation to and from the proposed development, for the AM and PM peak hour periods. Full details of the TRICS information used in the assessments are provided in Appendix B.

The TRICS sub-category '02 Residential / C – Flats Privately Owned' has been employed for the apartment element of the proposed development. This is described in the TRICS land use category definitions as follows:

"Housing developments where at least 75% of households are privately owned. Of the total number of units, 75% must also be flats (sum of flats in blocks and "split" houses), with no more than 25% of the total units being "non-split" houses. Includes properties that are privately owned and then privately rented. Trip rates are calculated by Site Area, Dwellings, Housing Density, or Total Bedrooms."

The TRICS database does not yet include a land use category corresponding directly to shared accommodation developments, which are relatively new to Great Britain and Ireland. Trip generation for the shared accommodation element of the proposed development has therefore been determined with reference to the TRICS sub-category '02 Residential / G – Student Accommodation', which offers the closest available equivalent in terms of trip generation potential. This sub-category is described in the TRICS land use category definitions as follows:

"Includes halls of residence, student flats, etc. If sharing a site with an educational land use, only the accommodation element should be included in the site and survey details. Trip rates are calculated by Site Area or Residents."

The TRICS trip rates for the proposed development have been selected from the above categories, restricted insofar as possible to similar locations at the edges of city centres, and further refined with reference to 2016 CSO census data on the basis of:

- the population within 1 mile of the development site (55,000 approx.);
- the population within 5 miles of the development site (685,000 approx.);
- the aggregate mean car ownership rate within 5 miles of the development site (0.94 cars per household).

The selected trip rates for the AM peak hour (07:45–08:45) and PM peak hour (17:00–18:00) are given in Table 3 and Table 4.

Table 3 – TRICS Apartment Trip Generation Rates

	Arrivals per apartment	Departures per apartment
AM Peak	0.033	0.098
PM Peak	0.134	0.092

Table 4 – TRICS Shared Accommodation Trip Generation Rates

	Arrivals per resident	Departures per resident
AM Peak	0.005	0.004
PM Peak	0.003	0.001

The proposed development consists of 2no. blocks, each with a self-contained basement car park and an individual vehicular access:

- Block 1 (to the north) comprises 298no. apartment units; and
- Block 2 (to the south) comprises 166no. apartment units and 84no. shared accommodation units. The shared accommodation units comprise a total of 200no. bedspaces.

The trip generation figures calculated for the northern and southern blocks of the development, as well as for the development as a whole, are given in Table 5.

Table 5 – Development Trip Generation from TRICS

	Arrival Trips per hour	Departure Trips per hour	Total Trips per hour
Block 1 (North)			
AM Peak	10	29	39
PM Peak	40	27	67
Block 2 (South) Apartments			
AM Peak	5	16	21
PM Peak	22	15	37
Block 2 (South) Shared Accommodation			
AM Peak	1	1	2
PM Peak	1	0	1
Block 2 (South) TOTALS			
AM Peak	6	17	23
PM Peak	23	15	38
CUMULATIVE TOTAL TRIPS – Entire Development			
AM Peak	16	46	62
PM Peak	63	42	105

As shown in Table 6, vehicular traffic to and from the proposed development is predicted to result in a 13.7% increase in total traffic flows along New Wapping Street during the AM peak hour, and a 38.5% increase in traffic flows during the PM peak hour, over the existing Base Year background traffic flows.

Table 6 – Increases in Peak Hour Traffic on New Wapping Street

Time Period	Total 2-Way Traffic Flows (Vehicles per Hour)		Proportional Increase
	Base Year (2019) Background Traffic	Development Traffic	
AM Peak Hour (07:45–08:45)	453	62	13.7%
PM Peak Hour (17:00–18:00)	273	105	38.5%

4.2 Development Trip Distribution

It is assumed that vehicles entering and exiting the development from and to New Wapping Street shall follow the same north/south directional splits as those currently observed for traffic entering and exiting Sheriff Street Upper (West) from and to East Road and New Wapping Street, at the surveyed Junction 2.

Table 7 – Existing Directional Splits to/from the West at Junction 2

From/To	East Road	Sheriff Street Upper (East)	New Wapping Street	TOTAL
Traffic TO Sheriff Street Upper (West)				
AM Peak	70%	11%	19%	100%
PM Peak	44%	23%	33%	100%
Traffic FROM Sheriff Street Upper (West)				
AM Peak	42%	40%	18%	100%
PM Peak	60%	35%	5%	100%

The full existing directional splits to and from the west at Junction 2 are given in Table 7. Excluding traffic to/from the east yields the directional splits predicted for the development accesses; these are given in Table 8.

Table 8 – Predicted Directional Splits to/from Development Accesses

From/To	New Wapping Street (North)	New Wapping Street (South)	TOTAL
Traffic TO Development Accesses			
AM Peak	79%	21%	100%
PM Peak	57%	43%	100%
Traffic FROM Development Accesses			
AM Peak	70%	30%	100%
PM Peak	92%	8%	100%

At the 2no. surveyed junctions (see Figure 7, page 13), it is assumed that vehicular traffic to and from the subject development shall be distributed according to the directional splits currently observed at these junctions. These splits, for both the AM and PM peak periods, are given in Table 9 and Table 10.

Table 9 – Existing Surveyed Traffic Splits at Survey Junction 1
(New Wapping Street / Mayor Street Upper)

From/To	Mayor St Upper (East)	New Wapping St (South)	Mayor St Upper (West)	TOTAL
Traffic TO New Wapping Street (to North)				
AM Peak	4%	94%	2%	100%
PM Peak	1%	98%	1%	100%
Traffic FROM New Wapping Street (from North)				
AM Peak	15%	83%	2%	100%
PM Peak	19%	79%	2%	100%

Table 10 – Existing Surveyed Traffic Splits at Survey Junction 2
(East Road / Sheriff Street Upper / New Wapping Street)

From/To	East Road	Sheriff St Upper (East)	Sheriff St Upper (West)	TOTAL
Traffic TO New Wapping Street (to South)				
AM Peak	73%	7%	20%	100%
PM Peak	64%	13%	23%	100%
Traffic FROM New Wapping Street (from South)				
AM Peak	41%	6%	53%	100%
PM Peak	55%	5%	40%	100%

4.3 Committed Development Trip Generation and Distribution

The vehicular trips predicted to be generated by the 2no. committed developments identified in sub-section 3.5 have been included in background traffic flows for future assessment years.

The proposed hotel and office development granted permission at Spencer Place, North Wall Quay (planning application ref. DSDZ2661/17) is located to the south of the subject development site and includes a vehicular access on New Wapping Street, between Mayor Street Upper and North Wall Quay.

Table 11 – TRICS Rates for Committed Development DSDZ2661/17

	Arrivals per 100m² GFA		Departures per 100m² GFA	
	Offices	Hotel	Offices	Hotel
AM Peak	1.429	0.170	0.172	0.273
PM Peak	0.143	0.247	1.393	0.184

Table 11 gives the TRICS trip generation rates applied to the committed development, for the AM and PM peak periods of the present assessment.

These differ slightly from the TRICS rates employed in the Traffic and Transportation Report prepared by CS Consulting in relation to planning application ref. DSDZ2661/17, as the traffic surveys informing that previous assessment identified different local peak flow hours to those applicable to the present development.

This committed development includes office space with a total GFA of 47,057m^2, as well as a hotel with a total GFA of 9,205m^2. Trip generation for the office element of the committed development is however constrained by the car parking provision of 118no. spaces for this element. Table 12 gives the resulting arrival and departure trips that are predicted to be generated by this development.

Table 12 – Trip Generation of Committed Development DSDZ2661/17

	Arrival Trips per hour	Departure Trips per hour	Total Trips per hour
Offices			
AM Peak	118	15	133
PM Peak	12	118	130
Hotel			
AM Peak	16	25	41
PM Peak	23	17	40
Development Totals			
AM Peak	134	40	174
PM Peak	35	135	170

For the purposes of the present traffic impact assessment, the predicted traffic flows to and from this committed development have been allocated the initial north/south directional splits outlined in the Traffic and Transportation Report prepared by CS Consulting in relation to planning application ref. DSDZ2661/17. At Junction 1 of the present assessment,

however, this committed development traffic has been distributed according to the directional splits currently observed at this junction for traffic to/from the south (as given in Table 13). At Junction 2, this traffic has been distributed in accordance with the directional splits used for the subject development, as given in Table 10.

Table 13 – Existing Surveyed Traffic Splits at Survey Junction 1
(New Wapping Street / Mayor Street Upper)

From/To	New Wapping St (North)	Mayor St Upper (East)	Mayor St Upper (West)	TOTAL
Traffic TO New Wapping Street (to South)				
AM Peak	95%	5%	0%	100%
PM Peak	87%	8%	5%	100%
Traffic FROM New Wapping Street (from South)				
AM Peak	94%	6%	0%	100%
PM Peak	95%	3%	2%	100%

The committed residential development to the east of the subject site (planning application ref. DSDZ3357/17) comprises 360no. apartment units, with 283no. car parking spaces that are accessed from New Wapping Street. The trip generation for this committed development – given in Table 14 – has therefore been calculated on the basis of the TRICS trip rates given in Table 3, and the predicted traffic flows to and from this development have been distributed in accordance with the directional splits used for the subject development, as given in Table 8 to Table 10.

Table 14 – Trip Generation of Committed Development DSDZ3357/17

	Arrival Trips per hour	Departure Trips per hour	Total Trips per hour
AM Peak	12	35	47
PM Peak	48	33	81

The traffic flows predicted to be generated by both committed developments been included under both the 'Without Development' and 'With Development' scenarios for each assessment year in the assessments detailed in the following section of this report.

4.4 Future Year Traffic Growth

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

- 2019 Base Year
- 2022 Proposed opening year
- 2027 5 years after opening
- 2032 10 years after opening
- 2037 Design year (15 years after opening)

Unit 5.5 of the TII *Project Appraisal Guidelines* (*Link-Based Traffic Growth Forecasting*) has been used to apply growth factors to the existing traffic flows for the future year junction assessments. The factors applied are as follows:

Table 15 – Predicted Background Traffic Growth [1]

2019	2022	2027	2032	2037
+ 0.4%	+ 1.0%	+ 2.0%	+ 3.0%	+ 4.1%

[1] Cumulative percentage increases over 2017 surveyed traffic levels.

5.0 OPERATIONAL ASSESSMENT

5.1 Introduction

To determine the likely traffic impact of the proposed development, capacity assessments of the following linked existing and future signalised junctions have been undertaken for the AM and PM peak hours using the computer program TRANSYT.

Existing junctions

J1. New Wapping Street / Mayor Street Upper
(4-arm signal-controlled junction)

J2. East Road / Sheriff Street Upper / New Wapping Street
(4-arm signal-controlled junction)

Proposed future junctions

J3. New Wapping Street / Development Access (South)
(3-arm priority-controlled junction)

J4. New Wapping Street / Development Access (North)
(3-arm priority -controlled junction)

The tables provided in this section of the report summarise the performances of these junctions in 2019 (the base year), in 2022 (the planned year of opening), in 2027 (five years after development completion), in 2032 (ten years after development completion), and in 2037 (the design year; fifteen years after the completion of the development), using the existing and predicted general and light rail traffic flows given in Appendix C.

In the absence of information regarding future changes to Luas frequencies on the Red Line, the volume of light rail traffic at the assessed New Wapping Street / Mayor Street Upper junction during peak hours has been maintained throughout at existing levels.

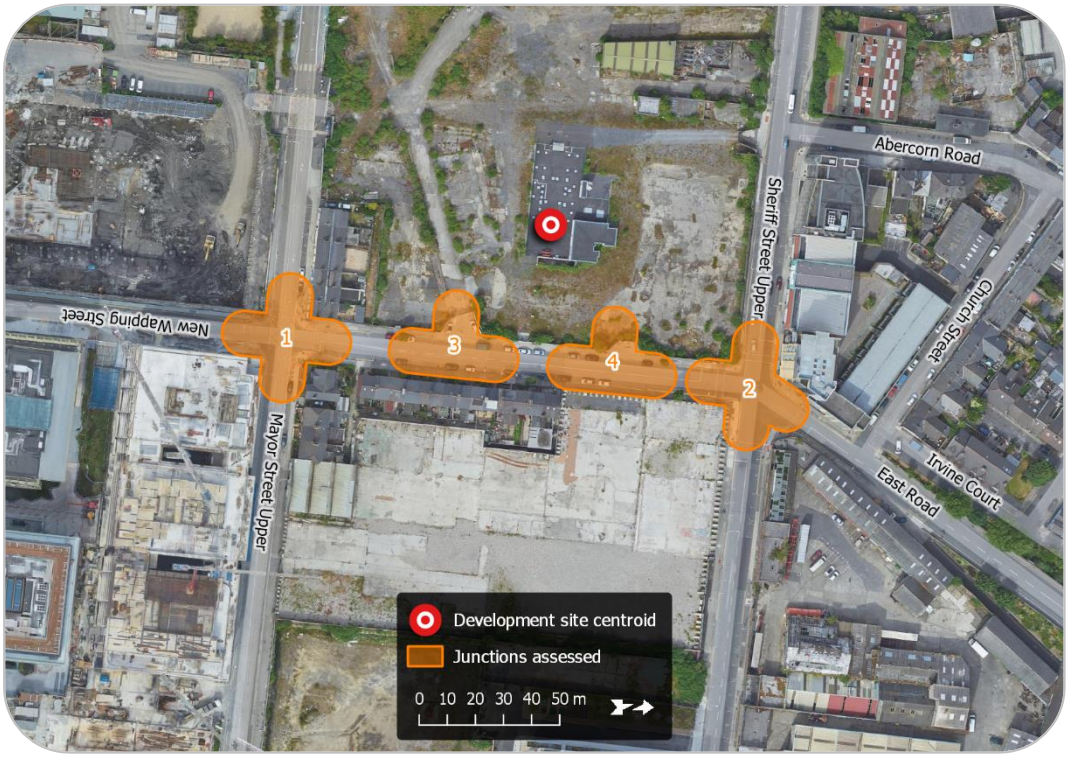


Figure 10 – Assessed road junctions
(*map data & imagery: OSM Contributors, Google*)

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

5.2 Definitions

Degree of Saturation:

The ratio of flow to capacity (also known as RFC) on a link or traffic stream. Account is taken of the green time given to the link per cycle when calculating this value, as well blocking effects and oversaturation effects.

Maximum Queue at End of Red:

The maximum length of queue in any lane of a signal-controlled junction approach link by the end of the red signal phase for that approach, measured in Passenger Car Units (PCUs). Given in the following tables for signal-controlled junction approaches only.

Mean Maximum Queue

The highest estimated mean number of Passenger Car Units (PCUs) queued in any lane of a junction approach link, averaged over the entire analysis period. Given in the following tables for priority-controlled junction approaches only.

Mean Delay per PCU:

The average delay incurred by a vehicle on a junction approach link or traffic stream, as a result of having to queue at signals or having to give way at a priority junction.

Practical Reserve Capacity:

The percentage by which the arrival rate on a stream could increase before the stream would be at practical capacity (i.e. 85% saturation).

5.3 2019 – Existing (Base Year Assessment)

The assessment results summarised in the following table indicate that the existing junctions of New Wapping Street with Mayor Street Upper and Sheriff Street Upper currently operate within their respective effective capacities during the AM and PM peak hour periods. Queues and delays on the majority of junction approaches are low, with the exception of the northern and western approaches to the East Road / Sheriff Street Upper / New Wapping Street junction.

Table 16 – 2019 Assessment (existing conditions)

Junction Approach Arm	Degree of Saturation (%)		Max. End of Red Queue (PCU)		Mean Maximum Queue (PCU)		Mean Delay per PCU (seconds)		Practical Reserve Capacity (%)	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
J1: New Wapping St (N) / Mayor St (E) / New Wapping St (S) / Mayor St (W)										
New Wapping St (North)	27	9	2	1	n/a	n/a	4	7	238	952
Mayor St Upper (East)	24	7	1	0	n/a	n/a	61	51	270	1241
New Wapping St (South)	11	15	1	2	n/a	n/a	6	8	734	494
Mayor St Upper (West)	6	8	0	0	n/a	n/a	55	52	1402	993
J2: East Road / Sheriff St Upper (East) / New Wapping St / Sheriff St Upper (West)										
East Road	85	54	11	4	n/a	n/a	37	42	6	65
Sheriff St Upper (East)	24	17	2	2	n/a	n/a	33	15	269	415
New Wapping St	13	33	2	2	n/a	n/a	13	26	570	176
Sheriff St Upper (West)	82	51	10	7	n/a	n/a	57	19	10	77

5.4 2022 – Opening Year Assessment (Without Development)

The assessment results summarised in the following table indicate that the existing New Wapping Street / Mayor Street Upper junction shall continue to operate within its effective capacity during the AM and PM peak hour periods in the year 2022, with limited queues and delays on junction approaches.

The existing East Road / Sheriff Street Upper / New Wapping Street junction shall exceed its effective capacity on the northern and western approaches during the AM peak hour, as a result of background traffic growth and traffic related to nearby committed developments. All junction approaches shall however continue to operate within their ultimate capacities.

Table 17 – 2022 Assessment (WITHOUT development)

Junction Approach Arm	Degree of Saturation (%)		Max. End of Red Queue (PCU)		Mean Maximum Queue (PCU)		Mean Delay per PCU (seconds)		Practical Reserve Capacity (%)	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
J1: New Wapping St (N) / Mayor St (E) / New Wapping St (S) / Mayor St (W)										
New Wapping St (North)	36	11	2	1	n/a	n/a	5	6	151	733
Mayor St Upper (East)	29	9	1	0	n/a	n/a	63	52	209	932
New Wapping St (South)	14	26	2	3	n/a	n/a	7	9	543	246
Mayor St Upper (West)	6	12	0	0	n/a	n/a	55	54	1381	649
J2: East Road / Sheriff St Upper (East) / New Wapping St / Sheriff St Upper (West)										
East Road	95	53	16	5	n/a	n/a	61	35	-5	69
Sheriff St Upper (East)	26	21	2	2	n/a	n/a	34	20	249	321
New Wapping St	20	48	3	4	n/a	n/a	14	23	360	89
Sheriff St Upper (West)	91	61	13	9	n/a	n/a	76	27	-1	47

5.5 2022 – Opening Year Assessment (With Development)

Table 18 – 2022 Assessment (WITH development)

Junction Approach Arm	Degree of Saturation (%)		Max. End of Red Queue (PCU)		Mean Maximum Queue (PCU)		Mean Delay per PCU (seconds)		Practical Reserve Capacity (%)	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
J1: New Wapping St (N) / Mayor St (E) / New Wapping St (S) / Mayor St (W)										
New Wapping St (North)	37	11	3	1	n/a	n/a	5	6	143	719
Mayor St Upper (East)	29	9	1	0	n/a	n/a	63	52	209	932
New Wapping St (South)	14	28	2	4	n/a	n/a	7	9	531	218
Mayor St Upper (West)	6	13	0	0	n/a	n/a	55	54	1381	609
J2: East Road / Sheriff St Upper (East) / New Wapping St / Sheriff St Upper (West)										
East Road	96	55	17	5	n/a	n/a	62	34	-6	63
Sheriff St Upper (East)	27	23	2	2	n/a	n/a	34	21	235	294
New Wapping St	23	52	3	5	n/a	n/a	13	23	294	74
Sheriff St Upper (West)	95	66	15	10	n/a	n/a	94	30	-6	37
J3: New Wapping St (S) / Southern Development Access / New Wapping St (N)										
New Wapping St (South)	0	0	n/a	n/a	0	0	0	0	n/a	n/a
Southern Dev. Access	3	3	n/a	n/a	0	0	0	0	2632	3165
New Wapping St (North)	26	10	n/a	n/a	0	0	0	0	248	821
J4: New Wapping St (S) / Northern Development Access / New Wapping St (N)										
New Wapping St (South)	0	0	n/a	n/a	0	0	0	0	n/a	n/a
Northern Dev. Access	6	5	n/a	n/a	0	0	0	0	1465	1695
New Wapping St (North)	26	13	n/a	n/a	0	0	0	0	245	567

The assessment results summarised in the preceding table indicate that the proposed development shall have a negligible impact upon the operation of the existing junctions of New Wapping Street with Mayor Street Upper and Sheriff Street Upper. With the proposed development in place, saturation levels, queues, and delays on all approaches to these junctions during the AM and PM peak periods remain at similar levels to those modelled under the 'Without Development' scenario in the year 2022.

The 2no. proposed new priority-controlled development access junctions on New Wapping Street shall operate within their effective capacities during the AM and PM peak periods in the year 2022, with negligible queues and delays experienced on junction approaches. Most importantly, no traffic queueing along New Wapping Street shall result from the addition of these junctions, and the operation of Luas light rail services along Mayor Street Upper shall not be affected.

5.6 2027 Assessment (Without Development)

The assessment results summarised in the following table indicate that the existing New Wapping Street / Mayor Street Upper junction shall continue to operate within its effective capacity during the AM and PM peak hour periods in the year 2027, with limited queues and delays on junction approaches.

The existing East Road / Sheriff Street Upper / New Wapping Street junction shall exceed its effective capacity on the northern and western approaches during the AM peak hour, as a result of background traffic growth and traffic related to nearby committed developments. All junction approaches shall however continue to operate within their ultimate capacities.

Table 19 – 2027 Assessment (WITHOUT development)

Junction Approach Arm	Degree of Saturation (%)		Max. End of Red Queue (PCU)		Mean Maximum Queue (PCU)		Mean Delay per PCU (seconds)		Practical Reserve Capacity (%)	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
J1: New Wapping St (N) / Mayor St (E) / New Wapping St (S) / Mayor St (W)										
New Wapping St (North)	36	11	2	1	n/a	n/a	5	6	149	726
Mayor St Upper (East)	30	9	1	0	n/a	n/a	63	52	199	932
New Wapping St (South)	14	26	2	3	n/a	n/a	7	9	539	244
Mayor St Upper (West)	6	12	0	0	n/a	n/a	55	54	1377	649
J2: East Road / Sheriff St Upper (East) / New Wapping St / Sheriff St Upper (West)										
East Road	96	54	17	5	n/a	n/a	66	36	-6	67
Sheriff St Upper (East)	26	22	2	2	n/a	n/a	34	20	243	312
New Wapping St	20	48	3	4	n/a	n/a	14	23	358	87
Sheriff St Upper (West)	92	62	13	9	n/a	n/a	80	27	-3	46

5.7 2027 – Assessment 5 years after completion (With Development)

Table 20 – 2027 Assessment (WITH development)

Junction Approach Arm	Degree of Saturation (%)		Max. End of Red Queue (PCU)		Mean Maximum Queue (PCU)		Mean Delay per PCU (seconds)		Practical Reserve Capacity (%)	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
J1: New Wapping St (N) / Mayor St (E) / New Wapping St (S) / Mayor St (W)										
New Wapping St (North)	37	11	3	1	n/a	n/a	5	6	141	728
Mayor St Upper (East)	30	11	1	0	n/a	n/a	63	55	199	724
New Wapping St (South)	14	28	2	4	n/a	n/a	7	8	528	225
Mayor St Upper (West)	6	16	0	0	n/a	n/a	55	58	1377	458
J2: East Road / Sheriff St Upper (East) / New Wapping St / Sheriff St Upper (West)										
East Road	97	56	18	5	n/a	n/a	67	35	-7	62
Sheriff St Upper (East)	27	23	2	2	n/a	n/a	35	21	232	286
New Wapping St	23	52	3	5	n/a	n/a	13	24	294	74
Sheriff St Upper (West)	96	66	16	10	n/a	n/a	100	30	-7	36
J3: New Wapping St (S) / Southern Development Access / New Wapping St (N)										
New Wapping St (South)	0	0	n/a	n/a	0	0	0	0	n/a	n/a
Southern Dev. Access	3	3	n/a	n/a	0	0	0	0	2630	3162
New Wapping St (North)	26	10	n/a	n/a	0	0	0	0	246	816
J4: New Wapping St (S) / Northern Development Access / New Wapping St (N)										
New Wapping St (South)	0	0	n/a	n/a	0	0	0	0	n/a	n/a
Northern Dev. Access	6	5	n/a	n/a	0	0	0	0	1463	1694
New Wapping St (North)	26	14	n/a	n/a	0	0	0	0	243	564

The assessment results summarised in the preceding table indicate that the proposed development shall have a negligible impact upon the operation of the existing junctions of New Wapping Street with Mayor Street Upper and Sheriff Street Upper. With the proposed development in place, saturation levels, queues, and delays on all approaches to these junctions during the AM and PM peak periods remain at similar levels to those modelled under the 'Without Development' scenario in the year 2027.

The 2no. proposed new priority-controlled development access junctions on New Wapping Street shall operate within their effective capacities during the AM and PM peak periods in the year 2027, with negligible queues and delays experienced on junction approaches. Most importantly, no traffic queueing along New Wapping Street shall result from the addition of these junctions, and the operation of Luas light rail services along Mayor Street Upper shall not be affected.

5.8 2032 Assessment (Without Development)

The assessment results summarised in the following table indicate that the existing New Wapping Street / Mayor Street Upper junction shall continue to operate within its effective capacity during the AM and PM peak hour periods in the year 2032, with limited queues and delays on junction approaches.

The existing East Road / Sheriff Street Upper / New Wapping Street junction shall exceed its effective capacity on the northern and western approaches during the AM peak hour, as a result of background traffic growth and traffic related to nearby committed developments. All junction approaches shall however continue to operate within their ultimate capacities.

Table 21 – 2032 Assessment (WITHOUT development)

Junction Approach Arm	Degree of Saturation (%)		Max. End of Red Queue (PCU)		Mean Maximum Queue (PCU)		Mean Delay per PCU (seconds)		Practical Reserve Capacity (%)	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
J1: New Wapping St (N) / Mayor St (E) / New Wapping St (S) / Mayor St (W)										
New Wapping St (North)	37	11	2	1	n/a	n/a	5	6	147	726
Mayor St Upper (East)	30	9	1	0	n/a	n/a	63	52	199	932
New Wapping St (South)	14	26	2	3	n/a	n/a	7	9	535	242
Mayor St Upper (West)	6	12	0	0	n/a	n/a	55	54	1377	649
J2: East Road / Sheriff St Upper (East) / New Wapping St / Sheriff St Upper (West)										
East Road	97	55	18	5	n/a	n/a	70	36	-7	65
Sheriff St Upper (East)	27	22	2	2	n/a	n/a	34	20	236	310
New Wapping St	20	48	3	4	n/a	n/a	14	23	355	87
Sheriff St Upper (West)	93	63	14	9	n/a	n/a	84	27	-4	44

5.9 2032 Assessment (With Development)

Table 22 – 2032 Assessment (WITH development)

Junction Approach Arm	Degree of Saturation (%)		Max. End of Red Queue (PCU)		Mean Maximum Queue (PCU)		Mean Delay per PCU (seconds)		Practical Reserve Capacity (%)	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
J1: New Wapping St (N) / Mayor St (E) / New Wapping St (S) / Mayor St (W)										
New Wapping St (North)	38	11	3	1	n/a	n/a	5	6	140	721
Mayor St Upper (East)	30	11	1	0	n/a	n/a	63	55	199	724
New Wapping St (South)	14	28	2	4	n/a	n/a	7	8	524	224
Mayor St Upper (West)	6	16	0	0	n/a	n/a	55	58	1377	458
J2: East Road / Sheriff St Upper (East) / New Wapping St / Sheriff St Upper (West)										
East Road	97	56	19	5	n/a	n/a	72	35	-8	60
Sheriff St Upper (East)	28	23	2	2	n/a	n/a	35	21	223	285
New Wapping St	23	52	3	5	n/a	n/a	13	24	291	73
Sheriff St Upper (West)	97	67	17	10	n/a	n/a	105	30	-7	34
J3: New Wapping St (S) / Southern Development Access / New Wapping St (N)										
New Wapping St (South)	0	0	n/a	n/a	0	0	0	0	n/a	n/a
Southern Dev. Access	3	3	n/a	n/a	0	0	0	0	2628	3160
New Wapping St (North)	26	10	n/a	n/a	0	0	0	0	243	811
J4: New Wapping St (S) / Northern Development Access / New Wapping St (N)										
New Wapping St (South)	0	0	n/a	n/a	0	0	0	0	n/a	n/a
Northern Dev. Access	6	5	n/a	n/a	0	0	0	0	1461	1693
New Wapping St (North)	26	14	n/a	n/a	0	0	0	0	240	561

The assessment results summarised in the preceding table indicate that the proposed development shall have a negligible impact upon the operation of the existing junctions of New Wapping Street with Mayor Street Upper and Sheriff Street Upper. With the proposed development in place, saturation levels, queues, and delays on all approaches to these junctions during the AM and PM peak periods remain at similar levels to those modelled under the 'Without Development' scenario in the year 2032.

The 2no. proposed new priority-controlled development access junctions on New Wapping Street shall operate within their effective capacities during the AM and PM peak periods in the year 2032, with negligible queues and delays experienced on junction approaches. Most importantly, no traffic queueing along New Wapping Street shall result from the addition of these junctions, and the operation of Luas light rail services along Mayor Street Upper shall not be affected.

5.10 2037 Assessment (Without Development)

The assessment results summarised in the following table indicate that the existing New Wapping Street / Mayor Street Upper junction shall continue to operate within its effective capacity during the AM and PM peak hour periods in the year 2037, with limited queues and delays on junction approaches.

The existing East Road / Sheriff Street Upper / New Wapping Street junction shall exceed its effective capacity on the northern and western approaches during the AM peak hour, as a result of background traffic growth and traffic related to nearby committed developments. All junction approaches shall however continue to operate within their ultimate capacities.

Table 23 – 2037 Assessment (WITHOUT development)

Junction Approach Arm	Degree of Saturation (%)		Max. End of Red Queue (PCU)		Mean Maximum Queue (PCU)		Mean Delay per PCU (seconds)		Practical Reserve Capacity (%)	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
J1: New Wapping St (N) / Mayor St (E) / New Wapping St (S) / Mayor St (W)										
New Wapping St (North)	37	11	3	1	n/a	n/a	5	6	144	720
Mayor St Upper (East)	30	9	1	0	n/a	n/a	63	52	199	932
New Wapping St (South)	14	26	2	3	n/a	n/a	7	9	532	241
Mayor St Upper (West)	6	12	0	0	n/a	n/a	55	54	1377	649
J2: East Road / Sheriff St Upper (East) / New Wapping St / Sheriff St Upper (West)										
East Road	97	55	18	5	n/a	n/a	67	36	-7	63
Sheriff St Upper (East)	28	22	2	2	n/a	n/a	35	20	222	301
New Wapping St	20	48	3	4	n/a	n/a	13	23	358	86
Sheriff St Upper (West)	97	63	16	9	n/a	n/a	102	28	-7	43

5.11 2037 – Assessment 15 years after completion (With Development)

Table 24 – 2037 Assessment (WITH development)

Junction Approach Arm	Degree of Saturation (%)		Max. End of Red Queue (PCU)		Mean Maximum Queue (PCU)		Mean Delay per PCU (seconds)		Practical Reserve Capacity (%)	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
J1: New Wapping St (N) / Mayor St (E) / New Wapping St (S) / Mayor St (W)										
New Wapping St (North)	38	11	3	1	n/a	n/a	5	6	138	705
Mayor St Upper (East)	30	10	1	0	n/a	n/a	63	53	199	828
New Wapping St (South)	15	28	2	4	n/a	n/a	7	8	517	218
Mayor St Upper (West)	6	14	0	0	n/a	n/a	55	56	1377	534
J2: East Road / Sheriff St Upper (East) / New Wapping St / Sheriff St Upper (West)										
East Road	98	57	20	5	n/a	n/a	79	35	-9	58
Sheriff St Upper (East)	28	24	2	2	n/a	n/a	35	21	220	274
New Wapping St	23	52	3	5	n/a	n/a	13	24	289	72
Sheriff St Upper (West)	98	67	17	10	n/a	n/a	111	31	-8	33
J3: New Wapping St (S) / Southern Development Access / New Wapping St (N)										
New Wapping St (South)	0	0	n/a	n/a	0	0	0	0	n/a	n/a
Southern Dev. Access	3	3	n/a	n/a	0	0	0	0	2623	3157
New Wapping St (North)	26	10	n/a	n/a	0	0	0	0	240	805
J4: New Wapping St (S) / Northern Development Access / New Wapping St (N)										
New Wapping St (South)	0	0	n/a	n/a	0	0	0	0	n/a	n/a
Northern Dev. Access	6	5	n/a	n/a	0	0	0	0	1459	1691
New Wapping St (North)	27	14	n/a	n/a	0	0	0	0	238	558

The assessment results summarised in the preceding table indicate that the proposed development shall have a negligible impact upon the operation of the existing junctions of New Wapping Street with Mayor Street Upper and Sheriff Street Upper. With the proposed development in place, saturation levels, queues, and delays on all approaches to these junctions during the AM and PM peak periods remain at similar levels to those modelled under the 'Without Development' scenario in the year 2037.

The 2no. proposed new priority-controlled development access junctions on New Wapping Street shall operate within their effective capacities during the AM and PM peak periods in the year 2037, with negligible queues and delays experienced on junction approaches. Most importantly, no traffic queueing along New Wapping Street shall result from the addition of these junctions, and the operation of Luas light rail services along Mayor Street Upper shall not be affected.

6.0 PARKING

6.1 Car Parking Provision

The car parking provision of the proposed development has been assessed with respect to the *Dublin City Development Plan 2016–2022*, which defines the standard maximum car parking provision for new developments by land use type. Table 25 below shows the car parking standards against which the proposed development has been assessed.

As in the case of trip generation (see sub-section 4.1), it has been necessary to employ student accommodation as a proxy for determining the maximum car parking provision applicable to the development's shared accommodation element, as the *Dublin City Development Plan 2016–2022* does not specify car parking standards for shared accommodation developments.

Table 25 – Overall Car Parking Provision

Land Use (Zone 1)	Car Parking Maxima	Quantum	Max. Provision	Proposed Provision
Residential	1 space per dwelling	464 dwellings	464 spaces	78 spaces
Student Accommodation [2]	none	84 units	0 spaces	0 spaces
Total			464 spaces	78 spaces

A total of 78no. car parking spaces shall be provided within 2no. basement-level car parks within the development (42no. car parking spaces below Block 1 and 36no. car parking spaces below Block 2). The car parking

[2] Employed as proxy category for shared accommodation element of proposed development.

provision of the proposed development is therefore below the maximum quantum permitted by the Local Authority development plan.

A further 26no. publicly accessible car parking spaces shall be provided along the new north-south access road between Sheriff Street Upper and Mayor Street Upper, inside the development site's western boundary. As these shall not be assigned specifically to residents of or visitors to the subject development, they are excluded from the total car parking provision given in Table 25.

In relation to car parking provision for apartment developments, the *Dublin City Development Plan 2016–2022* notes that:

> *"Car parking standards are maximum in nature and may be reduced in specific, mainly inner-city locations where it is demonstrated that other modes of transport are sufficient for the needs of residents."*

In addition, the policy document *Sustainable Urban Housing: Design Standards for New Apartments (Guidelines for Planning Authorities)*, published by the Department of Housing, Planning and Local Government in March 2018, gives the following guidance on the provision of residential car parking:

> *"In larger scale and higher density developments, comprising wholly of apartments in more central locations that are well served by public transport, the default policy is for car parking provision to be minimised, substantially reduced or wholly eliminated in certain circumstances. The policies above would be particularly applicable in highly accessible areas such as in or adjoining city cores or at a confluence of public transport systems such rail and bus stations located in close proximity.*
>
> *"These locations are most likely to be in cities, especially in or adjacent to (i.e. within 15 minutes walking distance of) city centres or centrally located employment locations. This includes 10 minutes walking*

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

As detailed in the Mobility Management Plan Framework submitted under separate cover in support of this planning application, the development site is situated in proximity to existing high-quality bus, rail and light rail services through Dublin City, as well as proposed future transport infrastructure. The site benefits from a location close to numerous amenities and centres of employment and is within approximately 20 minutes' walk of O'Connell Bridge, at the heart of the city centre.

The proposed development is therefore considered an exemplary candidate for a limited car parking provision, in accordance with the standards and guidelines set out by Dublin City Council and the Department of Housing, Planning and Local Government.

CSO data drawn from the 2016 census indicate that car ownership rates in the vicinity of the development site are relatively low, supporting the feasibility for residents in this area of eschewing private car use in favour of public and shared transport.

As illustrated in Figure 11, a mean average of 0.76 cars are owned per household in the census Small Area in which the development site is located. Established residential areas immediately to the east and west, however, have lower mean values of cars per household, between 0.28 and 0.54.

The 2016 census data also show that 32% of households in the development site's Small Area do not own a car. This is illustrated in Figure 12. In nearby Small Areas immediately to the east and west, this proportion increases to between 40% and 75%.

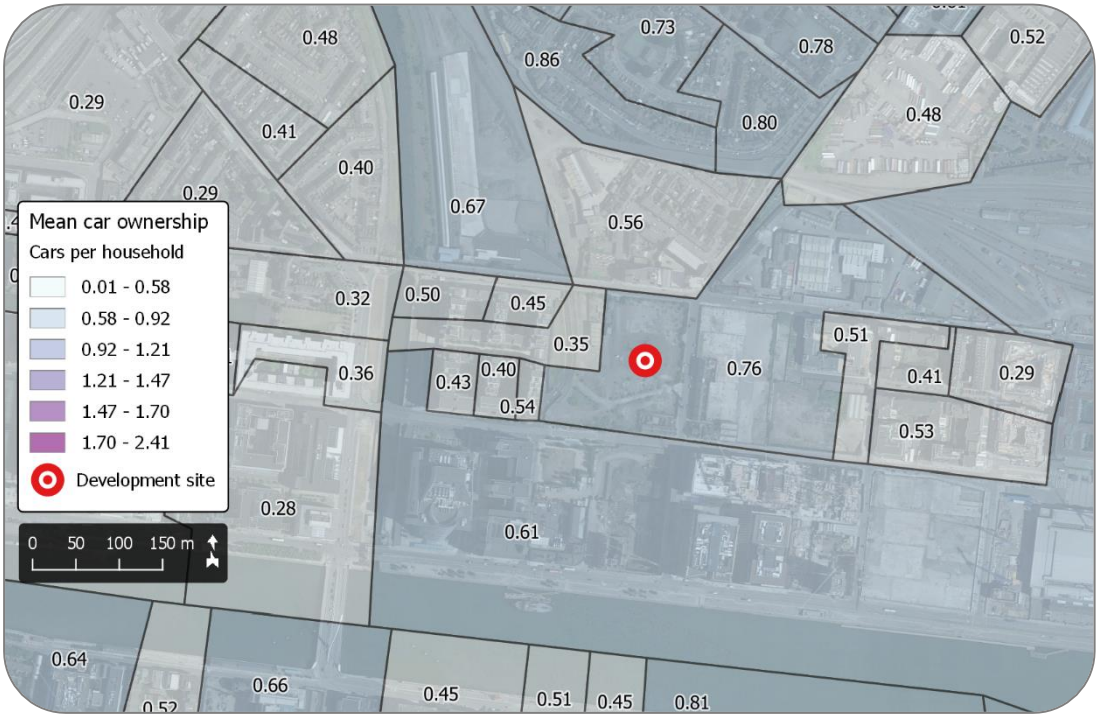


Figure 11 – Mean average number of cars per household, by Small Area
(map data and imagery sources: CSO, Google)

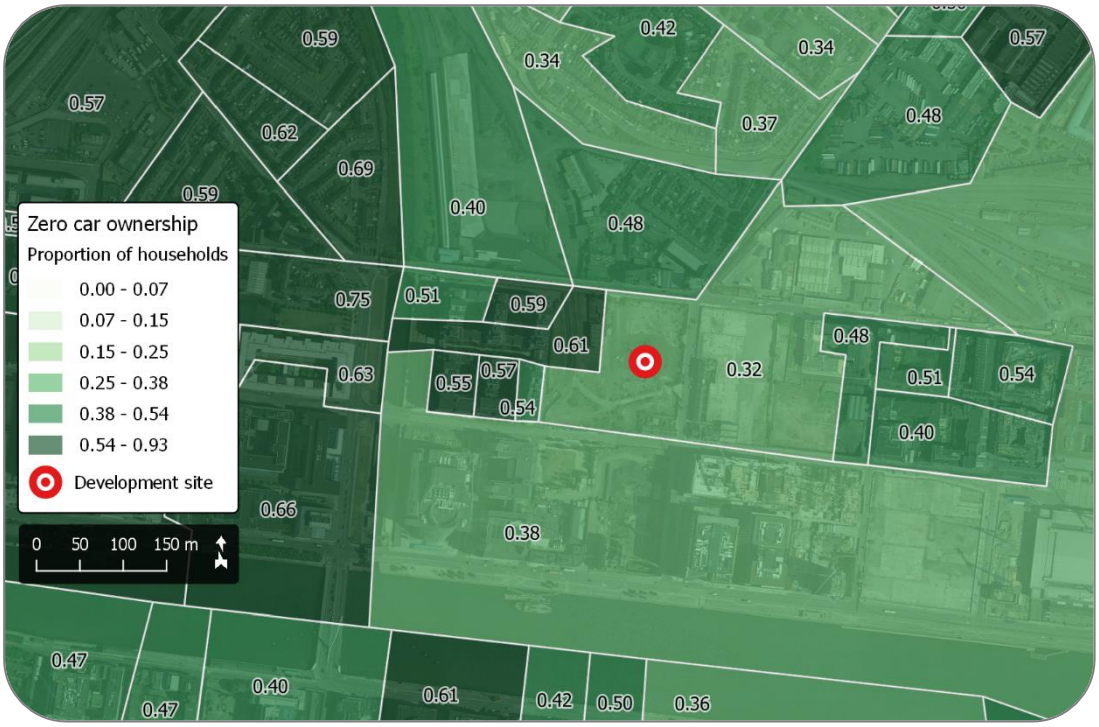


Figure 12 – Proportion of households owning no car, by Small Area
(map data and imagery sources: CSO, Google)

6.2 Allocation of Car Parking

22no. car parking spaces within the development shall be reserved for residential car club vehicles (see sub-section 6.3). The remaining 56no. car parking spaces within the two basement car parks of the proposed development shall be assigned entirely to residents of the apartment units within the development. No car parking spaces shall be allocated to the shared accommodation units.

Of the 26no. publicly accessible car parking spaces to be provided along the new north-south access road, 2no. spaces shall be identified for the preferential use of third-party car sharing operators. Should such an operator (e.g. GoCar, Yuko, or Green Mobility) wish to base one or two of their shared vehicle fleet within the development site, it shall be granted the use of one or both of these preferential spaces. In this way, the development seeks to improve access to car sharing services for the general public in the vicinity of the development site.

6.3 Residential Car Club

A residential car club shall be established for the proposed development, comprising a dedicated fleet of 22no. shared vehicles for the sole use of the development's residents. Refer to the accompanying Mobility Management Plan Framework for further details of the proposed car-sharing/car-club arrangements for the development.

6.4 Disabled-Accessible Car Parking Requirements

The *Dublin City Development Plan 2016–2022* sets out the minimum requirement for the provision of disabled-accessible parking in new developments, as a proportion of the total development car parking provision. Table 26 applies this requirement to the proposed development.

Table 26 – Accessible Car Parking Provision

Proposed Car Parking Provision	Minimum Required Proportion	Accessible Spaces Required	Accessible Spaces Proposed
78 spaces	5%	4	4

2no. accessible spaces are to be provided within each of the basement car parks (4no. accessible spaces in total), located in proximity to lifts serving the upper floors. Minimum vertical clearance of 2.6m is maintained at all accessible spaces, as well as along the access routes to these. The development's provision of disabled-accessible car parking is therefore deemed adequate.

6.5 Motorcycle Parking Requirements

The *Dublin City Development Plan 2016–2022* sets out the standard requirement for the provision of motorcycle parking in new developments, as a proportion of the total development car parking provision. Table 27 applies these requirements to the proposed development.

Table 27 – Motorcycle Parking Provision

Proposed Car Parking Provision	Standard Required Proportion	Motorcycle Spaces Required	Motorcycle Spaces Proposed
78 spaces	4%	3	4

2no. motorcycle parking spaces are to be provided within each of the 2no. basement car parks; suitable rails, hoops or posts shall be provided at these locations, to enable motorcycles to be securely attached. The

development's provision of motorcycle parking is therefore deemed adequate.

6.6 Electric Vehicle Charging Provision

2no. car parking spaces within each of the 2no. basement car parks shall be equipped with charging facilities for electric vehicles, and reserved for their use. All remaining car parking spaces within the development shall be 'future-proofed' by the inclusion of ducting and/or cabling to permit the rapid future installation of EV charging points, as defined in the ESB ecars specification document no. 18017 (*Public Charge Points*, last reviewed February 2012).

6.7 Bicycle Parking Provision

The bicycle parking provision of the proposed development has been assessed with respect to the *Dublin City Development Plan 2016–2022*, which defines the minimum standard bicycle parking provision for new developments by land use type.

Table 28 – Bicycle Parking Provision

Land Use (Zone 1)	Cycle Parking Minima	Quantum	Minimum Provision	Proposed Provision
Residential	1 space per unit	464 dwellings	464 spaces	526 spaces
Student Accommodation[3]	1 space per 2 residents	200 residents	100 spaces	200 spaces
Visitor Bicycle Parking	n/a	n/a	n/a	102 spaces
Totals			564 spaces	828 spaces

[3] Employed as proxy category for shared accommodation element of proposed development

A total of 828no. bicycle parking spaces shall be provided within the development. These shall include 478no. long term storage spaces for residents at basement level below Block 1, 248no. long term storage spaces for residents at basement level below Block 2, and 102no. publicly accessible short-term cycle parking spaces at surface level. As shown in Table 28, the bicycle parking within the proposed development thereby exceeds the minimum provision required by the Local Authority development plan.

As in the case of trip generation (see sub-section 4.1), it has been necessary to employ student accommodation as a proxy for determining the minimum bicycle parking provision applicable to the development's shared accommodation element, as the *Dublin City Development Plan 2016–2022* does not specify bicycle parking standards for shared accommodation developments.

It is acknowledged that the policy document *Sustainable Urban Housing: Design Standards for New Apartments (Guidelines for Planning Authorities)*, published by the Department of Housing, Planning and Local Government in March 2018, states that:

> *"A general minimum standard of 1 cycle storage space per bedroom shall be applied. For studio units, at least 1 cycle storage space shall be provided. Visitor cycle parking shall also be provided at a standard of 1 space per 2 residential units. Any deviation from these standards shall be at the discretion of the planning authority and shall be justified with respect to factors such as location, quality of facilities proposed, flexibility for future enhancement/enlargement, etc."*

Strict application of the above guidelines would result in a quantum of 931no. bicycle parking spaces being required for the apartment element of the proposed development. However, as outlined in sub-section 6.1, the development site benefits from a high level of public transport accessibility

and is within convenient walking distance of Dublin city centre. The proposed bicycle parking provision of 628no. spaces for the residential apartments (including 102no. surface level visitor spaces) is therefore considered adequate.

Table 29 – Bicycle Parking Provision (Apartment Guidelines)

Cycle Parking Recommendation	Quantum	Recommended Provision	Proposed Provision
Long-term bicycle storage			
1 storage space per bedroom	699 bedrooms [4]	699 spaces	526 spaces
Short-stay bicycle parking			
1 visitor parking space per 2 units	464 units [4]	232 spaces	102 spaces
All apartment bicycle parking			
TOTALS [4]		931 spaces	628 spaces

[4] Apartments only; excluding shared accommodation units

7.0 DEVELOPMENT ACCESS, INTERNAL LAYOUT, SWEPT PATHS, PUBLIC TRANSPORT, PEDESTRIANS & CYCLISTS

7.1 Development Accesses

The proposed development incorporates 2no. basement car parks, separated due to the presence of the North Lotts Pumping Station. It is proposed to provide a vehicular access to each of these basements directly from New Wapping Street, at the eastern boundary of the site.

The northern vehicular access (to the Block 1 basement) is to be located approx. 45m to the south of the existing Sheriff Street Upper / New Wapping Street junction; the southern access (to the Block 2 basement) is to be located approx. 55m to the north of the existing Mayor Street Upper / New Wapping Street junction. The two accesses are separated by a distance of approx. 55m along New Wapping Street.

Each of these vehicular accesses shall have a minimum total carriageway width of 7.0m, allowing two-way vehicle entry and exit to/from the development. The design of the accesses ensures that sightlines of 49m are achievable in both directions along New Wapping Street for vehicles exiting the development, in accordance with the requirements of the *Design Manual for Urban Roads and Streets*.

An existing bus stop sign (stop no. 2502) is located on the western side of New Wapping Street, approx. 15m to the south of the development's northern vehicular access and approx. 35m to the north of its southern vehicular access. It is proposed to relocate this bus stop sign approx. 10m to the south, to a point equidistant from the two development accesses.

Stop no. 2502 is no longer a designated Dublin Bus stop, and at present is used only by a private shuttle bus service operating to and from the East Point Business Park. No bus bay (either on-street or recessed) is associated

with this bus stop, and no road markings currently prohibit on-street parking at this location.

7.2 Basement Car Parks

The ground-level vehicular accesses shall lead to service ramps giving access to 2no. basement car parks. The service ramps each have a maximum gradient of 1:6, with transition slopes of 1:12 at either end, in accordance with the standards set out in the IStructE *Design Recommendations for Multi-Storey and Underground Car Parks*.

The basement car park of Block 1 accommodates 42no. car parking spaces, with a minimum internal circulation aisle width of 6.4m; the basement car park of Block 2 accommodates 36no. car parking spaces, with a minimum internal circulation aisle width of 6.0m.

7.3 Surface-Level Internal Site Layout

The internal road layout of the proposed development is designed in accordance with the guidance provided in the *Design Manual for Urban Roads and Streets* (DMURS).

At surface level, the development incorporates the north-south access road between Sheriff Street Upper and Mayor Street Upper, as planned under the *North Lotts and Grand Canal Dock Planning Scheme 2014*. The southern part of this access road shall be restricted to one-way operation in the northbound direction. The north-south access road shall have general carriageway widths of 3.8m along its southern section (one-way traffic) and 6.0m along its northern section (two-way traffic).

26no. publicly accessible parallel car parking spaces shall be located along the new north-south access road within the development site. These shall be 6.0m in length and 2.4m in width, to Dublin City Council standards. A

loading bay 12.0m in length and 2.8m in width shall also be provided on the north-south access road. Car parking spaces and loading facilities along this road are positioned so as to minimise conflicts between vehicle and pedestrian movements.

7.4 Development Servicing

Deliveries, refuse collection, and other servicing of the development shall be conducted primarily via the north-south access road between Sheriff Street Upper and Mayor Street Upper, to be constructed as part of the development. As previously noted, a 12.0m-long loading bay (capable of accommodating up to 2no. service vehicles) shall be provided on this access road.

A service access to the development and to the North Lotts Pumping Station is provided via an internal spur to the east, between blocks 1 and 2 of the proposed development. This is accessible by way of removable bollards and a dropped kerb. With these bollards in place, the service spur entry provides a turning head for larger vehicles.

7.5 Swept Path Analyses

Vehicle swept path analyses have been carried out for cars accessing and circulating within the development's basement car parks, as well as for service vehicles and emergency vehicles accessing the development at surface level. These indicate that the design of the development access and the internal layout can accommodate these vehicle movements where required.

Refer to drawing CS Consulting drawings R043-013, R043-016 and R043-017 for swept path analyses of the development.

7.6 Pedestrians & Cyclists

Pedestrian access to the development shall be accommodated from New Wapping Street, Sheriff Street Upper, and Mayor Street Upper, as well as from the new north-south access road between Sheriff Street Upper and Mayor Street Upper. A stairway is to be provided from New Wapping Street to the spur off the north-south access road, ensuring east-west pedestrian permeability through the site. The proposed development will incorporate the provision of increased footpath width along a section of New Wapping Street.

726no. cycle parking spaces are to be located at basement level within the development (478no. spaces in the basement of Block 1 and 248no. spaces in the basement of Block 2). Access to the two basements for cyclists shall be provided from New Wapping Street, via dedicated entrances and internal staircases located adjacent to the vehicular access ramps.

An additional 84no. publicly accessible short-stay bicycle parking spaces for visitors shall be provided externally at surface level within the development, and a further 18no. visitor bicycle parking spaces provided internally at ground floor level, giving a total bicycle parking provision of 828no. spaces.

7.7 Public Transport Facilities

For details of existing public transport provision in the vicinity of the proposed development, as well as proposed future improvements to public transport infrastructure, refer to the Mobility Management Plan Framework submitted under separate cover in support of this application.

7.8 Potential for Impact on Public Transport Service Levels

As noted in sub-section 6.1, and as outlined in the Mobility Management Plan Framework submitted in support of this planning application, it is envisaged that public transport shall occupy a relatively high modal share of journeys made to and from the proposed development by residents and visitors. The existing light and medium rail lines that serve the Docklands Strategic Development Zone (the Luas Red Line and the commuter train service to Docklands station) are employed by significant numbers of people commuting to places of employment in the SDZ.

Given the high concentration of employment in the immediate vicinity of the proposed development, it is expected that a significant proportion of its residents shall be able to walk or cycle to and from work on a daily basis, without using public transport. Moreover, those residents that do commute regularly by tram or train shall be travelling in the opposite direction to the majority of journeys made on these services at peak times. For these reasons, the proposed development is not expected to have a detrimental effect on the service level of these public transport facilities.

7.9 Quality Audit

An independent Quality Audit has been conducted by Roadplan Consulting in respect of the proposed development, as part of this planning application. All recommendations made within this Audit have been acknowledged by the design team. All measures adopted in response to the Quality Audit have been accepted by the Audit Team.

The independent Quality Audit is included as Appendix F.

8.0 SUMMARY & CONCLUSIONS

This report examines the impact of a proposed strategic housing development of 464no. apartment units and the change of use of the permitted aparthotel development to shared accommodation at City Block 2, Spencer Dock, Dublin 1 on the performance of the surrounding road network, and assesses the internal development layout, car parking provision, and cyclist and pedestrian facilities.

The main conclusions of this study are as follows:

- The proposed development shall not generate excessive traffic flows during peak hour periods and shall not have a detrimental impact on the operation of the surrounding road network.
- The existing signal-controlled Mayor Street Upper / New Wapping Street junction will be able to operate within effective capacity when the development is completed in 2022; in 2027, 5 years after opening; in 2032, 10 years after completion; and in 2037, 15 years after development completion. Vehicle queues and delays on all approaches to this junction shall remain at levels similar to those currently existing. Traffic related to the proposed development shall have a negligible influence on the operation of this junction.
- The existing signal-controlled Sheriff Street Upper / East Road / New Wapping Street junction will be able to operate within ultimate capacity when the development is completed in 2022; in 2027, 5 years after opening; in 2032, 10 years after completion; and in 2037, 15 years after development completion. The northern and western approaches to this junction currently operate at effective capacity during the AM peak period; these approaches shall exceed effective capacity from 2022 onwards, under the influence of background traffic growth and other committed development, but shall continue to operate within ultimate

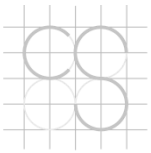
capacity beyond 2037. Traffic related to the proposed development shall have a negligible influence on the operation of this junction.

- The 2no. proposed priority-controlled development access junctions on New Wapping Street will be able to operate within their effective capacities and with negligible queues and delays when the development is completed in 2022; in 2027, 5 years after opening; in 2032, 10 years after completion; and in 2037, 15 years after development completion.
- The proposed development access junctions shall not result in any increase in vehicle queueing on New Wapping Street and shall not impact upon the operation of Luas light rail services along Mayor Street Upper.
- The car parking to be provided in the proposed development does not exceed Local Authority standards and is aligned with development guidance from the Department of Housing, Planning and Local Government.
- Adequate numbers of bicycle parking spaces, motorcycle parking spaces, and disabled-accessible car parking spaces are to be provided within the proposed development.
- Swept path analyses have been carried out for cars accessing and circulating within the development's basement car parks, as well as for cars, service vehicles and emergency vehicles accessing the development at surface level. These indicate that the design of the development access and the internal layout can accommodate these vehicle movements where required.
- An independent Quality Audit has been conducted by Roadplan Consulting; all items raised in this Audit have been responded to, and all measures adopted in response have been accepted by the Audit Team.

In summary, the assessment indicates that the proposed development can be supported by the existing road infrastructure, that the internal road layout of the proposed development is fit for purpose, and that the parking provision for the proposed development conforms to Local Authority standards.

Appendix A

Traffic Survey Data



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CS CONSULTNG
SPENCER DOCK
TRAFFIC SURVEY

SURVEY REPORT
OCTOBER 2017

PROJECT NO.	7973
CHECKED	P. MURRAY
DATE	06/10/2017
CONTACT	A.CHAMBERS
REVISION	

Email: enquiries@nationwidedatacollection.ie
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Appendix A – Vehicle Categories

INTRODUCTION

Nationwide Data Collection (NDC) was instructed by CS Consulting to undertake junction turning counts in Dublin City Centre.

A general location plan is given in Diagram 7973-01.

JUNCTION TURNING COUNTS

Junction turning counts were undertaken at the following sites:

Site No.	Location.	Day / Date
1	New Wapping Street(N) / Mayor Street Upper(W) / New Wapping Street(S) / Mayor Street Upper(E)	Wednesday 4th October 2017
2	East Road / Sheriff Street Upper(W) / New Wapping Street / Sheriff Street Upper(E)	

All sites were surveyed using telescopically mounted video cameras from which the information was subsequently extracted. Details of the observed movements are given in Drawing 7973-01.

The survey was carried out with survey hours of 07:00 to 19:00. All information was collected in 15 minute intervals and has been tabulated with both hourly and period totals.

Vehicles were classified into the following categories:

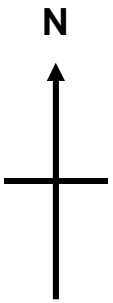
- Cars and Taxis (**CAR**)
- Light Goods Vehicles (**LGV**),
- Other Goods Vehicles - type 1 (**OGV1**),
- Other Goods Vehicles - type 2 (**OGV2**),
- Buses (**PSV**),
- Luas – Site 1 only.

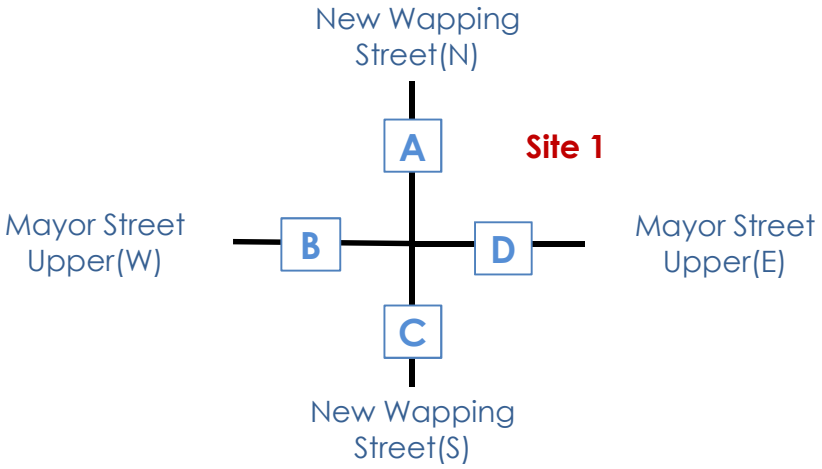
A detailed description of the vehicles included in each category is provided in Appendix A.

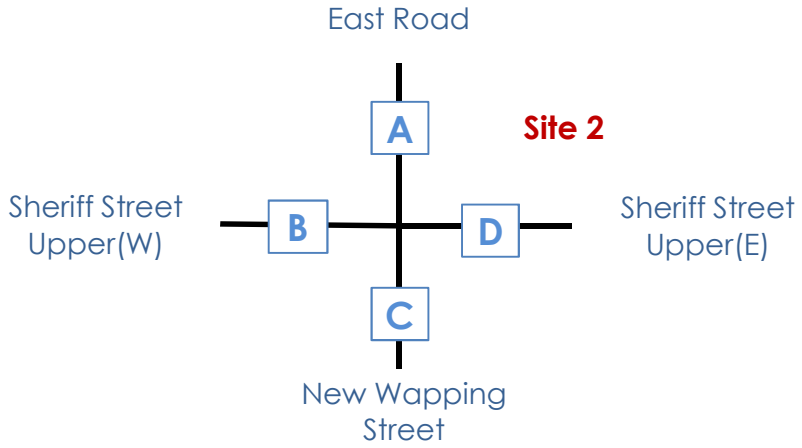
SITE REPORT

Weather	Clear in the AM, rain in the PM
Accidents	Luas accident at Queen street at approx. 10:39 closing red line to/from The Point.
Roadworks	None.
Queues	Not required.
Pedestrians	Not required.
General Site Notes.	No additional notes.

NDC NATIONWIDE DATA COLLECTION	**Sites / Location:**	1 & 2 / Spencer Dock	**Project No:**	7973	**Diagram No:**	7973-01	**Drawn By:**	AC
	Survey Date:	Wednesday 4th October 2017	**Project Name:**	SPENCER DOCK				
	Survey Times:	07:00 to 19:00	**Diagram Title:**	General Location Plan				

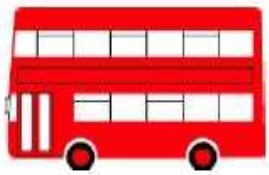






NDC NATIONWIDE DATA COLLECTION	**Sites / Location:**	1 & 2 / Spencer Dock	**Project No:**	7973	**Drawing No:**	7973-01	**Drawn By:**	AC
	Survey Date:	Wednesday 4th October 2017	**Project Name:**	SPENCER DOCK				
	Survey Times:	07:00 to 19:00	**Drawing Title:**	Site Layout and Observed Movements				

COBA VEHICLE CATEGORIES

CAR	 SALOON  ESTATE  PEOPLE CARRIER  CAR TOWING CARAVAN / TRAILER
LIGHT GOODS VEHICLE (LGV)	 VAN  <3.5 TONNES – single rear tyres  PICK-UP
OTHER GOODS VEHICLE (OGV1)	 > 3.5 TONNES – twin rear tyres  2-AXLES RIGID  2-AXLES RIGID  3 AXLES-RIGID
OTHER GOODS VEHICLE (OGV2)	 4 OR MORE AXLES RIGID  3-AXLES ARTIC  4 OR MORE AXLES ARTIC  OTHER GOODS VEHICLE WITH TRAILER
BUSES & COACHES (PSV)	 DOUBLE DECK BUS  SINGLE DECK BUS OR COACH

COBA VEHICLE CATEGORIES

Definition of Categories

The various components of traffic have different characteristics in terms of operating costs, growth and occupancy. The most common categories into which the traffic is split in COBA; these are defined as:

Cars (CARS)

Including taxis, estate cars, 'people carriers' and other passenger vehicles (for example, minibuses and camper vans) with a gross vehicle weight of less than 3.5 tonnes, normally ones which can accommodate not more than 15 seats. Three-wheeled cars, motor invalid carriages, Land Rovers, Range Rovers and Jeeps and smaller ambulances are included. Cars towing caravans or trailers are counted as one vehicle unless included as a separate class.

Light Goods Vehicles (LGV)

Includes all goods vehicles up to 3.5 tonnes gross vehicle weight (goods vehicles over 3.5 tonnes have sideguards fitted between axles), including those towing a trailer or caravan. This includes all car delivery vans and those of the next larger carrying capacity such as transit vans. Included here are small pickup vans, three-wheeled goods vehicles, milk floats and pedestrian controlled motor vehicles. Most of this group is delivery vans of one type or another.

Other Goods Vehicles (OGV 1)

Includes all rigid vehicles over 3.5 tonnes gross vehicle weight with two or three axles Includes larger ambulances, tractors (without trailers), road rollers for tarmac pressing, box vans and similar large vans. A two or three axle motor tractive unit without a trailer is also included.

Other Goods Vehicles (OGV 2)

This category includes all rigid vehicles with four or more axles and all articulated vehicles. Also included in this class are OGV1 goods vehicles towing a caravan or trailer.

Buses and Coaches (PSV)

Includes all public service vehicles and works buses with a gross vehicle weight of 3.5 tonnes or more, usually vehicles with more than 16 seats.

Site No. 1
Location New Wapping Street(N) / Mayor Street Upper(W) / New Wapping Street(S) / Mayor Street Upper(E)
Date 04 October 2017

Time	A to D - New Wapping Street(N) to Mayor Street Upper(E)						Veh. Total	A to C - New Wapping Street(N) to New Wapping Street(S)						Veh. Total
	CAR	LGV	OGV1	OGV2	PSV	LUAS		CAR	LGV	OGV1	OGV2	PSV	LUAS	
07:00	2	1	1	0	0		4	66	5	1	1	3		76
07:15	4	3	0	0	0		7	58	6	1	3	1		69
07:30	8	2	0	0	0		10	33	1	1	1	3		39
07:45	10	1	2	0	0		13	61	8	0	0	1		70
Hour	24	7	3	0	0	0	34	218	20	3	5	8	0	254
08:00	3	1	0	0	0		4	47	10	0	3	3		63
08:15	7	1	0	0	0		8	35	4	3	0	1		43
08:30	10	3	1	0	0		14	43	2	2	1	2		50
08:45	9	3	0	0	0		12	35	7	3	0	3		48
Hour	29	8	1	0	0	0	38	160	23	8	4	9	0	204
09:00	5	0	1	0	0		6	46	1	1	1	2		51
09:15	6	2	1	0	0		9	25	3	1	0	3		32
09:30	3	0	0	0	0		3	14	3	3	0	2		22
09:45	6	1	0	0	0		7	18	4	1	1	2		26
Hour	20	3	2	0	0	0	25	103	11	6	2	9	0	131
10:00	5	0	0	0	0		5	9	7	1	0	0		17
10:15	4	5	1	0	0		10	11	2	1	1	2		17
10:30	2	0	1	0	0		3	11	4	4	0	0		19
10:45	2	2	0	0	0		4	9	2	4	2	1		18
Hour	13	7	2	0	0	0	22	40	15	10	3	3	0	71
11:00	3	1	1	0	0		5	8	3	1	0	1		13
11:15	4	2	0	0	0		6	9	3	1	2	1		16
11:30	1	2	0	0	0		3	15	5	1	0	0		21
11:45	4	1	0	0	0		5	5	1	2	0	1		9
Hour	12	6	1	0	0	0	19	37	12	5	2	3	0	59
12:00	4	1	0	0	0		5	6	7	1	0	0		14
12:15	8	0	0	0	0		8	8	4	2	0	0		14
12:30	2	0	0	0	0		2	13	4	0	1	1		19
12:45	5	2	1	0	0		8	9	3	0	0	1		13
Hour	19	3	1	0	0	0	23	36	18	3	1	2	0	60
13:00	4	2	0	0	0		6	13	3	1	0	0		17
13:15	6	2	0	0	0		8	8	1	2	1	1		13
13:30	4	1	1	0	0		6	18	1	0	2	1		22
13:45	3	0	0	0	0		3	14	5	1	1	0		21
Hour	17	5	1	0	0	0	23	53	10	4	4	2	0	73
14:00	5	3	0	0	0		8	12	5	0	1	0		18
14:15	3	2	1	0	0		6	13	6	2	2	1		24
14:30	0	0	1	0	0		1	7	3	0	0	1		11
14:45	2	1	0	0	0		3	10	10	2	0	0		22
Hour	10	6	2	0	0	0	18	42	24	4	3	2	0	75
15:00	4	2	0	0	0		6	16	6	1	1	1		25
15:15	5	0	0	0	0		5	6	3	0	1	1		11
15:30	4	0	0	0	0		4	12	5	1	1	1		20
15:45	5	0	0	0	0		5	15	5	2	1	0		23
Hour	18	2	0	0	0	0	20	49	19	4	4	3	0	79
16:00	2	1	1	0	0		4	23	1	0	1	2		27
16:15	5	2	0	0	0		7	21	4	0	0	1		26
16:30	4	2	0	0	0		6	9	3	1	1	1		15
16:45	3	0	1	0	1		5	3	1	1	0	3		8
Hour	14	5	2	0	1	0	22	56	9	2	2	7	0	76
17:00	5	0	0	0	0		5	9	1	1	0	2		13
17:15	3	0	0	0	0		3	7	1	0	0	3		11
17:30	7	0	0	0	0		7	15	0	1	0	1		17
17:45	4	0	0	0	0		4	13	1	0	1	5		20
Hour	19	0	0	0	0	0	19	44	3	2	1	11	0	61
18:00	1	0	0	0	0		1	7	0	0	0	2		9
18:15	2	0	0	0	0		2	11	1	0	0	2		14
18:30	3	0	0	0	0		3	10	3	0	0	2		15
18:45	5	0	0	0	0		5	11	0	0	0	3		14
Hour	11	0	0	0	0	0	11	39	4	0	0	9	0	52
Total	206	52	15	0	1	0	274	877	168	51	31	68	0	1195

Site No. 1
Location New Wapping Street(N) / Mayor Street Upper(W) / New Wapping Street(S) / Mayor Street Upper(E)
Date 04 October 2017

Time	A to B - New Wapping Street(N) to Mayor Street Upper(W)						Veh. Total	B to A - Mayor Street Upper(W) to New Wapping Street(N)						Veh. Total
	CAR	LGV	OGV1	OGV2	PSV	LUAS		CAR	LGV	OGV1	OGV2	PSV	LUAS	
07:00	0	0	0	0	0		0	0	0	0	0	0		0
07:15	0	0	0	0	0		0	0	0	0	0	0		0
07:30	0	0	0	0	0		0	0	0	0	0	0		0
07:45	1	2	0	0	0		3	0	0	0	0	0		0
Hour	1	2	0	0	0	0	3	0	0	0	0	0	0	0
08:00	0	0	0	0	0		0	0	1	0	0	0		1
08:15	0	0	1	0	0		1	0	0	0	0	0		0
08:30	1	0	0	0	0		1	0	0	0	0	0		0
08:45	0	0	0	0	0		0	0	0	0	0	0		0
Hour	1	0	1	0	0	0	2	0	1	0	0	0	0	1
09:00	0	0	0	0	0		0	0	0	0	0	0		0
09:15	0	0	0	0	0		0	0	0	0	0	0		0
09:30	0	0	0	0	0		0	1	0	0	0	0		1
09:45	0	0	0	0	0		0	0	0	0	0	0		0
Hour	0	0	0	0	0	0	0	1	0	0	0	0	0	1
10:00	0	0	0	0	0		0	0	0	0	0	0		0
10:15	1	0	0	0	0		1	1	0	0	0	0		1
10:30	0	0	0	0	0		0	0	0	0	0	0		0
10:45	0	0	1	0	0		1	0	0	0	0	0		0
Hour	1	0	1	0	0	0	2	1	0	0	0	0	0	1
11:00	0	1	0	0	0		1	0	0	0	0	0		0
11:15	0	0	0	0	0		0	0	1	0	0	0		1
11:30	0	0	0	0	0		0	0	0	0	0	0		0
11:45	0	0	0	0	0		0	0	0	0	0	0		0
Hour	0	1	0	0	0	0	1	0	1	0	0	0	0	1
12:00	0	0	0	0	0		0	0	0	0	0	0		0
12:15	0	0	0	0	0		0	2	0	0	0	0		2
12:30	1	0	0	0	0		1	0	0	0	0	0		0
12:45	0	0	0	0	0		0	0	0	0	0	0		0
Hour	1	0	0	0	0	0	1	2	0	0	0	0	0	2
13:00	0	0	0	0	0		0	0	0	0	0	0		0
13:15	0	0	0	0	0		0	0	0	0	0	0		0
13:30	2	0	0	0	0		2	2	0	0	0	0		2
13:45	1	0	0	0	0		1	1	0	0	0	0		1
Hour	3	0	0	0	0	0	3	3	0	0	0	0	0	3
14:00	0	0	0	0	0		0	0	0	0	0	0		0
14:15	0	0	0	0	0		0	1	0	0	0	0		1
14:30	1	0	0	0	0		1	0	0	0	0	0		0
14:45	0	0	0	0	0		0	2	0	0	0	0		2
Hour	1	0	0	0	0	0	1	3	0	0	0	0	0	3
15:00	0	0	0	0	0		0	0	0	0	0	0		0
15:15	1	0	0	0	0		1	0	0	0	0	0		0
15:30	1	0	0	0	0		1	1	0	0	0	0		1
15:45	0	0	0	0	0		0	1	0	0	0	0		1
Hour	2	0	0	0	0	0	2	2	0	0	0	0	0	2
16:00	1	0	0	0	0		1	1	0	0	0	0		1
16:15	0	0	0	0	0		0	0	0	0	0	0		0
16:30	0	0	0	0	0		0	2	0	0	0	0		2
16:45	0	0	0	0	0		0	1	0	0	0	0		1
Hour	1	0	0	0	0	0	1	4	0	0	0	0	0	4
17:00	2	0	0	0	0		2	1	0	0	0	0		1
17:15	0	0	0	0	0		0	0	0	0	0	0		0
17:30	0	0	0	0	0		0	1	0	0	0	0		1
17:45	0	0	0	0	0		0	0	0	0	0	0		0
Hour	2	0	0	0	0	0	2	2	0	0	0	0	0	2
18:00	0	0	0	0	0		0	0	0	0	0	0		0
18:15	0	0	0	0	0		0	1	0	0	0	0		1
18:30	0	0	0	0	0		0	0	1	0	0	0		1
18:45	1	0	0	0	0		1	1	0	0	0	0		1
Hour	1	0	0	0	0	0	1	2	1	0	0	0	0	3
Total	14	3	2	0	0	0	19	20	3	0	0	0	0	23

Site No. 1
Location New Wapping Street(N) / Mayor Street Upper(W) / New Wapping Street(S) / Mayor Street Upper(E)
Date 04 October 2017

Time	B to D - Mayor Street Upper(W) to Mayor Street Upper(E)						Veh. Total	B to C - Mayor Street Upper(W) to New Wapping Street(S)						Veh. Total
	CAR	LGV	OGV1	OGV2	PSV	LUAS		CAR	LGV	OGV1	OGV2	PSV	LUAS	
07:00	0	0	0	0	0	1	1	0	0	0	0	0		0
07:15	0	0	1	0	0	2	3	0	0	0	0	0		0
07:30	0	0	0	0	0	2	2	0	0	0	0	0		0
07:45	0	0	1	0	0	1	2	0	0	0	0	0		0
Hour	0	0	2	0	0	6	8	0	0	0	0	0	0	0
08:00	0	0	0	0	0	2	2	0	0	0	0	0		0
08:15	0	0	0	0	0	1	1	0	0	0	0	0		0
08:30	0	0	0	0	0	1	1	1	0	0	0	0		1
08:45	0	1	0	0	0	3	4	0	0	0	0	0		0
Hour	0	1	0	0	0	7	8	1	0	0	0	0	0	1
09:00	0	0	0	0	0	3	3	0	0	0	0	0		0
09:15	1	0	0	0	0	2	3	0	0	0	0	0		0
09:30	0	1	1	0	0	2	4	0	0	0	0	0		0
09:45	0	0	0	0	0	1	1	0	0	0	0	0		0
Hour	1	1	1	0	0	8	11	0	0	0	0	0	0	0
10:00	0	0	0	0	0	2	2	0	0	0	0	0		0
10:15	0	0	0	0	0	1	1	0	0	0	0	0		0
10:30	0	0	0	0	0	2	2	0	0	0	0	0		0
10:45	0	0	0	0	0	1	1	0	0	0	0	0		0
Hour	0	0	0	0	0	6	6	0	0	0	0	0	0	0
11:00	1	0	0	0	0	1	2	0	0	0	0	0		0
11:15	0	0	0	0	0	0	0	0	0	0	0	0		0
11:30	0	0	0	0	0	0	0	0	0	0	0	0		0
11:45	0	0	0	0	0	0	0	0	0	0	0	0		0
Hour	1	0	0	0	0	1	2	0	0	0	0	0	0	0
12:00	0	0	0	0	0	0	0	0	0	0	0	0		0
12:15	0	0	0	0	0	0	0	0	0	0	0	0		0
12:30	0	0	0	0	0	0	0	0	0	0	0	0		0
12:45	0	0	0	0	0	0	0	0	0	0	0	0		0
Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00	0	0	0	0	0	0	0	0	0	0	0	0		0
13:15	0	0	0	0	0	0	0	0	0	0	0	0		0
13:30	0	0	0	0	0	0	0	0	0	0	0	0		0
13:45	1	0	0	0	0	1	2	0	0	0	0	0		0
Hour	1	0	0	0	0	1	2	0	0	0	0	0	0	0
14:00	0	0	0	0	0	2	2	0	0	0	0	0		0
14:15	1	0	0	0	0	0	1	0	0	0	0	0		0
14:30	0	0	0	0	0	1	1	0	0	0	0	0		0
14:45	0	0	0	0	0	0	0	0	0	0	0	0		0
Hour	1	0	0	0	0	3	4	0	0	0	0	0	0	0
15:00	0	0	0	0	0	2	2	1	0	0	0	0		1
15:15	1	0	0	0	0	2	3	1	0	0	0	0		1
15:30	0	0	0	0	0	2	2	0	0	0	0	0		0
15:45	0	0	0	0	0	2	2	0	0	0	0	0		0
Hour	1	0	0	0	0	8	9	2	0	0	0	0	0	2
16:00	0	0	0	0	0	1	1	0	0	0	0	0		0
16:15	0	1	0	0	0	2	3	0	0	0	0	0		0
16:30	0	0	0	0	0	1	1	0	0	0	0	0		0
16:45	0	0	0	0	0	2	2	0	0	0	0	0		0
Hour	0	1	0	0	0	6	7	0	0	0	0	0	0	0
17:00	0	0	0	0	0	2	2	0	0	0	0	0		0
17:15	1	0	0	0	0	2	3	1	0	0	0	0		1
17:30	0	0	0	0	0	1	1	3	0	0	0	0		3
17:45	0	0	0	0	0	1	1	1	0	0	0	0		1
Hour	1	0	0	0	0	6	7	5	0	0	0	0	0	5
18:00	0	0	0	0	0	3	3	0	0	0	0	0		0
18:15	0	0	0	0	0	1	1	0	0	0	0	0		0
18:30	0	0	0	0	0	2	2	0	0	0	0	0		0
18:45	0	0	0	0	0	1	1	0	0	0	0	0		0
Hour	0	0	0	0	0	7	7	0	0	0	0	0	0	0
Total	6	3	3	0	0	59	71	8	0	0	0	0	0	8

Site No. 1
Location New Wapping Street(N) / Mayor Street Upper(W) / New Wapping Street(S) / Mayor Street Upper(E)
Date 04 October 2017

Time	C to B - New Wapping Street(S) to Mayor Street Upper(W)						Veh. Total	C to A - New Wapping Street(S) to New Wapping Street(N)						Veh. Total
	CAR	LGV	OGV1	OGV2	PSV	LUAS		CAR	LGV	OGV1	OGV2	PSV	LUAS	
07:00	0	0	0	0	0		0	7	2	1	1	2		13
07:15	0	0	0	0	0		0	8	2	1	0	1		12
07:30	0	1	0	0	0		1	14	3	0	1	1		19
07:45	0	0	0	0	0		0	10	8	2	1	3		24
Hour	0	1	0	0	0	0	1	39	15	4	3	7	0	68
08:00	0	0	0	0	0		0	13	3	1	0	2		19
08:15	0	0	0	0	0		0	15	5	3	0	2		25
08:30	0	0	0	0	0		0	14	2	0	0	1		17
08:45	0	0	0	0	0		0	20	1	2	0	1		24
Hour	0	0	0	0	0	0	0	62	11	6	0	6	0	85
09:00	0	0	0	0	0		0	12	4	2	0	1		19
09:15	0	0	0	0	0		0	14	4	1	1	1		21
09:30	0	0	0	0	0		0	8	5	3	1	3		20
09:45	0	0	0	0	0		0	10	4	3	0	0		17
Hour	0	0	0	0	0	0	0	44	17	9	2	5	0	77
10:00	0	0	0	0	0		0	9	1	3	1	0		14
10:15	2	0	0	0	0		2	10	2	1	1	1		15
10:30	0	0	0	0	0		0	8	4	0	1	0		13
10:45	0	0	0	0	0		0	17	5	1	1	1		25
Hour	2	0	0	0	0	0	2	44	12	5	4	2	0	67
11:00	0	0	0	0	0		0	12	0	1	1	0		14
11:15	0	0	0	0	0		0	6	5	1	1	1		14
11:30	0	0	0	0	0		0	11	4	2	0	0		17
11:45	0	0	0	0	0		0	9	4	0	0	0		13
Hour	0	0	0	0	0	0	0	38	13	4	2	1	0	58
12:00	0	0	0	0	0		0	9	3	0	2	0		14
12:15	0	0	0	0	0		0	8	1	4	0	2		15
12:30	0	0	0	0	0		0	14	3	0	2	0		19
12:45	0	0	0	0	0		0	9	2	2	2	1		16
Hour	0	0	0	0	0	0	0	40	9	6	6	3	0	64
13:00	0	0	0	0	0		0	12	3	0	1	1		17
13:15	0	0	0	0	0		0	11	2	2	0	0		15
13:30	0	0	0	0	0		0	12	3	0	3	0		18
13:45	0	0	0	0	0		0	17	3	3	2	0		25
Hour	0	0	0	0	0	0	0	52	11	5	6	1	0	75
14:00	1	0	0	0	0		1	24	5	3	0	1		33
14:15	0	0	0	0	0		0	8	1	0	1	0		10
14:30	0	0	0	0	0		0	13	8	1	1	2		25
14:45	0	0	0	0	0		0	15	5	0	3	1		24
Hour	1	0	0	0	0	0	1	60	19	4	5	4	0	92
15:00	0	0	0	0	0		0	10	5	2	0	1		18
15:15	0	0	0	0	0		0	15	4	2	1	1		23
15:30	0	0	0	0	0		0	11	4	1	2	1		19
15:45	0	0	0	0	0		0	9	2	3	2	1		17
Hour	0	0	0	0	0	0	0	45	15	8	5	4	0	77
16:00	0	0	0	0	0		0	23	3	3	3	1		33
16:15	0	0	0	0	0		0	25	3	2	1	0		31
16:30	0	0	0	0	0		0	23	4	0	1	1		29
16:45	0	0	0	0	0		0	20	5	0	3	0		28
Hour	0	0	0	0	0	0	0	91	15	5	8	2	0	121
17:00	0	0	0	0	0		0	26	3	0	1	0		30
17:15	0	1	0	0	0		1	21	1	2	1	0		25
17:30	1	0	0	0	0		1	29	4	3	1	1		38
17:45	1	0	0	0	0		1	42	2	1	1	2		48
Hour	2	1	0	0	0	0	3	118	10	6	4	3	0	141
18:00	1	0	0	0	0		1	26	6	1	1	0		34
18:15	0	0	0	0	0		0	27	7	0	1	0		35
18:30	0	0	0	0	0		0	27	4	1	0	0		32
18:45	0	0	0	0	0		0	17	0	3	0	0		20
Hour	1	0	0	0	0	0	1	97	17	5	2	0	0	121
Total	6	2	0	0	0	0	8	730	164	67	47	38	0	1046

Site No. 1
Location New Wapping Street(N) / Mayor Street Upper(W) / New Wapping Street(S) / Mayor Street Upper(E)
Date 04 October 2017

Time	C to D - New Wapping Street(S) to Mayor Street Upper(E)						Veh. Total	D to C - Mayor Street Upper(E) to New Wapping Street(S)						Veh. Total
	CAR	LGV	OGV1	OGV2	PSV	LUAS		CAR	LGV	OGV1	OGV2	PSV	LUAS	
07:00	1	0	0	0	0		1	0	0	0	3	0		3
07:15	1	0	0	0	0		1	3	0	0	2	0		5
07:30	1	0	0	0	0		1	1	0	0	0	1		2
07:45	0	0	0	0	0		0	3	1	0	0	0		4
Hour	3	0	0	0	0	0	3	7	1	0	5	1	0	14
08:00	2	1	0	0	0		3	0	0	2	0	0		2
08:15	3	0	0	0	0		3	2	0	0	0	0		2
08:30	0	0	0	0	0		0	1	0	1	0	0		2
08:45	3	0	0	0	0		3	0	1	0	0	1		2
Hour	8	1	0	0	0	0	9	3	1	3	0	1	0	8
09:00	2	0	0	0	0		2	2	1	0	1	0		4
09:15	1	0	1	0	0		2	2	0	0	1	0		3
09:30	1	0	0	0	0		1	0	1	0	0	0		1
09:45	0	0	0	0	0		0	1	0	1	0	0		2
Hour	4	0	1	0	0	0	5	5	2	1	2	0	0	10
10:00	1	0	0	0	0		1	3	2	1	1	0		7
10:15	0	1	0	0	0		1	0	0	0	0	0		0
10:30	3	0	0	0	0		3	0	1	3	0	0		4
10:45	1	0	1	0	0		2	0	0	0	0	0		0
Hour	5	1	1	0	0	0	7	3	3	4	1	0	0	11
11:00	1	1	0	0	0		2	2	1	0	1	0		4
11:15	3	1	0	0	0		4	0	0	0	0	0		0
11:30	2	2	0	0	0		4	2	1	1	0	0		4
11:45	1	1	0	0	0		2	1	0	1	0	0		2
Hour	7	5	0	0	0	0	12	5	2	2	1	0	0	10
12:00	0	1	0	0	0		1	2	4	0	0	0		6
12:15	1	1	0	0	0		2	0	1	0	0	0		1
12:30	0	0	0	0	0		0	0	0	0	0	0		0
12:45	1	1	0	0	0		2	0	0	0	0	0		0
Hour	2	3	0	0	0	0	5	2	5	0	0	0	0	7
13:00	0	0	0	0	0		0	0	0	0	0	0		0
13:15	0	0	0	0	0		0	0	0	0	0	0		0
13:30	3	0	0	0	0		3	0	0	1	0	0		1
13:45	4	0	0	0	1		5	0	1	0	0	0		1
Hour	7	0	0	0	1	0	8	0	1	1	0	0	0	2
14:00	0	0	0	0	0		0	2	1	0	0	0		3
14:15	1	0	0	0	0		1	1	0	1	0	0		2
14:30	0	2	0	0	0		2	0	0	0	0	0		0
14:45	0	0	0	0	0		0	1	1	1	0	0		3
Hour	1	2	0	0	0	0	3	4	2	2	0	0	0	8
15:00	1	0	0	0	0		1	0	0	0	0	0		0
15:15	2	0	0	0	0		2	1	2	0	0	0		3
15:30	1	0	0	0	0		1	0	1	0	0	0		1
15:45	2	0	0	0	0		2	2	1	0	0	0		3
Hour	6	0	0	0	0	0	6	3	4	0	0	0	0	7
16:00	1	0	0	0	0		1	2	1	0	2	0		5
16:15	1	0	0	0	0		1	2	0	0	0	0		2
16:30	0	0	0	0	0		0	0	0	0	0	0		0
16:45	1	0	0	0	0		1	1	0	0	0	0		1
Hour	3	0	0	0	0	0	3	5	1	0	2	0	0	8
17:00	1	0	0	0	0		1	0	0	0	0	0		0
17:15	0	0	1	0	0		1	0	1	0	0	0		1
17:30	1	0	0	0	0		1	1	0	0	0	0		1
17:45	1	0	0	0	0		1	0	1	0	1	0		2
Hour	3	0	1	0	0	0	4	1	2	0	1	0	0	4
18:00	0	0	0	0	0		0	0	1	0	0	0		1
18:15	0	0	0	0	0		0	0	0	0	0	0		0
18:30	4	0	0	0	0		4	0	0	0	0	0		0
18:45	3	0	0	0	0		3	7	0	0	0	0		7
Hour	7	0	0	0	0	0	7	7	1	0	0	0	0	8
Total	56	12	3	0	1	0	72	45	25	13	12	2	0	97

Site No. 1
Location New Wapping Street(N) / Mayor Street Upper(W) / New Wapping Street(S) / Mayor Street Upper(E)
Date 04 October 2017

Time	D to B - Mayor Street Upper(E) to Mayor Street Upper(W)						Veh. Total	D to A - Mayor Street Upper(E) to New Wapping Street(N)						Veh. Total
	CAR	LGV	OGV1	OGV2	PSV	LUAS		CAR	LGV	OGV1	OGV2	PSV	LUAS	
07:00	0	0	0	0	0	2	2	0	0	0	0	0		0
07:15	0	0	0	0	0	1	1	0	0	0	0	0		0
07:30	1	0	0	0	0	2	3	0	0	0	0	0		0
07:45	0	0	0	0	0	1	1	0	0	0	0	0		0
Hour	1	0	0	0	0	6	7	0	0	0	0	0	0	0
08:00	0	0	0	0	0	2	2	1	1	0	0	0		2
08:15	0	0	0	0	0	1	1	0	0	0	0	0		0
08:30	1	0	0	0	0	2	3	0	0	1	0	0		1
08:45	0	0	0	0	0	2	2	1	0	0	0	0		1
Hour	1	0	0	0	0	7	8	2	1	1	0	0	0	4
09:00	0	0	0	0	0	3	3	3	0	1	0	0		4
09:15	0	0	1	0	0	2	3	0	0	0	0	0		0
09:30	0	1	0	0	0	2	3	2	0	0	0	0		2
09:45	0	0	0	0	0	1	1	1	0	0	0	0		1
Hour	0	1	1	0	0	8	10	6	0	1	0	0	0	7
10:00	0	0	0	0	0	1	1	0	0	0	0	0		0
10:15	0	0	0	0	0	2	2	0	0	0	0	0		0
10:30	0	0	0	0	0	1	1	0	0	0	0	0		0
10:45	0	0	0	0	0	2	2	1	1	0	0	0		2
Hour	0	0	0	0	0	6	6	1	1	0	0	0	0	2
11:00	0	0	0	0	0	1	1	0	0	0	0	0		0
11:15	1	0	0	0	0	1	2	1	0	0	0	0		1
11:30	0	0	0	0	0	0	0	0	0	0	0	0		0
11:45	0	0	0	0	0	0	0	0	0	0	0	0		0
Hour	1	0	0	0	0	2	3	1	0	0	0	0	0	1
12:00	0	0	0	0	0	0	0	1	0	0	0	0		1
12:15	0	1	0	0	0	0	1	0	0	0	0	0		0
12:30	0	0	0	0	0	0	0	0	0	0	0	0		0
12:45	0	0	0	0	0	0	0	1	0	0	0	0		1
Hour	0	1	0	0	0	0	1	2	0	0	0	0	0	2
13:00	0	0	0	0	0	0	0	0	0	0	0	0		0
13:15	0	0	0	0	0	0	0	0	0	0	0	0		0
13:30	0	0	0	0	0	0	0	0	0	0	0	0		0
13:45	0	0	0	0	0	1	1	0	0	0	0	0		0
Hour	0	0	0	0	0	1	1	0	0	0	0	0	0	0
14:00	0	0	0	0	0	1	1	0	0	0	0	0		0
14:15	0	0	0	0	0	2	2	1	0	0	0	0		1
14:30	0	0	0	0	0	0	0	0	1	1	0	0		2
14:45	0	0	0	0	0	1	1	0	0	0	0	0		0
Hour	0	0	0	0	0	4	4	1	1	1	0	0	0	3
15:00	0	0	0	0	0	1	1	2	0	0	0	0		2
15:15	0	0	0	0	0	1	1	0	0	0	0	0		0
15:30	0	0	0	0	0	1	1	1	0	0	0	0		1
15:45	0	0	0	0	0	2	2	0	0	0	0	0		0
Hour	0	0	0	0	0	5	5	3	0	0	0	0	0	3
16:00	0	0	0	0	0	1	1	0	0	0	0	0		0
16:15	0	0	0	0	0	2	2	0	0	0	0	0		0
16:30	0	0	0	0	0	2	2	1	0	0	0	0		1
16:45	0	0	0	0	0	1	1	1	1	0	0	0		2
Hour	0	0	0	0	0	6	6	2	1	0	0	0	0	3
17:00	1	0	0	0	0	2	3	0	0	0	0	0		0
17:15	1	0	0	0	0	2	3	0	0	0	0	0		0
17:30	0	0	0	0	0	1	1	0	0	0	0	0		0
17:45	0	0	0	0	0	2	2	1	0	0	0	0		1
Hour	2	0	0	0	0	7	9	1	0	0	0	0	0	1
18:00	0	0	0	0	0	2	2	0	0	0	0	0		0
18:15	0	0	0	0	0	1	1	1	0	0	0	0		1
18:30	0	0	0	0	0	2	2	2	0	0	0	0		2
18:45	1	0	0	0	0	1	2	1	0	0	0	0		1
Hour	1	0	0	0	0	6	7	4	0	0	0	0	0	4
Total	6	2	1	0	0	58	67	23	4	3	0	0	0	30

Site No. 1
Location New Wapping Street(N) / Mayor Street Upper(W) / New Wapping Street(S) / Mayor Street Upper(E)
Date 04 October 2017

Time	To Arm A - New Wapping Street(N)						Veh. Total	From Arm A - New Wapping Street(N)						Veh. Total
	CAR	LGV	OGV1	OGV2	PSV	LUAS		CAR	LGV	OGV1	OGV2	PSV	LUAS	
07:00	7	2	1	1	2	0	13	68	6	2	1	3	0	80
07:15	8	2	1	0	1	0	12	62	9	1	3	1	0	76
07:30	14	3	0	1	1	0	19	41	3	1	1	3	0	49
07:45	10	8	2	1	3	0	24	72	11	2	0	1	0	86
Hour	39	15	4	3	7	0	68	243	29	6	5	8	0	291
08:00	14	5	1	0	2	0	22	50	11	0	3	3	0	67
08:15	15	5	3	0	2	0	25	42	5	4	0	1	0	52
08:30	14	2	1	0	1	0	18	54	5	3	1	2	0	65
08:45	21	1	2	0	1	0	25	44	10	3	0	3	0	60
Hour	64	13	7	0	6	0	90	190	31	10	4	9	0	244
09:00	15	4	3	0	1	0	23	51	1	2	1	2	0	57
09:15	14	4	1	1	1	0	21	31	5	2	0	3	0	41
09:30	11	5	3	1	3	0	23	17	3	3	0	2	0	25
09:45	11	4	3	0	0	0	18	24	5	1	1	2	0	33
Hour	51	17	10	2	5	0	85	123	14	8	2	9	0	156
10:00	9	1	3	1	0	0	14	14	7	1	0	0	0	22
10:15	11	2	1	1	1	0	16	16	7	2	1	2	0	28
10:30	8	4	0	1	0	0	13	13	4	5	0	0	0	22
10:45	18	6	1	1	1	0	27	11	4	5	2	1	0	23
Hour	46	13	5	4	2	0	70	54	22	13	3	3	0	95
11:00	12	0	1	1	0	0	14	11	5	2	0	1	0	19
11:15	7	6	1	1	1	0	16	13	5	1	2	1	0	22
11:30	11	4	2	0	0	0	17	16	7	1	0	0	0	24
11:45	9	4	0	0	0	0	13	9	2	2	0	1	0	14
Hour	39	14	4	2	1	0	60	49	19	6	2	3	0	79
12:00	10	3	0	2	0	0	15	10	8	1	0	0	0	19
12:15	10	1	4	0	2	0	17	16	4	2	0	0	0	22
12:30	14	3	0	2	0	0	19	16	4	0	1	1	0	22
12:45	10	2	2	2	1	0	17	14	5	1	0	1	0	21
Hour	44	9	6	6	3	0	68	56	21	4	1	2	0	84
13:00	12	3	0	1	1	0	17	17	5	1	0	0	0	23
13:15	11	2	2	0	0	0	15	14	3	2	1	1	0	21
13:30	14	3	0	3	0	0	20	24	2	1	2	1	0	30
13:45	18	3	3	2	0	0	26	18	5	1	1	0	0	25
Hour	55	11	5	6	1	0	78	73	15	5	4	2	0	99
14:00	24	5	3	0	1	0	33	17	8	0	1	0	0	26
14:15	10	1	0	1	0	0	12	16	8	3	2	1	0	30
14:30	13	9	2	1	2	0	27	8	3	1	0	1	0	13
14:45	17	5	0	3	1	0	26	12	11	2	0	0	0	25
Hour	64	20	5	5	4	0	98	53	30	6	3	2	0	94
15:00	12	5	2	0	1	0	20	20	8	1	1	1	0	31
15:15	15	4	2	1	1	0	23	12	3	0	1	1	0	17
15:30	13	4	1	2	1	0	21	17	5	1	1	1	0	25
15:45	10	2	3	2	1	0	18	20	5	2	1	0	0	28
Hour	50	15	8	5	4	0	82	69	21	4	4	3	0	101
16:00	24	3	3	3	1	0	34	26	2	1	1	2	0	32
16:15	25	3	2	1	0	0	31	26	6	0	0	1	0	33
16:30	26	4	0	1	1	0	32	13	5	1	1	1	0	21
16:45	22	6	0	3	0	0	31	6	1	2	0	4	0	13
Hour	97	16	5	8	2	0	128	71	14	4	2	8	0	99
17:00	27	3	0	1	0	0	31	16	1	1	0	2	0	20
17:15	21	1	2	1	0	0	25	10	1	0	0	3	0	14
17:30	30	4	3	1	1	0	39	22	0	1	0	1	0	24
17:45	43	2	1	1	2	0	49	17	1	0	1	5	0	24
Hour	121	10	6	4	3	0	144	65	3	2	1	11	0	82
18:00	26	6	1	1	0	0	34	8	0	0	0	2	0	10
18:15	29	7	0	1	0	0	37	13	1	0	0	2	0	16
18:30	29	5	1	0	0	0	35	13	3	0	0	2	0	18
18:45	19	0	3	0	0	0	22	17	0	0	0	3	0	20
Hour	103	18	5	2	0	0	128	51	4	0	0	9	0	64
Total	773	171	70	47	38	0	1099	1097	223	68	31	69	0	1488

Site No. 1
Location New Wapping Street(N) / Mayor Street Upper(W) / New Wapping Street(S) / Mayor Street Upper(E)
Date 04 October 2017

Time	To Arm B - Mayor Street Upper(W)						Veh. Total	From Arm B - Mayor Street Upper(W)						Veh. Total
	CAR	LGV	OGV1	OGV2	PSV	LUAS		CAR	LGV	OGV1	OGV2	PSV	LUAS	
07:00	0	0	0	0	0	2	2	0	0	0	0	0	1	1
07:15	0	0	0	0	0	1	1	0	0	1	0	0	2	3
07:30	1	1	0	0	0	2	4	0	0	0	0	0	2	2
07:45	1	2	0	0	0	1	4	0	0	1	0	0	1	2
Hour	2	3	0	0	0	6	11	0	0	2	0	0	6	8
08:00	0	0	0	0	0	2	2	0	1	0	0	0	2	3
08:15	0	0	1	0	0	1	2	0	0	0	0	0	1	1
08:30	2	0	0	0	0	2	4	1	0	0	0	0	1	2
08:45	0	0	0	0	0	2	2	0	1	0	0	0	3	4
Hour	2	0	1	0	0	7	10	1	2	0	0	0	7	10
09:00	0	0	0	0	0	3	3	0	0	0	0	0	3	3
09:15	0	0	1	0	0	2	3	1	0	0	0	0	2	3
09:30	0	1	0	0	0	2	3	1	1	1	0	0	2	5
09:45	0	0	0	0	0	1	1	0	0	0	0	0	1	1
Hour	0	1	1	0	0	8	10	2	1	1	0	0	8	12
10:00	0	0	0	0	0	1	1	0	0	0	0	0	2	2
10:15	3	0	0	0	0	2	5	1	0	0	0	0	1	2
10:30	0	0	0	0	0	1	1	0	0	0	0	0	2	2
10:45	0	0	1	0	0	2	3	0	0	0	0	0	1	1
Hour	3	0	1	0	0	6	10	1	0	0	0	0	6	7
11:00	0	1	0	0	0	1	2	1	0	0	0	0	1	2
11:15	1	0	0	0	0	1	2	0	1	0	0	0	0	1
11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hour	1	1	0	0	0	2	4	1	1	0	0	0	1	3
12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15	0	1	0	0	0	0	1	2	0	0	0	0	0	2
12:30	1	0	0	0	0	0	1	0	0	0	0	0	0	0
12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hour	1	1	0	0	0	0	2	2	0	0	0	0	0	2
13:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:30	2	0	0	0	0	0	2	2	0	0	0	0	0	2
13:45	1	0	0	0	0	1	2	2	0	0	0	0	1	3
Hour	3	0	0	0	0	1	4	4	0	0	0	0	1	5
14:00	1	0	0	0	0	1	2	0	0	0	0	0	2	2
14:15	0	0	0	0	0	2	2	2	0	0	0	0	0	2
14:30	1	0	0	0	0	0	1	0	0	0	0	0	1	1
14:45	0	0	0	0	0	1	1	2	0	0	0	0	0	2
Hour	2	0	0	0	0	4	6	4	0	0	0	0	3	7
15:00	0	0	0	0	0	1	1	1	0	0	0	0	2	3
15:15	1	0	0	0	0	1	2	2	0	0	0	0	2	4
15:30	1	0	0	0	0	1	2	1	0	0	0	0	2	3
15:45	0	0	0	0	0	2	2	1	0	0	0	0	2	3
Hour	2	0	0	0	0	5	7	5	0	0	0	0	8	13
16:00	1	0	0	0	0	1	2	1	0	0	0	0	1	2
16:15	0	0	0	0	0	2	2	0	1	0	0	0	2	3
16:30	0	0	0	0	0	2	2	2	0	0	0	0	1	3
16:45	0	0	0	0	0	1	1	1	0	0	0	0	2	3
Hour	1	0	0	0	0	6	7	4	1	0	0	0	6	11
17:00	3	0	0	0	0	2	5	1	0	0	0	0	2	3
17:15	1	1	0	0	0	2	4	2	0	0	0	0	2	4
17:30	1	0	0	0	0	1	2	4	0	0	0	0	1	5
17:45	1	0	0	0	0	2	3	1	0	0	0	0	1	2
Hour	6	1	0	0	0	7	14	8	0	0	0	0	6	14
18:00	1	0	0	0	0	2	3	0	0	0	0	0	3	3
18:15	0	0	0	0	0	1	1	1	0	0	0	0	1	2
18:30	0	0	0	0	0	2	2	0	1	0	0	0	2	3
18:45	2	0	0	0	0	1	3	1	0	0	0	0	1	2
Hour	3	0	0	0	0	6	9	2	1	0	0	0	7	10
Total	26	7	3	0	0	58	94	34	6	3	0	0	59	102

Site No. 1
Location New Wapping Street(N) / Mayor Street Upper(W) / New Wapping Street(S) / Mayor Street Upper(E)
Date 04 October 2017

Time	To Arm C - New Wapping Street(S)						Veh. Total	From Arm C - New Wapping Street(S)						Veh. Total
	CAR	LGV	OGV1	OGV2	PSV	LUAS		CAR	LGV	OGV1	OGV2	PSV	LUAS	
07:00	66	5	1	4	3	0	79	8	2	1	1	2	0	14
07:15	61	6	1	5	1	0	74	9	2	1	0	1	0	13
07:30	34	1	1	1	4	0	41	15	4	0	1	1	0	21
07:45	64	9	0	0	1	0	74	10	8	2	1	3	0	24
Hour	225	21	3	10	9	0	268	42	16	4	3	7	0	72
08:00	47	10	2	3	3	0	65	15	4	1	0	2	0	22
08:15	37	4	3	0	1	0	45	18	5	3	0	2	0	28
08:30	45	2	3	1	2	0	53	14	2	0	0	1	0	17
08:45	35	8	3	0	4	0	50	23	1	2	0	1	0	27
Hour	164	24	11	4	10	0	213	70	12	6	0	6	0	94
09:00	48	2	1	2	2	0	55	14	4	2	0	1	0	21
09:15	27	3	1	1	3	0	35	15	4	2	1	1	0	23
09:30	14	4	3	0	2	0	23	9	5	3	1	3	0	21
09:45	19	4	2	1	2	0	28	10	4	3	0	0	0	17
Hour	108	13	7	4	9	0	141	48	17	10	2	5	0	82
10:00	12	9	2	1	0	0	24	10	1	3	1	0	0	15
10:15	11	2	1	1	2	0	17	12	3	1	1	1	0	18
10:30	11	5	7	0	0	0	23	11	4	0	1	0	0	16
10:45	9	2	4	2	1	0	18	18	5	2	1	1	0	27
Hour	43	18	14	4	3	0	82	51	13	6	4	2	0	76
11:00	10	4	1	1	1	0	17	13	1	1	1	0	0	16
11:15	9	3	1	2	1	0	16	9	6	1	1	1	0	18
11:30	17	6	2	0	0	0	25	13	6	2	0	0	0	21
11:45	6	1	3	0	1	0	11	10	5	0	0	0	0	15
Hour	42	14	7	3	3	0	69	45	18	4	2	1	0	70
12:00	8	11	1	0	0	0	20	9	4	0	2	0	0	15
12:15	8	5	2	0	0	0	15	9	2	4	0	2	0	17
12:30	13	4	0	1	1	0	19	14	3	0	2	0	0	19
12:45	9	3	0	0	1	0	13	10	3	2	2	1	0	18
Hour	38	23	3	1	2	0	67	42	12	6	6	3	0	69
13:00	13	3	1	0	0	0	17	12	3	0	1	1	0	17
13:15	8	1	2	1	1	0	13	11	2	2	0	0	0	15
13:30	18	1	1	2	1	0	23	15	3	0	3	0	0	21
13:45	14	6	1	1	0	0	22	21	3	3	2	1	0	30
Hour	53	11	5	4	2	0	75	59	11	5	6	2	0	83
14:00	14	6	0	1	0	0	21	25	5	3	0	1	0	34
14:15	14	6	3	2	1	0	26	9	1	0	1	0	0	11
14:30	7	3	0	0	1	0	11	13	10	1	1	2	0	27
14:45	11	11	3	0	0	0	25	15	5	0	3	1	0	24
Hour	46	26	6	3	2	0	83	62	21	4	5	4	0	96
15:00	17	6	1	1	1	0	26	11	5	2	0	1	0	19
15:15	8	5	0	1	1	0	15	17	4	2	1	1	0	25
15:30	12	6	1	1	1	0	21	12	4	1	2	1	0	20
15:45	17	6	2	1	0	0	26	11	2	3	2	1	0	19
Hour	54	23	4	4	3	0	88	51	15	8	5	4	0	83
16:00	25	2	0	3	2	0	32	24	3	3	3	1	0	34
16:15	23	4	0	0	1	0	28	26	3	2	1	0	0	32
16:30	9	3	1	1	1	0	15	23	4	0	1	1	0	29
16:45	4	1	1	0	3	0	9	21	5	0	3	0	0	29
Hour	61	10	2	4	7	0	84	94	15	5	8	2	0	124
17:00	9	1	1	0	2	0	13	27	3	0	1	0	0	31
17:15	8	2	0	0	3	0	13	21	2	3	1	0	0	27
17:30	19	0	1	0	1	0	21	31	4	3	1	1	0	40
17:45	14	2	0	2	5	0	23	44	2	1	1	2	0	50
Hour	50	5	2	2	11	0	70	123	11	7	4	3	0	148
18:00	7	1	0	0	2	0	10	27	6	1	1	0	0	35
18:15	11	1	0	0	2	0	14	27	7	0	1	0	0	35
18:30	10	3	0	0	2	0	15	31	4	1	0	0	0	36
18:45	18	0	0	0	3	0	21	20	0	3	0	0	0	23
Hour	46	5	0	0	9	0	60	105	17	5	2	0	0	129
Total	930	193	64	43	70	0	1300	792	178	70	47	39	0	1126

Site No. 1
Location New Wapping Street(N) / Mayor Street Upper(W) / New Wapping Street(S) / Mayor Street Upper(E)
Date 04 October 2017

Time	To Arm D - Mayor Street Upper(E)						Veh. Total	From Arm D - Mayor Street Upper(E)						Veh. Total
	CAR	LGV	OGV1	OGV2	PSV	LUAS		CAR	LGV	OGV1	OGV2	PSV	LUAS	
07:00	3	1	1	0	0	1	6	0	0	0	3	0	2	5
07:15	5	3	1	0	0	2	11	3	0	0	2	0	1	6
07:30	9	2	0	0	0	2	13	2	0	0	0	1	2	5
07:45	10	1	3	0	0	1	15	3	1	0	0	0	1	5
Hour	27	7	5	0	0	6	45	8	1	0	5	1	6	21
08:00	5	2	0	0	0	2	9	1	1	2	0	0	2	6
08:15	10	1	0	0	0	1	12	2	0	0	0	0	1	3
08:30	10	3	1	0	0	1	15	2	0	2	0	0	2	6
08:45	12	4	0	0	0	3	19	1	1	0	0	1	2	5
Hour	37	10	1	0	0	7	55	6	2	4	0	1	7	20
09:00	7	0	1	0	0	3	11	5	1	1	1	0	3	11
09:15	8	2	2	0	0	2	14	2	0	1	1	0	2	6
09:30	4	1	1	0	0	2	8	2	2	0	0	0	2	6
09:45	6	1	0	0	0	1	8	2	0	1	0	0	1	4
Hour	25	4	4	0	0	8	41	11	3	3	2	0	8	27
10:00	6	0	0	0	0	2	8	3	2	1	1	0	1	8
10:15	4	6	1	0	0	1	12	0	0	0	0	0	2	2
10:30	5	0	1	0	0	2	8	0	1	3	0	0	1	5
10:45	3	2	1	0	0	1	7	1	1	0	0	0	2	4
Hour	18	8	3	0	0	6	35	4	4	4	1	0	6	19
11:00	5	2	1	0	0	1	9	2	1	0	1	0	1	5
11:15	7	3	0	0	0	0	10	2	0	0	0	0	1	3
11:30	3	4	0	0	0	0	7	2	1	1	0	0	0	4
11:45	5	2	0	0	0	0	7	1	0	1	0	0	0	2
Hour	20	11	1	0	0	1	33	7	2	2	1	0	2	14
12:00	4	2	0	0	0	0	6	3	4	0	0	0	0	7
12:15	9	1	0	0	0	0	10	0	2	0	0	0	0	2
12:30	2	0	0	0	0	0	2	0	0	0	0	0	0	0
12:45	6	3	1	0	0	0	10	1	0	0	0	0	0	1
Hour	21	6	1	0	0	0	28	4	6	0	0	0	0	10
13:00	4	2	0	0	0	0	6	0	0	0	0	0	0	0
13:15	6	2	0	0	0	0	8	0	0	0	0	0	0	0
13:30	7	1	1	0	0	0	9	0	0	1	0	0	0	1
13:45	8	0	0	0	1	1	10	0	1	0	0	0	1	2
Hour	25	5	1	0	1	1	33	0	1	1	0	0	1	3
14:00	5	3	0	0	0	2	10	2	1	0	0	0	1	4
14:15	5	2	1	0	0	0	8	2	0	1	0	0	2	5
14:30	0	2	1	0	0	1	4	0	1	1	0	0	0	2
14:45	2	1	0	0	0	0	3	1	1	1	0	0	1	4
Hour	12	8	2	0	0	3	25	5	3	3	0	0	4	15
15:00	5	2	0	0	0	2	9	2	0	0	0	0	1	3
15:15	8	0	0	0	0	2	10	1	2	0	0	0	1	4
15:30	5	0	0	0	0	2	7	1	1	0	0	0	1	3
15:45	7	0	0	0	0	2	9	2	1	0	0	0	2	5
Hour	25	2	0	0	0	8	35	6	4	0	0	0	5	15
16:00	3	1	1	0	0	1	6	2	1	0	2	0	1	6
16:15	6	3	0	0	0	2	11	2	0	0	0	0	2	4
16:30	4	2	0	0	0	1	7	1	0	0	0	0	2	3
16:45	4	0	1	0	1	2	8	2	1	0	0	0	1	4
Hour	17	6	2	0	1	6	32	7	2	0	2	0	6	17
17:00	6	0	0	0	0	2	8	1	0	0	0	0	2	3
17:15	4	0	1	0	0	2	7	1	1	0	0	0	2	4
17:30	8	0	0	0	0	1	9	1	0	0	0	0	1	2
17:45	5	0	0	0	0	1	6	1	1	0	1	0	2	5
Hour	23	0	1	0	0	6	30	4	2	0	1	0	7	14
18:00	1	0	0	0	0	3	4	0	1	0	0	0	2	3
18:15	2	0	0	0	0	1	3	1	0	0	0	0	1	2
18:30	7	0	0	0	0	2	9	2	0	0	0	0	2	4
18:45	8	0	0	0	0	1	9	9	0	0	0	0	1	10
Hour	18	0	0	0	0	7	25	12	1	0	0	0	6	19
Total	268	67	21	0	2	59	417	74	31	17	12	2	58	194

Site No. 2
Location East Road / Sheriff Street Upper(W) / New Wapping Street / Sheriff Street Upper(E)
Date 04 October 2017

Time	A to D - East Road to Sheriff Street Upper(E)					Veh. Total	A to C - East Road to New Wapping Street					Veh. Total
	CAR	LGV	OGV1	OGV2	PSV		CAR	LGV	OGV1	OGV2	PSV	
07:00	5	3	0	1	0	9	42	1	1	1	2	47
07:15	7	4	0	1	0	12	43	4	1	4	1	53
07:30	11	2	1	0	0	14	39	0	1	0	2	42
07:45	12	0	0	1	0	13	50	6	2	0	1	59
Hour	35	9	1	3	0	48	174	11	5	5	6	201
08:00	20	5	1	2	0	28	41	6	0	1	2	50
08:15	6	3	1	0	0	10	26	5	2	0	1	34
08:30	18	1	1	2	1	23	50	4	4	1	2	61
08:45	21	2	0	1	1	25	28	5	2	0	2	37
Hour	65	11	3	5	2	86	145	20	8	2	7	182
09:00	15	2	1	2	0	20	48	2	0	1	2	53
09:15	9	1	1	0	0	11	20	2	1	0	2	25
09:30	11	3	1	0	0	15	12	1	2	0	1	16
09:45	9	4	0	0	0	13	17	4	0	1	1	23
Hour	44	10	3	2	0	59	97	9	3	2	6	117
10:00	4	1	1	0	0	6	12	5	1	0	0	18
10:15	9	3	0	0	0	12	10	3	0	0	1	14
10:30	3	1	0	0	0	4	5	1	2	0	0	8
10:45	8	4	0	0	0	12	9	2	2	2	1	16
Hour	24	9	1	0	0	34	36	11	5	2	2	56
11:00	6	1	0	0	0	7	7	3	1	0	0	11
11:15	2	2	0	1	0	5	9	2	1	2	0	14
11:30	2	3	1	0	0	6	10	3	0	0	0	13
11:45	5	4	0	1	0	10	5	0	0	0	0	5
Hour	15	10	1	2	0	28	31	8	2	2	0	43
12:00	6	3	1	1	0	11	5	3	1	0	0	9
12:15	3	1	0	3	0	7	12	3	1	0	0	16
12:30	4	2	0	0	0	6	7	0	0	1	0	8
12:45	3	1	1	2	0	7	7	3	1	0	0	11
Hour	16	7	2	6	0	31	31	9	3	1	0	44
13:00	5	2	1	0	0	8	9	0	1	1	0	11
13:15	4	2	2	0	0	8	11	1	1	0	0	13
13:30	6	1	1	0	0	8	4	2	0	2	0	8
13:45	6	2	1	0	0	9	13	0	0	0	0	13
Hour	21	7	5	0	0	33	37	3	2	3	0	45
14:00	2	0	2	1	0	5	9	2	0	1	0	12
14:15	2	1	1	0	1	5	12	4	2	1	0	19
14:30	5	1	1	1	0	8	5	2	1	0	0	8
14:45	3	0	2	0	0	5	7	5	1	0	0	13
Hour	12	2	6	2	1	23	33	13	4	2	0	52
15:00	3	4	2	0	0	9	10	5	1	1	0	17
15:15	2	1	1	1	0	5	6	3	0	1	0	10
15:30	2	1	0	0	0	3	10	5	1	2	0	18
15:45	2	1	1	1	0	5	13	5	2	1	0	21
Hour	9	7	4	2	0	22	39	18	4	5	0	66
16:00	3	0	0	1	0	4	15	2	0	1	1	19
16:15	1	0	0	3	0	4	14	3	0	0	1	18
16:30	1	1	0	2	0	4	8	2	1	1	1	13
16:45	4	1	1	0	0	6	6	1	1	0	4	12
Hour	9	2	1	6	0	18	43	8	2	2	7	62
17:00	2	0	0	2	0	4	9	1	0	0	1	11
17:15	5	0	0	0	0	5	6	2	0	0	2	10
17:30	3	1	0	0	0	4	17	0	0	0	2	19
17:45	3	2	0	0	0	5	8	1	0	1	3	13
Hour	13	3	0	2	0	18	40	4	0	1	8	53
18:00	3	0	0	0	0	3	8	0	0	0	2	10
18:15	7	2	0	2	0	11	11	1	0	0	1	13
18:30	7	0	0	0	0	7	13	2	0	0	2	17
18:45	2	0	0	0	0	2	9	0	0	0	2	11
Hour	19	2	0	2	0	23	41	3	0	0	7	51
Total	282	79	27	32	3	423	747	117	38	27	43	972

Site No. 2
Location East Road / Sheriff Street Upper(W) / New Wapping Street / Sheriff Street Upper(E)
Date 04 October 2017

Time	A to B - East Road to Sheriff Street Upper(W)					Veh. Total	B to A - Sheriff Street Upper(W) to East Road					Veh. Total
	CAR	LGV	OGV1	OGV2	PSV		CAR	LGV	OGV1	OGV2	PSV	
07:00	26	6	1	0	2	35	34	3	1	0	0	38
07:15	48	7	0	0	0	55	27	2	1	0	0	30
07:30	45	4	1	1	1	52	21	3	1	0	0	25
07:45	50	7	5	0	1	63	31	5	0	0	0	36
Hour	169	24	7	1	4	205	113	13	3	0	0	129
08:00	48	3	1	0	2	54	19	8	0	0	0	27
08:15	20	2	1	1	2	26	28	4	4	0	0	36
08:30	47	7	3	0	3	60	17	7	1	0	0	25
08:45	37	7	1	0	1	46	27	3	3	0	0	33
Hour	152	19	6	1	8	186	91	22	8	0	0	121
09:00	62	6	1	0	1	70	22	4	1	1	0	28
09:15	45	10	1	1	1	58	28	7	0	0	0	35
09:30	38	5	4	1	1	49	17	3	1	0	0	21
09:45	22	5	1	0	1	29	27	4	0	0	1	32
Hour	167	26	7	2	4	206	94	18	2	1	1	116
10:00	23	2	0	0	1	26	17	8	0	0	0	25
10:15	11	4	1	0	1	17	22	9	3	0	0	34
10:30	8	2	0	0	1	11	22	8	1	0	0	31
10:45	14	6	3	0	0	23	15	10	1	0	0	26
Hour	56	14	4	0	3	77	76	35	5	0	0	116
11:00	11	3	2	0	1	17	27	15	2	0	0	44
11:15	13	2	3	0	1	19	26	6	0	0	0	32
11:30	11	6	2	0	1	20	30	8	3	0	2	43
11:45	4	2	1	1	0	8	26	11	1	0	0	38
Hour	39	13	8	1	3	64	109	40	6	0	2	157
12:00	10	5	0	0	2	17	23	11	0	0	0	34
12:15	9	3	1	0	1	14	26	7	0	0	0	33
12:30	11	1	1	1	1	15	27	4	1	0	0	32
12:45	9	3	0	0	0	12	29	5	2	0	0	36
Hour	39	12	2	1	4	58	105	27	3	0	0	135
13:00	8	3	1	0	1	13	29	9	0	1	0	39
13:15	15	5	0	0	1	21	27	5	0	0	0	32
13:30	13	2	0	0	0	15	34	2	3	0	0	39
13:45	14	5	0	0	1	20	29	2	2	0	0	33
Hour	50	15	1	0	3	69	119	18	5	1	0	143
14:00	11	9	2	0	2	24	35	10	1	0	0	46
14:15	8	2	0	0	1	11	29	3	1	0	0	33
14:30	13	2	0	0	2	17	38	5	2	0	0	45
14:45	12	0	0	0	0	12	34	7	1	1	0	43
Hour	44	13	2	0	5	64	136	25	5	1	0	167
15:00	11	2	1	0	1	15	23	11	0	1	0	35
15:15	16	2	0	0	1	19	34	7	0	1	0	42
15:30	14	9	0	0	1	24	21	7	1	0	0	29
15:45	9	4	0	0	0	13	46	3	1	0	0	50
Hour	50	17	1	0	3	71	124	28	2	2	0	156
16:00	13	2	1	0	1	17	44	10	0	0	0	54
16:15	14	4	0	0	1	19	40	6	0	0	0	46
16:30	14	2	0	0	1	17	54	8	0	0	0	62
16:45	19	1	0	0	0	20	50	11	0	0	0	61
Hour	60	9	1	0	3	73	188	35	0	0	0	223
17:00	18	3	1	0	2	24	51	5	1	0	0	57
17:15	13	1	0	0	1	15	69	4	1	0	0	74
17:30	13	3	1	0	0	17	48	9	0	0	0	57
17:45	15	2	1	0	2	20	51	11	0	0	0	62
Hour	59	9	3	0	5	76	219	29	2	0	0	250
18:00	15	2	0	0	2	19	49	4	1	0	0	54
18:15	10	2	0	0	1	13	39	6	0	0	0	45
18:30	18	1	0	0	2	21	40	2	0	0	1	43
18:45	13	1	0	0	0	14	53	4	0	0	0	57
Hour	56	6	0	0	5	67	181	16	1	0	1	199
Total	941	177	42	6	50	1216	1555	306	42	5	4	1912

Site No. 2
Location East Road / Sheriff Street Upper(W) / New Wapping Street / Sheriff Street Upper(E)
Date 04 October 2017

Time	B to D - Sheriff Street Upper(W) to Sheriff Street Upper(E)					Veh. Total	B to C - Sheriff Street Upper(W) to New Wapping Street					Veh. Total
	CAR	LGV	OGV1	OGV2	PSV		CAR	LGV	OGV1	OGV2	PSV	
07:00	18	2	2	1	0	23	11	2	0	0	0	13
07:15	25	5	4	1	0	35	14	4	0	0	1	19
07:30	25	10	0	1	0	36	5	3	0	0	0	8
07:45	18	1	0	0	0	19	16	4	0	0	0	20
Hour	86	18	6	3	0	113	46	13	0	0	1	60
08:00	31	4	1	0	1	37	10	1	0	1	1	13
08:15	26	3	3	2	1	35	14	1	0	0	0	15
08:30	22	7	2	0	1	32	5	2	0	0	0	7
08:45	27	3	1	0	1	32	12	1	0	0	1	14
Hour	106	17	7	2	4	136	41	5	0	1	2	49
09:00	25	2	2	0	0	29	9	1	1	0	0	11
09:15	22	3	3	0	0	28	8	0	0	0	1	9
09:30	23	5	0	0	0	28	4	2	0	1	0	7
09:45	19	8	5	0	2	34	5	0	1	0	1	7
Hour	89	18	10	0	2	119	26	3	2	1	2	34
10:00	14	6	1	0	0	21	3	2	0	0	0	5
10:15	26	10	4	2	0	42	5	2	2	0	1	10
10:30	19	6	2	0	0	27	4	0	2	0	0	6
10:45	17	5	3	0	0	25	2	1	2	0	0	5
Hour	76	27	10	2	0	115	14	5	6	0	1	26
11:00	18	10	3	1	1	33	1	1	1	0	1	4
11:15	13	5	1	0	1	20	1	2	0	0	1	4
11:30	19	3	4	0	0	26	6	2	1	0	0	9
11:45	18	8	2	0	0	28	4	3	0	0	1	8
Hour	68	26	10	1	2	107	12	8	2	0	3	25
12:00	25	7	0	0	0	32	2	4	0	0	0	6
12:15	23	5	1	0	0	29	5	0	0	0	0	5
12:30	23	10	2	2	0	37	4	2	0	0	1	7
12:45	21	8	4	0	0	33	5	2	0	0	1	8
Hour	92	30	7	2	0	131	16	8	0	0	2	26
13:00	22	8	5	0	1	36	4	2	0	0	0	6
13:15	23	11	2	0	0	36	4	1	0	0	1	6
13:30	24	11	2	0	0	37	10	1	1	0	1	13
13:45	40	7	2	0	0	49	5	3	1	0	0	9
Hour	109	37	11	0	1	158	23	7	2	0	2	34
14:00	30	6	0	1	1	38	6	3	0	0	0	9
14:15	24	6	2	3	1	36	5	2	1	0	1	9
14:30	29	9	3	0	1	42	0	1	0	0	1	2
14:45	37	6	0	2	2	47	4	3	1	0	0	8
Hour	120	27	5	6	5	163	15	9	2	0	2	28
15:00	31	6	2	0	0	39	6	1	0	0	1	8
15:15	43	7	4	0	0	54	6	1	0	0	1	8
15:30	37	9	1	0	2	49	4	0	0	0	1	5
15:45	36	9	0	1	3	49	6	0	0	0	0	6
Hour	147	31	7	1	5	191	22	2	0	0	3	27
16:00	15	3	1	1	1	21	3	1	1	0	1	6
16:15	29	13	0	1	1	44	9	2	0	0	0	11
16:30	34	7	0	0	0	41	5	1	0	0	0	6
16:45	31	3	0	0	0	34	4	0	0	0	0	4
Hour	109	26	1	2	2	140	21	4	1	0	1	27
17:00	28	4	0	1	0	33	5	0	0	0	1	6
17:15	36	4	0	0	0	40	4	0	0	0	1	5
17:30	34	2	1	1	0	38	6	0	0	0	0	6
17:45	27	3	2	1	0	33	3	0	0	0	1	4
Hour	125	13	3	3	0	144	18	0	0	0	3	21
18:00	22	7	1	1	0	31	2	0	0	0	0	2
18:15	34	1	0	0	0	35	2	0	0	0	1	3
18:30	20	5	1	0	1	27	3	0	0	0	0	3
18:45	25	5	0	0	0	30	6	0	0	0	1	7
Hour	101	18	2	1	1	123	13	0	0	0	2	15
Total	1228	288	79	23	22	1640	267	64	15	2	24	372

Site No. 2
Location East Road / Sheriff Street Upper(W) / New Wapping Street / Sheriff Street Upper(E)
Date 04 October 2017

Time	C to B - New Wapping Street to Sheriff Street Upper(W)					Veh. Total	C to A - New Wapping Street to East Road					Veh. Total
	CAR	LGV	OGV1	OGV2	PSV		CAR	LGV	OGV1	OGV2	PSV	
07:00	5	1	0	0	0	6	3	1	0	0	0	4
07:15	1	1	1	0	1	4	7	1	0	0	0	8
07:30	4	2	0	0	1	7	8	1	0	1	0	10
07:45	4	2	1	1	3	11	8	6	0	0	0	14
Hour	14	6	2	1	5	28	26	9	0	1	0	36
08:00	6	0	2	0	2	10	4	2	0	0	0	6
08:15	7	1	2	0	2	12	9	5	0	0	0	14
08:30	11	1	1	0	1	14	3	1	0	0	0	4
08:45	10	1	1	0	1	13	8	1	0	0	0	9
Hour	34	3	6	0	6	49	24	9	0	0	0	33
09:00	10	1	3	0	1	15	7	3	1	0	0	11
09:15	10	1	1	1	0	13	2	3	0	0	0	5
09:30	6	1	1	0	3	11	5	2	0	1	0	8
09:45	5	2	2	0	0	9	3	0	1	0	0	4
Hour	31	5	7	1	4	48	17	8	2	1	0	28
10:00	4	1	0	0	0	5	6	0	2	1	0	9
10:15	5	1	0	0	1	7	4	1	0	1	0	6
10:30	2	2	0	0	0	4	4	2	0	1	0	7
10:45	6	1	0	0	1	8	7	4	1	1	0	13
Hour	17	5	0	0	2	24	21	7	3	4	0	35
11:00	8	0	0	0	0	8	3	0	1	1	0	5
11:15	3	1	1	1	0	6	4	3	1	0	0	8
11:30	4	1	1	0	0	6	6	2	0	1	1	10
11:45	1	3	1	0	0	5	8	1	0	0	0	9
Hour	16	5	3	1	0	25	21	6	2	2	1	32
12:00	8	1	0	0	0	9	3	2	0	2	0	7
12:15	3	0	2	0	2	7	7	0	1	0	0	8
12:30	8	1	0	0	0	9	5	1	0	2	0	8
12:45	3	1	1	0	1	6	5	1	1	2	0	9
Hour	22	3	3	0	3	31	20	4	2	6	0	32
13:00	5	1	0	0	1	7	2	1	0	0	0	3
13:15	5	1	1	0	0	7	7	1	1	1	0	10
13:30	9	1	0	0	0	10	4	2	0	3	0	9
13:45	5	0	1	0	0	6	13	2	1	1	0	17
Hour	24	3	2	0	1	30	26	6	2	5	0	39
14:00	10	3	1	0	1	15	12	2	2	0	0	16
14:15	6	0	0	0	0	6	5	1	0	1	0	7
14:30	2	5	2	0	1	10	7	3	0	1	0	11
14:45	6	0	0	0	1	7	12	5	0	3	0	20
Hour	24	8	3	0	3	38	36	11	2	5	0	54
15:00	1	3	0	0	1	5	10	2	2	0	0	14
15:15	5	1	1	0	1	8	10	1	1	1	0	13
15:30	4	1	0	0	1	6	10	3	1	1	0	15
15:45	4	1	0	0	1	6	7	2	3	2	0	14
Hour	14	6	1	0	4	25	37	8	7	4	0	56
16:00	6	1	0	0	1	8	16	3	3	2	0	24
16:15	10	1	0	0	0	11	14	2	2	0	0	18
16:30	13	0	0	0	1	14	15	3	0	1	0	19
16:45	5	1	0	0	0	6	19	5	0	3	0	27
Hour	34	3	0	0	2	39	64	13	5	6	0	88
17:00	12	2	0	0	0	14	18	1	0	1	0	20
17:15	5	2	1	0	0	8	16	0	0	1	0	17
17:30	11	1	1	0	1	14	20	0	2	1	0	23
17:45	18	2	0	0	2	22	26	1	0	1	0	28
Hour	46	7	2	0	3	58	80	2	2	4	0	88
18:00	9	1	0	0	0	10	22	4	1	1	0	28
18:15	9	1	0	0	0	10	23	7	0	1	0	31
18:30	9	1	0	0	0	10	21	3	1	0	0	25
18:45	3	0	0	0	0	3	15	0	3	0	0	18
Hour	30	3	0	0	0	33	81	14	5	2	0	102
Total	306	57	29	3	33	428	453	97	32	40	1	623

Site No. 2
Location East Road / Sheriff Street Upper(W) / New Wapping Street / Sheriff Street Upper(E)
Date 04 October 2017

Time	C to D - New Wapping Street to Sheriff Street Upper(E)					Veh. Total	D to C - Sheriff Street Upper(E) to New Wapping Street					Veh. Total
	CAR	LGV	OGV1	OGV2	PSV		CAR	LGV	OGV1	OGV2	PSV	
07:00	2	2	1	1	0	6	1	3	0	0	1	5
07:15	0	0	0	0	0	0	5	1	0	0	0	6
07:30	2	0	0	0	0	2	4	0	0	0	0	4
07:45	0	0	0	0	0	0	3	2	0	0	0	5
Hour	4	2	1	1	0	8	13	6	0	0	1	20
08:00	0	1	0	0	0	1	2	3	0	1	0	6
08:15	1	0	1	0	0	2	0	0	2	0	0	2
08:30	0	1	0	0	0	1	1	1	0	0	0	2
08:45	1	0	0	0	0	1	4	0	0	0	0	4
Hour	2	2	1	0	0	5	7	4	2	1	0	14
09:00	1	0	0	0	0	1	0	1	0	0	0	1
09:15	1	0	0	0	0	1	1	0	2	0	0	3
09:30	0	1	1	0	0	2	1	0	0	0	0	1
09:45	3	3	0	0	0	6	3	2	0	0	0	5
Hour	5	4	1	0	0	10	5	3	2	0	0	10
10:00	1	1	2	0	0	4	1	1	0	1	0	3
10:15	2	1	1	0	0	4	0	1	0	0	0	1
10:30	0	0	0	0	0	0	5	3	1	0	0	9
10:45	3	1	0	0	0	4	0	0	1	0	0	1
Hour	6	3	3	0	0	12	6	5	2	1	0	14
11:00	1	0	0	0	0	1	4	1	0	0	0	5
11:15	0	2	0	0	0	2	2	1	0	0	0	3
11:30	1	1	0	0	0	2	1	1	0	0	0	2
11:45	0	1	0	0	0	1	1	0	1	0	0	2
Hour	2	4	0	0	0	6	8	3	1	0	0	12
12:00	0	0	0	0	0	0	2	0	0	0	0	2
12:15	3	0	1	0	0	4	3	1	1	0	0	5
12:30	0	1	0	0	0	1	3	2	0	0	0	5
12:45	2	0	0	0	0	2	0	0	0	0	0	0
Hour	5	1	1	0	0	7	8	3	1	0	0	12
13:00	5	1	0	0	0	6	5	1	0	0	0	6
13:15	2	0	0	0	0	2	1	1	1	0	0	3
13:30	0	0	0	0	0	0	7	0	0	1	0	8
13:45	1	1	1	1	0	4	2	2	0	0	0	4
Hour	8	2	1	1	0	12	15	4	1	1	0	21
14:00	1	0	0	0	0	1	2	2	0	0	0	4
14:15	3	0	0	0	0	3	2	2	0	1	0	5
14:30	0	2	0	0	1	3	1	0	0	0	0	1
14:45	1	0	0	0	0	1	2	3	0	0	0	5
Hour	5	2	0	0	1	8	7	7	0	1	0	15
15:00	2	0	0	0	0	2	3	2	0	0	0	5
15:15	0	3	1	0	0	4	1	0	0	0	0	1
15:30	2	0	0	1	0	3	2	0	0	0	0	2
15:45	1	0	0	0	0	1	3	0	0	0	0	3
Hour	5	3	1	1	0	10	9	2	0	0	0	11
16:00	1	0	1	0	0	2	8	0	0	0	0	8
16:15	1	1	0	1	0	3	4	1	0	0	0	5
16:30	1	1	0	0	0	2	1	1	0	0	0	2
16:45	0	0	0	0	0	0	2	0	1	0	0	3
Hour	3	2	1	1	0	7	15	2	1	0	0	18
17:00	0	0	0	0	0	0	2	0	1	0	0	3
17:15	0	0	1	0	0	1	2	0	0	0	0	2
17:30	1	2	0	0	0	3	3	0	1	0	0	4
17:45	0	0	1	0	0	1	2	0	0	0	0	2
Hour	1	2	2	0	0	5	9	0	2	0	0	11
18:00	1	0	0	0	0	1	1	0	0	0	0	1
18:15	2	0	0	0	0	2	1	0	0	0	0	1
18:30	0	0	0	0	0	0	1	0	0	0	0	1
18:45	2	0	0	0	0	2	3	0	0	0	0	3
Hour	5	0	0	0	0	5	6	0	0	0	0	6
Total	51	27	12	4	1	95	108	39	12	4	1	164

Site No. 2
Location East Road / Sheriff Street Upper(W) / New Wapping Street / Sheriff Street Upper(E)
Date 04 October 2017

Time	D to B - Sheriff Street Upper(E) to Sheriff Street Upper(W)					Veh. Total	D to A - Sheriff Street Upper(E) to East Road					Veh. Total
	CAR	LGV	OGV1	OGV2	PSV		CAR	LGV	OGV1	OGV2	PSV	
07:00	3	1	0	0	0	4	3	0	0	0	0	3
07:15	2	1	0	0	0	3	1	0	0	0	0	1
07:30	3	0	0	0	0	3	3	2	0	0	0	5
07:45	3	2	1	0	0	6	3	0	0	0	0	3
Hour	11	4	1	0	0	16	10	2	0	0	0	12
08:00	3	1	1	0	0	5	7	0	1	0	0	8
08:15	6	3	1	0	0	10	1	3	0	0	0	4
08:30	3	3	0	0	0	6	3	1	0	0	0	4
08:45	8	4	2	0	0	14	2	2	0	0	0	4
Hour	20	11	4	0	0	35	13	6	1	0	0	20
09:00	11	3	0	0	0	14	5	1	0	0	0	6
09:15	14	5	0	0	0	19	1	0	0	0	0	1
09:30	5	1	2	0	0	8	0	0	0	0	0	0
09:45	2	2	0	0	0	4	0	0	0	0	0	0
Hour	32	11	2	0	0	45	6	1	0	0	0	7
10:00	3	4	0	0	0	7	0	2	0	0	0	2
10:15	2	4	0	0	0	6	0	2	1	0	0	3
10:30	1	4	0	0	0	5	1	0	0	0	0	1
10:45	3	1	4	0	0	8	0	1	0	0	0	1
Hour	9	13	4	0	0	26	1	5	1	0	0	7
11:00	4	1	0	0	0	5	2	0	0	0	0	2
11:15	2	2	0	0	0	4	2	3	0	0	0	5
11:30	4	3	0	0	0	7	0	0	0	0	0	0
11:45	7	4	0	0	0	11	4	3	0	0	0	7
Hour	17	10	0	0	0	27	8	6	0	0	0	14
12:00	4	0	0	0	0	4	2	1	0	0	0	3
12:15	9	1	0	0	0	10	0	3	1	0	0	4
12:30	11	3	0	0	0	14	1	1	0	0	0	2
12:45	6	4	0	0	0	10	2	1	0	0	0	3
Hour	30	8	0	0	0	38	5	6	1	0	0	12
13:00	7	5	1	0	0	13	0	2	1	0	0	3
13:15	3	6	1	0	0	10	2	0	0	0	0	2
13:30	11	5	0	0	0	16	4	0	0	0	0	4
13:45	4	4	0	0	0	8	5	3	1	0	0	9
Hour	25	20	2	0	0	47	11	5	2	0	0	18
14:00	13	2	0	0	0	15	4	0	0	0	0	4
14:15	5	3	1	0	0	9	2	3	0	0	0	5
14:30	8	1	0	0	1	10	2	2	0	0	0	4
14:45	7	4	0	0	0	11	4	3	0	0	0	7
Hour	33	10	1	0	1	45	12	8	0	0	0	20
15:00	7	0	0	0	0	7	5	2	0	0	0	7
15:15	8	2	1	0	0	11	5	1	0	0	0	6
15:30	3	1	0	0	0	4	2	1	0	0	0	3
15:45	5	6	0	0	0	11	5	2	0	0	0	7
Hour	23	9	1	0	0	33	17	6	0	0	0	23
16:00	9	4	0	0	0	13	10	1	2	0	0	13
16:15	6	1	1	0	0	8	5	1	0	0	0	6
16:30	8	3	1	0	0	12	4	1	0	0	0	5
16:45	7	0	0	0	0	7	4	0	0	0	0	4
Hour	30	8	2	0	0	40	23	3	2	0	0	28
17:00	8	2	0	1	0	11	7	1	0	0	0	8
17:15	10	2	0	0	0	12	6	1	0	0	0	7
17:30	13	1	0	0	0	14	14	0	0	0	0	14
17:45	5	0	0	0	0	5	6	2	0	0	0	8
Hour	36	5	0	1	0	42	33	4	0	0	0	37
18:00	9	5	0	0	0	14	5	2	0	0	0	7
18:15	4	2	0	0	0	6	4	1	0	0	0	5
18:30	6	1	0	1	0	8	7	2	0	0	0	9
18:45	6	1	0	0	0	7	2	0	0	0	0	2
Hour	25	9	0	1	0	35	18	5	0	0	0	23
Total	291	118	17	2	1	429	157	57	7	0	0	221

Site No. 2
Location East Road / Sheriff Street Upper(W) / New Wapping Street / Sheriff Street Upper(E)
Date 04 October 2017

Time	To Arm A - East Road					Veh. Total	From Arm A - East Road					Veh. Total
	CAR	LGV	OGV1	OGV2	PSV		CAR	LGV	OGV1	OGV2	PSV	
07:00	40	4	1	0	0	45	73	10	2	2	4	91
07:15	35	3	1	0	0	39	98	15	1	5	1	120
07:30	32	6	1	1	0	40	95	6	3	1	3	108
07:45	42	11	0	0	0	53	112	13	7	1	2	135
Hour	149	24	3	1	0	177	378	44	13	9	10	454
08:00	30	10	1	0	0	41	109	14	2	3	4	132
08:15	38	12	4	0	0	54	52	10	4	1	3	70
08:30	23	9	1	0	0	33	115	12	8	3	6	144
08:45	37	6	3	0	0	46	86	14	3	1	4	108
Hour	128	37	9	0	0	174	362	50	17	8	17	454
09:00	34	8	2	1	0	45	125	10	2	3	3	143
09:15	31	10	0	0	0	41	74	13	3	1	3	94
09:30	22	5	1	1	0	29	61	9	7	1	2	80
09:45	30	4	1	0	1	36	48	13	1	1	2	65
Hour	117	27	4	2	1	151	308	45	13	6	10	382
10:00	23	10	2	1	0	36	39	8	2	0	1	50
10:15	26	12	4	1	0	43	30	10	1	0	2	43
10:30	27	10	1	1	0	39	16	4	2	0	1	23
10:45	22	15	2	1	0	40	31	12	5	2	1	51
Hour	98	47	9	4	0	158	116	34	10	2	5	167
11:00	32	15	3	1	0	51	24	7	3	0	1	35
11:15	32	12	1	0	0	45	24	6	4	3	1	38
11:30	36	10	3	1	3	53	23	12	3	0	1	39
11:45	38	15	1	0	0	54	14	6	1	2	0	23
Hour	138	52	8	2	3	203	85	31	11	5	3	135
12:00	28	14	0	2	0	44	21	11	2	1	2	37
12:15	33	10	2	0	0	45	24	7	2	3	1	37
12:30	33	6	1	2	0	42	22	3	1	2	1	29
12:45	36	7	3	2	0	48	19	7	2	2	0	30
Hour	130	37	6	6	0	179	86	28	7	8	4	133
13:00	31	12	1	1	0	45	22	5	3	1	1	32
13:15	36	6	1	1	0	44	30	8	3	0	1	42
13:30	42	4	3	3	0	52	23	5	1	2	0	31
13:45	47	7	4	1	0	59	33	7	1	0	1	42
Hour	156	29	9	6	0	200	108	25	8	3	3	147
14:00	51	12	3	0	0	66	22	11	4	2	2	41
14:15	36	7	1	1	0	45	22	7	3	1	2	35
14:30	47	10	2	1	0	60	23	5	2	1	2	33
14:45	50	15	1	4	0	70	22	5	3	0	0	30
Hour	184	44	7	6	0	241	89	28	12	4	6	139
15:00	38	15	2	1	0	56	24	11	4	1	1	41
15:15	49	9	1	2	0	61	24	6	1	2	1	34
15:30	33	11	2	1	0	47	26	15	1	2	1	45
15:45	58	7	4	2	0	71	24	10	3	2	0	39
Hour	178	42	9	6	0	235	98	42	9	7	3	159
16:00	70	14	5	2	0	91	31	4	1	2	2	40
16:15	59	9	2	0	0	70	29	7	0	3	2	41
16:30	73	12	0	1	0	86	23	5	1	3	2	34
16:45	73	16	0	3	0	92	29	3	2	0	4	38
Hour	275	51	7	6	0	339	112	19	4	8	10	153
17:00	76	7	1	1	0	85	29	4	1	2	3	39
17:15	91	5	1	1	0	98	24	3	0	0	3	30
17:30	82	9	2	1	0	94	33	4	1	0	2	40
17:45	83	14	0	1	0	98	26	5	1	1	5	38
Hour	332	35	4	4	0	375	112	16	3	3	13	147
18:00	76	10	2	1	0	89	26	2	0	0	4	32
18:15	66	14	0	1	0	81	28	5	0	2	2	37
18:30	68	7	1	0	1	77	38	3	0	0	4	45
18:45	70	4	3	0	0	77	24	1	0	0	2	27
Hour	280	35	6	2	1	324	116	11	0	2	12	141
Total	2165	460	81	45	5	2756	1970	373	107	65	96	2611

Site No. 2
Location East Road / Sheriff Street Upper(W) / New Wapping Street / Sheriff Street Upper(E)
Date 04 October 2017

Time	To Arm B - Sheriff Street Upper(W)					Veh. Total	From Arm B - Sheriff Street Upper(W)					Veh. Total
	CAR	LGV	OGV1	OGV2	PSV		CAR	LGV	OGV1	OGV2	PSV	
07:00	34	8	1	0	2	45	63	7	3	1	0	74
07:15	51	9	1	0	1	62	66	11	5	1	1	84
07:30	52	6	1	1	2	62	51	16	1	1	0	69
07:45	57	11	7	1	4	80	65	10	0	0	0	75
Hour	194	34	10	2	9	249	245	44	9	3	1	302
08:00	57	4	4	0	4	69	60	13	1	1	2	77
08:15	33	6	4	1	4	48	68	8	7	2	1	86
08:30	61	11	4	0	4	80	44	16	3	0	1	64
08:45	55	12	4	0	2	73	66	7	4	0	2	79
Hour	206	33	16	1	14	270	238	44	15	3	6	306
09:00	83	10	4	0	2	99	56	7	4	1	0	68
09:15	69	16	2	2	1	90	58	10	3	0	1	72
09:30	49	7	7	1	4	68	44	10	1	1	0	56
09:45	29	9	3	0	1	42	51	12	6	0	4	73
Hour	230	42	16	3	8	299	209	39	14	2	5	269
10:00	30	7	0	0	1	38	34	16	1	0	0	51
10:15	18	9	1	0	2	30	53	21	9	2	1	86
10:30	11	8	0	0	1	20	45	14	5	0	0	64
10:45	23	8	7	0	1	39	34	16	6	0	0	56
Hour	82	32	8	0	5	127	166	67	21	2	1	257
11:00	23	4	2	0	1	30	46	26	6	1	2	81
11:15	18	5	4	1	1	29	40	13	1	0	2	56
11:30	19	10	3	0	1	33	55	13	8	0	2	78
11:45	12	9	2	1	0	24	48	22	3	0	1	74
Hour	72	28	11	2	3	116	189	74	18	1	7	289
12:00	22	6	0	0	2	30	50	22	0	0	0	72
12:15	21	4	3	0	3	31	54	12	1	0	0	67
12:30	30	5	1	1	1	38	54	16	3	2	1	76
12:45	18	8	1	0	1	28	55	15	6	0	1	77
Hour	91	23	5	1	7	127	213	65	10	2	2	292
13:00	20	9	2	0	2	33	55	19	5	1	1	81
13:15	23	12	2	0	1	38	54	17	2	0	1	74
13:30	33	8	0	0	0	41	68	14	6	0	1	89
13:45	23	9	1	0	1	34	74	12	5	0	0	91
Hour	99	38	5	0	4	146	251	62	18	1	3	335
14:00	34	14	3	0	3	54	71	19	1	1	1	93
14:15	19	5	1	0	1	26	58	11	4	3	2	78
14:30	23	8	2	0	4	37	67	15	5	0	2	89
14:45	25	4	0	0	1	30	75	16	2	3	2	98
Hour	101	31	6	0	9	147	271	61	12	7	7	358
15:00	19	5	1	0	2	27	60	18	2	1	1	82
15:15	29	5	2	0	2	38	83	15	4	1	1	104
15:30	21	11	0	0	2	34	62	16	2	0	3	83
15:45	18	11	0	0	1	30	88	12	1	1	3	105
Hour	87	32	3	0	7	129	293	61	9	3	8	374
16:00	28	7	1	0	2	38	62	14	2	1	2	81
16:15	30	6	1	0	1	38	78	21	0	1	1	101
16:30	35	5	1	0	2	43	93	16	0	0	0	109
16:45	31	2	0	0	0	33	85	14	0	0	0	99
Hour	124	20	3	0	5	152	318	65	2	2	3	390
17:00	38	7	1	1	2	49	84	9	1	1	1	96
17:15	28	5	1	0	1	35	109	8	1	0	1	119
17:30	37	5	2	0	1	45	88	11	1	1	0	101
17:45	38	4	1	0	4	47	81	14	2	1	1	99
Hour	141	21	5	1	8	176	362	42	5	3	3	415
18:00	33	8	0	0	2	43	73	11	2	1	0	87
18:15	23	5	0	0	1	29	75	7	0	0	1	83
18:30	33	3	0	1	2	39	63	7	1	0	2	73
18:45	22	2	0	0	0	24	84	9	0	0	1	94
Hour	111	18	0	1	5	135	295	34	3	1	4	337
Total	1538	352	88	11	84	2073	3050	658	136	30	50	3924

Site No. 2
Location East Road / Sheriff Street Upper(W) / New Wapping Street / Sheriff Street Upper(E)
Date 04 October 2017

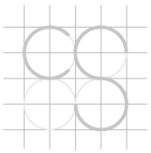
Time	To Arm C - New Wapping Street					Veh. Total	From Arm C - New Wapping Street					Veh. Total
	CAR	LGV	OGV1	OGV2	PSV		CAR	LGV	OGV1	OGV2	PSV	
07:00	54	6	1	1	3	65	10	4	1	1	0	16
07:15	62	9	1	4	2	78	8	2	1	0	1	12
07:30	48	3	1	0	2	54	14	3	0	1	1	19
07:45	69	12	2	0	1	84	12	8	1	1	3	25
Hour	233	30	5	5	8	281	44	17	3	3	5	72
08:00	53	10	0	3	3	69	10	3	2	0	2	17
08:15	40	6	4	0	1	51	17	6	3	0	2	28
08:30	56	7	4	1	2	70	14	3	1	0	1	19
08:45	44	6	2	0	3	55	19	2	1	0	1	23
Hour	193	29	10	4	9	245	60	14	7	0	6	87
09:00	57	4	1	1	2	65	18	4	4	0	1	27
09:15	29	2	3	0	3	37	13	4	1	1	0	19
09:30	17	3	2	1	1	24	11	4	2	1	3	21
09:45	25	6	1	1	2	35	11	5	3	0	0	19
Hour	128	15	7	3	8	161	53	17	10	2	4	86
10:00	16	8	1	1	0	26	11	2	4	1	0	18
10:15	15	6	2	0	2	25	11	3	1	1	1	17
10:30	14	4	5	0	0	23	6	4	0	1	0	11
10:45	11	3	5	2	1	22	16	6	1	1	1	25
Hour	56	21	13	3	3	96	44	15	6	4	2	71
11:00	12	5	2	0	1	20	12	0	1	1	0	14
11:15	12	5	1	2	1	21	7	6	2	1	0	16
11:30	17	6	1	0	0	24	11	4	1	1	1	18
11:45	10	3	1	0	1	15	9	5	1	0	0	15
Hour	51	19	5	2	3	80	39	15	5	3	1	63
12:00	9	7	1	0	0	17	11	3	0	2	0	16
12:15	20	4	2	0	0	26	13	0	4	0	2	19
12:30	14	4	0	1	1	20	13	3	0	2	0	18
12:45	12	5	1	0	1	19	10	2	2	2	1	17
Hour	55	20	4	1	2	82	47	8	6	6	3	70
13:00	18	3	1	1	0	23	12	3	0	0	1	16
13:15	16	3	2	0	1	22	14	2	2	1	0	19
13:30	21	3	1	3	1	29	13	3	0	3	0	19
13:45	20	5	1	0	0	26	19	3	3	2	0	27
Hour	75	14	5	4	2	100	58	11	5	6	1	81
14:00	17	7	0	1	0	25	23	5	3	0	1	32
14:15	19	8	3	2	1	33	14	1	0	1	0	16
14:30	6	3	1	0	1	11	9	10	2	1	2	24
14:45	13	11	2	0	0	26	19	5	0	3	1	28
Hour	55	29	6	3	2	95	65	21	5	5	4	100
15:00	19	8	1	1	1	30	13	5	2	0	1	21
15:15	13	4	0	1	1	19	15	5	3	1	1	25
15:30	16	5	1	2	1	25	16	4	1	2	1	24
15:45	22	5	2	1	0	30	12	3	3	2	1	21
Hour	70	22	4	5	3	104	56	17	9	5	4	91
16:00	26	3	1	1	2	33	23	4	4	2	1	34
16:15	27	6	0	0	1	34	25	4	2	1	0	32
16:30	14	4	1	1	1	21	29	4	0	1	1	35
16:45	12	1	2	0	4	19	24	6	0	3	0	33
Hour	79	14	4	2	8	107	101	18	6	7	2	134
17:00	16	1	1	0	2	20	30	3	0	1	0	34
17:15	12	2	0	0	3	17	21	2	2	1	0	26
17:30	26	0	1	0	2	29	32	3	3	1	1	40
17:45	13	1	0	1	4	19	44	3	1	1	2	51
Hour	67	4	2	1	11	85	127	11	6	4	3	151
18:00	11	0	0	0	2	13	32	5	1	1	0	39
18:15	14	1	0	0	2	17	34	8	0	1	0	43
18:30	17	2	0	0	2	21	30	4	1	0	0	35
18:45	18	0	0	0	3	21	20	0	3	0	0	23
Hour	60	3	0	0	9	72	116	17	5	2	0	140
Total	1122	220	65	33	68	1508	810	181	73	47	35	1146

Site No. 2
Location East Road / Sheriff Street Upper(W) / New Wapping Street / Sheriff Street Upper(E)
Date 04 October 2017

Time	To Arm D - Sheriff Street Upper(E)					Veh. Total	From Arm D - Sheriff Street Upper(E)					Veh. Total
	CAR	LGV	OGV1	OGV2	PSV		CAR	LGV	OGV1	OGV2	PSV	
07:00	25	7	3	3	0	38	7	4	0	0	1	12
07:15	32	9	4	2	0	47	8	2	0	0	0	10
07:30	38	12	1	1	0	52	10	2	0	0	0	12
07:45	30	1	0	1	0	32	9	4	1	0	0	14
Hour	125	29	8	7	0	169	34	12	1	0	1	48
08:00	51	10	2	2	1	66	12	4	2	1	0	19
08:15	33	6	5	2	1	47	7	6	3	0	0	16
08:30	40	9	3	2	2	56	7	5	0	0	0	12
08:45	49	5	1	1	2	58	14	6	2	0	0	22
Hour	173	30	11	7	6	227	40	21	7	1	0	69
09:00	41	4	3	2	0	50	16	5	0	0	0	21
09:15	32	4	4	0	0	40	16	5	2	0	0	23
09:30	34	9	2	0	0	45	6	1	2	0	0	9
09:45	31	15	5	0	2	53	5	4	0	0	0	9
Hour	138	32	14	2	2	188	43	15	4	0	0	62
10:00	19	8	4	0	0	31	4	7	0	1	0	12
10:15	37	14	5	2	0	58	2	7	1	0	0	10
10:30	22	7	2	0	0	31	7	7	1	0	0	15
10:45	28	10	3	0	0	41	3	2	5	0	0	10
Hour	106	39	14	2	0	161	16	23	7	1	0	47
11:00	25	11	3	1	1	41	10	2	0	0	0	12
11:15	15	9	1	1	1	27	6	6	0	0	0	12
11:30	22	7	5	0	0	34	5	4	0	0	0	9
11:45	23	13	2	1	0	39	12	7	1	0	0	20
Hour	85	40	11	3	2	141	33	19	1	0	0	53
12:00	31	10	1	1	0	43	8	1	0	0	0	9
12:15	29	6	2	3	0	40	12	5	2	0	0	19
12:30	27	13	2	2	0	44	15	6	0	0	0	21
12:45	26	9	5	2	0	42	8	5	0	0	0	13
Hour	113	38	10	8	0	169	43	17	2	0	0	62
13:00	32	11	6	0	1	50	12	8	2	0	0	22
13:15	29	13	4	0	0	46	6	7	2	0	0	15
13:30	30	12	3	0	0	45	22	5	0	1	0	28
13:45	47	10	4	1	0	62	11	9	1	0	0	21
Hour	138	46	17	1	1	203	51	29	5	1	0	86
14:00	33	6	2	2	1	44	19	4	0	0	0	23
14:15	29	7	3	3	2	44	9	8	1	1	0	19
14:30	34	12	4	1	2	53	11	3	0	0	1	15
14:45	41	6	2	2	2	53	13	10	0	0	0	23
Hour	137	31	11	8	7	194	52	25	1	1	1	80
15:00	36	10	4	0	0	50	15	4	0	0	0	19
15:15	45	11	6	1	0	63	14	3	1	0	0	18
15:30	41	10	1	1	2	55	7	2	0	0	0	9
15:45	39	10	1	2	3	55	13	8	0	0	0	21
Hour	161	41	12	4	5	223	49	17	1	0	0	67
16:00	19	3	2	2	1	27	27	5	2	0	0	34
16:15	31	14	0	5	1	51	15	3	1	0	0	19
16:30	36	9	0	2	0	47	13	5	1	0	0	19
16:45	35	4	1	0	0	40	13	0	1	0	0	14
Hour	121	30	3	9	2	165	68	13	5	0	0	86
17:00	30	4	0	3	0	37	17	3	1	1	0	22
17:15	41	4	1	0	0	46	18	3	0	0	0	21
17:30	38	5	1	1	0	45	30	1	1	0	0	32
17:45	30	5	3	1	0	39	13	2	0	0	0	15
Hour	139	18	5	5	0	167	78	9	2	1	0	90
18:00	26	7	1	1	0	35	15	7	0	0	0	22
18:15	43	3	0	2	0	48	9	3	0	0	0	12
18:30	27	5	1	0	1	34	14	3	0	1	0	18
18:45	29	5	0	0	0	34	11	1	0	0	0	12
Hour	125	20	2	3	1	151	49	14	0	1	0	64
Total	1561	394	118	59	26	2158	556	214	36	6	2	814

Appendix B

TRICS Data



CS CONSULTING
GROUP
DUBLIN - LONDON - LIMERICK

Calculation Reference: AUDIT-656801-190611-0616

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

01	GREATER LONDON		
	HO	HOUNSLOW	1 days
	IS	ISLINGTON	1 days
	KI	KINGSTON	1 days
	SK	SOUTHWARK	1 days

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

Secondary Filtering selection:

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

Parameter: Number of dwellings
Actual Range: 15 to 150 (units:)
Range Selected by User: 6 to 493 (units:)

Parking Spaces Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/11 to 03/07/18

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

Selected survey days:

Monday	1 days
Wednesday	1 days
Friday	2 days

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

Selected survey types:

Manual count	4 days
Directional ATC Count	0 days

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

Selected Locations:

Edge of Town 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	1
Residential Zone	1
Built-Up Zone	2

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	4 days

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

Secondary Filtering selection (Cont.):

Population within 1 mile:

25,001 to 50,000	2 days
50,001 to 100,000	2 days

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

Population within 5 miles:

500,001 or More	4 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	2 days
1.1 to 1.5	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:

Yes	1 days
No	3 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:

2 Poor	2 days
6a Excellent	1 days
6b (High) Excellent	1 days

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

LIST OF SITES relevant to selection parameters

1	HO-03-C-03 COMMERCE ROAD BRENTFORD	BLOCKS OF FLATS		HOUNSLOW
	Edge of Town Centre Development Zone Total Number of dwellings:		150	
	Survey date: FRIDAY		*18/11/16*	*Survey Type: MANUAL*
2	IS-03-C-05 LEVER STREET FINSBURY	BLOCK OF FLATS		ISLINGTON
	Edge of Town Centre Built-Up Zone Total Number of dwellings:		15	
	Survey date: WEDNESDAY		*29/06/16*	*Survey Type: MANUAL*
3	KI-03-C-03 PORTSMOUTH ROAD SURBITON	BLOCK OF FLATS		KINGSTON
	Edge of Town Centre Residential Zone Total Number of dwellings:		20	
	Survey date: MONDAY		*11/07/16*	*Survey Type: MANUAL*
4	SK-03-C-01 PARK STREET SOUTHWARK	BLOCK OF FLATS		SOUTHWARK
	Edge of Town Centre Built-Up Zone Total Number of dwellings:		53	
	Survey date: FRIDAY		*19/09/14*	*Survey Type: MANUAL*

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

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
VEHICLES
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	4	60	0.029	4	60	0.088	4	60	0.117
08:00 - 09:00	4	60	0.034	4	60	0.101	4	60	0.135
09:00 - 10:00	4	60	0.055	4	60	0.067	4	60	0.122
10:00 - 11:00	4	60	0.088	4	60	0.097	4	60	0.185
11:00 - 12:00	4	60	0.059	4	60	0.080	4	60	0.139
12:00 - 13:00	4	60	0.092	4	60	0.080	4	60	0.172
13:00 - 14:00	4	60	0.063	4	60	0.076	4	60	0.139
14:00 - 15:00	4	60	0.038	4	60	0.046	4	60	0.084
15:00 - 16:00	4	60	0.088	4	60	0.067	4	60	0.155
16:00 - 17:00	4	60	0.118	4	60	0.071	4	60	0.189
17:00 - 18:00	4	60	0.134	4	60	0.092	4	60	0.226
18:00 - 19:00	4	60	0.113	4	60	0.080	4	60	0.193
19:00 - 20:00	3	62	0.081	3	62	0.086	3	62	0.167
20:00 - 21:00	3	62	0.054	3	62	0.059	3	62	0.113
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.046			1.090			2.136

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.*

Parameter summary

Trip rate parameter range selected:	15 - 150 (units:)
Survey date date range:	01/01/11 - 03/07/18
Number of weekdays (Monday-Friday):	4
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

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

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
TAXIS
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	4	60	0.004	4	60	0.004	4	60	0.008
08:00 - 09:00	4	60	0.004	4	60	0.004	4	60	0.008
09:00 - 10:00	4	60	0.000	4	60	0.000	4	60	0.000
10:00 - 11:00	4	60	0.000	4	60	0.000	4	60	0.000
11:00 - 12:00	4	60	0.008	4	60	0.008	4	60	0.016
12:00 - 13:00	4	60	0.000	4	60	0.000	4	60	0.000
13:00 - 14:00	4	60	0.000	4	60	0.000	4	60	0.000
14:00 - 15:00	4	60	0.000	4	60	0.000	4	60	0.000
15:00 - 16:00	4	60	0.008	4	60	0.004	4	60	0.012
16:00 - 17:00	4	60	0.008	4	60	0.013	4	60	0.021
17:00 - 18:00	4	60	0.021	4	60	0.017	4	60	0.038
18:00 - 19:00	4	60	0.017	4	60	0.017	4	60	0.034
19:00 - 20:00	3	62	0.000	3	62	0.005	3	62	0.005
20:00 - 21:00	3	62	0.000	3	62	0.000	3	62	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.070			0.072			0.142

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
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	4	60	0.000	4	60	0.000	4	60	0.000
08:00 - 09:00	4	60	0.000	4	60	0.000	4	60	0.000
09:00 - 10:00	4	60	0.008	4	60	0.004	4	60	0.012
10:00 - 11:00	4	60	0.008	4	60	0.008	4	60	0.016
11:00 - 12:00	4	60	0.004	4	60	0.000	4	60	0.004
12:00 - 13:00	4	60	0.004	4	60	0.004	4	60	0.008
13:00 - 14:00	4	60	0.013	4	60	0.017	4	60	0.030
14:00 - 15:00	4	60	0.000	4	60	0.000	4	60	0.000
15:00 - 16:00	4	60	0.000	4	60	0.004	4	60	0.004
16:00 - 17:00	4	60	0.000	4	60	0.000	4	60	0.000
17:00 - 18:00	4	60	0.000	4	60	0.000	4	60	0.000
18:00 - 19:00	4	60	0.000	4	60	0.000	4	60	0.000
19:00 - 20:00	3	62	0.000	3	62	0.000	3	62	0.000
20:00 - 21:00	3	62	0.000	3	62	0.000	3	62	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.037			0.037			0.074

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
CYCLISTS
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	4	60	0.013	4	60	0.025	4	60	0.038
08:00 - 09:00	4	60	0.008	4	60	0.042	4	60	0.050
09:00 - 10:00	4	60	0.013	4	60	0.025	4	60	0.038
10:00 - 11:00	4	60	0.017	4	60	0.017	4	60	0.034
11:00 - 12:00	4	60	0.008	4	60	0.004	4	60	0.012
12:00 - 13:00	4	60	0.000	4	60	0.000	4	60	0.000
13:00 - 14:00	4	60	0.017	4	60	0.004	4	60	0.021
14:00 - 15:00	4	60	0.013	4	60	0.004	4	60	0.017
15:00 - 16:00	4	60	0.000	4	60	0.000	4	60	0.000
16:00 - 17:00	4	60	0.000	4	60	0.000	4	60	0.000
17:00 - 18:00	4	60	0.008	4	60	0.004	4	60	0.012
18:00 - 19:00	4	60	0.008	4	60	0.008	4	60	0.016
19:00 - 20:00	3	62	0.038	3	62	0.000	3	62	0.038
20:00 - 21:00	3	62	0.011	3	62	0.000	3	62	0.011
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.154			0.133			0.287

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
CARS
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	4	60	0.025	4	60	0.076	4	60	0.101
08:00 - 09:00	4	60	0.021	4	60	0.080	4	60	0.101
09:00 - 10:00	4	60	0.029	4	60	0.042	4	60	0.071
10:00 - 11:00	4	60	0.050	4	60	0.063	4	60	0.113
11:00 - 12:00	4	60	0.034	4	60	0.059	4	60	0.093
12:00 - 13:00	4	60	0.059	4	60	0.050	4	60	0.109
13:00 - 14:00	4	60	0.021	4	60	0.025	4	60	0.046
14:00 - 15:00	4	60	0.025	4	60	0.029	4	60	0.054
15:00 - 16:00	4	60	0.046	4	60	0.038	4	60	0.084
16:00 - 17:00	4	60	0.080	4	60	0.042	4	60	0.122
17:00 - 18:00	4	60	0.088	4	60	0.055	4	60	0.143
18:00 - 19:00	4	60	0.088	4	60	0.063	4	60	0.151
19:00 - 20:00	3	62	0.070	3	62	0.070	3	62	0.140
20:00 - 21:00	3	62	0.043	3	62	0.054	3	62	0.097
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.679			0.746			1.425

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
LGVS
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	4	60	0.000	4	60	0.004	4	60	0.004
08:00 - 09:00	4	60	0.004	4	60	0.000	4	60	0.004
09:00 - 10:00	4	60	0.004	4	60	0.008	4	60	0.012
10:00 - 11:00	4	60	0.025	4	60	0.021	4	60	0.046
11:00 - 12:00	4	60	0.008	4	60	0.013	4	60	0.021
12:00 - 13:00	4	60	0.025	4	60	0.025	4	60	0.050
13:00 - 14:00	4	60	0.029	4	60	0.025	4	60	0.054
14:00 - 15:00	4	60	0.013	4	60	0.017	4	60	0.030
15:00 - 16:00	4	60	0.029	4	60	0.021	4	60	0.050
16:00 - 17:00	4	60	0.025	4	60	0.017	4	60	0.042
17:00 - 18:00	4	60	0.017	4	60	0.017	4	60	0.034
18:00 - 19:00	4	60	0.004	4	60	0.000	4	60	0.004
19:00 - 20:00	3	62	0.000	3	62	0.005	3	62	0.005
20:00 - 21:00	3	62	0.000	3	62	0.000	3	62	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.183			0.173			0.356

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

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TRIP RATE for Land Use 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	4	60	0.000	4	60	0.004	4	60	0.004
08:00 - 09:00	4	60	0.004	4	60	0.017	4	60	0.021
09:00 - 10:00	4	60	0.013	4	60	0.013	4	60	0.026
10:00 - 11:00	4	60	0.004	4	60	0.004	4	60	0.008
11:00 - 12:00	4	60	0.004	4	60	0.000	4	60	0.004
12:00 - 13:00	4	60	0.004	4	60	0.000	4	60	0.004
13:00 - 14:00	4	60	0.000	4	60	0.008	4	60	0.008
14:00 - 15:00	4	60	0.000	4	60	0.000	4	60	0.000
15:00 - 16:00	4	60	0.004	4	60	0.000	4	60	0.004
16:00 - 17:00	4	60	0.004	4	60	0.000	4	60	0.004
17:00 - 18:00	4	60	0.008	4	60	0.004	4	60	0.012
18:00 - 19:00	4	60	0.004	4	60	0.000	4	60	0.004
19:00 - 20:00	3	62	0.011	3	62	0.005	3	62	0.016
20:00 - 21:00	3	62	0.011	3	62	0.005	3	62	0.016
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.071			0.060			0.131

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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Calculation Reference: AUDIT-656801-190611-0648

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
Category : G - STUDENT ACCOMMODATION
VEHICLES

Selected regions and areas:

01	GREATER LONDON		
	CN	CAMDEN	1 days
06	WEST MIDLANDS		
	WK	WARWICKSHIRE	1 days

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

Secondary Filtering selection:

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

Parameter: Number of residents
Actual Range: 197 to 571 (units:)
Range Selected by User: 15 to 1700 (units:)

Parking Spaces Range: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/11 to 14/11/17

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

Selected survey days:

Monday	1 days
Tuesday	1 days

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

Selected survey types:

Manual count	2 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:

Edge of Town Centre	2

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

Selected Location Sub Categories:

Built-Up Zone	2

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	2 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®.

Secondary Filtering selection (Cont.):

Population within 1 mile:

25,001 to 50,000	2 days

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

Population within 5 miles:

250,001 to 500,000	1 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:

0.6 to 1.0	2 days

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

Travel Plan:

No	2 days

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

PTAL Rating:

No PTAL Present	1 days
6a Excellent	1 days

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

LIST OF SITES relevant to selection parameters

1	CN-03-G-01	STUDENT FLATS	CAMDEN
	SAINT PANCRAS WAY		
	KING'S CROSS		
	Edge of Town Centre		
	Built-Up Zone		
	Total Number of residents:	571	
	Survey date: TUESDAY	*14/11/17*	*Survey Type: MANUAL*
2	WK-03-G-01	STUDENT FLATS	WARWICKSHIRE
	RAGLAN STREET		
	COVENTRY		
	Edge of Town Centre		
	Built-Up Zone		
	Total Number of residents:	197	
	Survey date: MONDAY	*31/10/11*	*Survey Type: MANUAL*

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

TRIP RATE for Land Use 03 - RESIDENTIAL/G - STUDENT ACCOMMODATION
VEHICLES
Calculation factor: 1 RESIDE
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	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	2	384	0.005	2	384	0.001	2	384	0.006
08:00 - 09:00	2	384	0.005	2	384	0.005	2	384	0.010
09:00 - 10:00	2	384	0.004	2	384	0.001	2	384	0.005
10:00 - 11:00	2	384	0.001	2	384	0.004	2	384	0.005
11:00 - 12:00	2	384	0.003	2	384	0.004	2	384	0.007
12:00 - 13:00	2	384	0.003	2	384	0.004	2	384	0.007
13:00 - 14:00	2	384	0.004	2	384	0.005	2	384	0.009
14:00 - 15:00	2	384	0.001	2	384	0.003	2	384	0.004
15:00 - 16:00	2	384	0.004	2	384	0.001	2	384	0.005
16:00 - 17:00	2	384	0.000	2	384	0.003	2	384	0.003
17:00 - 18:00	2	384	0.003	2	384	0.001	2	384	0.004
18:00 - 19:00	2	384	0.001	2	384	0.004	2	384	0.005
19:00 - 20:00	2	384	0.001	2	384	0.001	2	384	0.002
20:00 - 21:00	2	384	0.005	2	384	0.003	2	384	0.008
21:00 - 22:00	1	197	0.000	1	197	0.015	1	197	0.015
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.040			0.055			0.095

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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Parameter summary

Trip rate parameter range selected:	197 - 571 (units:)
Survey date date range:	01/01/11 - 14/11/17
Number of weekdays (Monday-Friday):	2
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

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

TRIP RATE for Land Use 03 - RESIDENTIAL/G - STUDENT ACCOMMODATION
TAXIS
Calculation factor: 1 RESIDE
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	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	2	384	0.003	2	384	0.001	2	384	0.004
08:00 - 09:00	2	384	0.001	2	384	0.003	2	384	0.004
09:00 - 10:00	2	384	0.000	2	384	0.000	2	384	0.000
10:00 - 11:00	2	384	0.000	2	384	0.000	2	384	0.000
11:00 - 12:00	2	384	0.001	2	384	0.001	2	384	0.002
12:00 - 13:00	2	384	0.000	2	384	0.000	2	384	0.000
13:00 - 14:00	2	384	0.001	2	384	0.001	2	384	0.002
14:00 - 15:00	2	384	0.000	2	384	0.000	2	384	0.000
15:00 - 16:00	2	384	0.003	2	384	0.001	2	384	0.004
16:00 - 17:00	2	384	0.000	2	384	0.001	2	384	0.001
17:00 - 18:00	2	384	0.001	2	384	0.000	2	384	0.001
18:00 - 19:00	2	384	0.000	2	384	0.001	2	384	0.001
19:00 - 20:00	2	384	0.000	2	384	0.000	2	384	0.000
20:00 - 21:00	2	384	0.001	2	384	0.000	2	384	0.001
21:00 - 22:00	1	197	0.000	1	197	0.005	1	197	0.005
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.011			0.014			0.025

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/G - STUDENT ACCOMMODATION
CYCLISTS
Calculation factor: 1 RESIDE
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	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	2	384	0.000	2	384	0.000	2	384	0.000
08:00 - 09:00	2	384	0.000	2	384	0.000	2	384	0.000
09:00 - 10:00	2	384	0.000	2	384	0.000	2	384	0.000
10:00 - 11:00	2	384	0.000	2	384	0.000	2	384	0.000
11:00 - 12:00	2	384	0.003	2	384	0.001	2	384	0.004
12:00 - 13:00	2	384	0.003	2	384	0.001	2	384	0.004
13:00 - 14:00	2	384	0.003	2	384	0.001	2	384	0.004
14:00 - 15:00	2	384	0.001	2	384	0.000	2	384	0.001
15:00 - 16:00	2	384	0.000	2	384	0.001	2	384	0.001
16:00 - 17:00	2	384	0.001	2	384	0.000	2	384	0.001
17:00 - 18:00	2	384	0.001	2	384	0.000	2	384	0.001
18:00 - 19:00	2	384	0.004	2	384	0.003	2	384	0.007
19:00 - 20:00	2	384	0.000	2	384	0.001	2	384	0.001
20:00 - 21:00	2	384	0.003	2	384	0.000	2	384	0.003
21:00 - 22:00	1	197	0.000	1	197	0.010	1	197	0.010
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.019			0.018			0.037

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

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

Calculation Reference: AUDIT-656801-190317-0341

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT
Category : A - OFFICE
MULTI-MODAL VEHICLES

Selected regions and areas:

01	GREATER LONDON		
	CN	CAMDEN	1 days
	HM	HAMMERSMITH AND FULHAM	1 days
08	NORTH WEST		
	GM	GREATER MANCHESTER	3 days
09	NORTH		
	TW	TYNE & WEAR	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

Secondary 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: 2036 to 26639 (units: sqm)
Range Selected by User: 186 to 120000 (units: sqm)

Parking Spaces Range: Selected: 0 to 2923 Actual: 0 to 2923

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/10 to 04/07/18

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	4 days
Wednesday	2 days
Thursday	1 days

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

Selected survey types:

Manual count	7 days
Directional ATC Count	0 days

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

Selected Locations:

Town Centre	5
Edge of Town Centre	2

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

Selected Location Sub Categories:

Development Zone	1
Built-Up Zone	6

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:

B1	7 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 1 mile:

20,001 to 25,000	1 days
25,001 to 50,000	3 days
50,001 to 100,000	1 days
100,001 or More	2 days

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

Population within 5 miles:

500,001 or More	7 days

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

Car ownership within 5 miles:

0.6 to 1.0	6 days
1.1 to 1.5	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:

Yes	1 days
No	6 days

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

PTAL Rating:

No PTAL Present	5 days
6b (High) Excellent	2 days

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

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE
MULTI-MODAL 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 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	7	7893	0.022	7	7893	0.004	7	7893	0.026
07:30 - 08:00	7	7893	0.038	7	7893	0.007	7	7893	0.045
08:00 - 08:30	7	7893	0.076	7	7893	0.020	7	7893	0.096
08:30 - 09:00	7	7893	0.154	7	7893	0.027	7	7893	0.181
09:00 - 09:30	7	7893	0.098	7	7893	0.025	7	7893	0.123
09:30 - 10:00	7	7893	0.078	7	7893	0.025	7	7893	0.103
10:00 - 10:30	7	7893	0.027	7	7893	0.014	7	7893	0.041
10:30 - 11:00	7	7893	0.060	7	7893	0.034	7	7893	0.094
11:00 - 11:30	7	7893	0.031	7	7893	0.029	7	7893	0.060
11:30 - 12:00	7	7893	0.029	7	7893	0.022	7	7893	0.051
12:00 - 12:30	7	7893	0.031	7	7893	0.022	7	7893	0.053
12:30 - 13:00	7	7893	0.027	7	7893	0.022	7	7893	0.049
13:00 - 13:30	7	7893	0.025	7	7893	0.011	7	7893	0.036
13:30 - 14:00	7	7893	0.040	7	7893	0.038	7	7893	0.078
14:00 - 14:30	7	7893	0.034	7	7893	0.034	7	7893	0.068
14:30 - 15:00	7	7893	0.018	7	7893	0.036	7	7893	0.054
15:00 - 15:30	7	7893	0.029	7	7893	0.031	7	7893	0.060
15:30 - 16:00	7	7893	0.016	7	7893	0.033	7	7893	0.049
16:00 - 16:30	7	7893	0.033	7	7893	0.071	7	7893	0.104
16:30 - 17:00	7	7893	0.025	7	7893	0.069	7	7893	0.094
17:00 - 17:30	7	7893	0.016	7	7893	0.103	7	7893	0.119
17:30 - 18:00	7	7893	0.009	7	7893	0.092	7	7893	0.101
18:00 - 18:30	7	7893	0.011	7	7893	0.100	7	7893	0.111
18:30 - 19:00	7	7893	0.004	7	7893	0.036	7	7893	0.040
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.931			0.905			1.836

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.*

Parameter summary

Trip rate parameter range selected:	2036 - 26639 (units: sqm)
Survey date date range:	01/01/10 - 04/07/18
Number of weekdays (Monday-Friday):	7
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

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

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE
MULTI-MODAL 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 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	7	7893	0.000	7	7893	0.000	7	7893	0.000
07:30 - 08:00	7	7893	0.000	7	7893	0.000	7	7893	0.000
08:00 - 08:30	7	7893	0.005	7	7893	0.000	7	7893	0.005
08:30 - 09:00	7	7893	0.013	7	7893	0.005	7	7893	0.018
09:00 - 09:30	7	7893	0.005	7	7893	0.002	7	7893	0.007
09:30 - 10:00	7	7893	0.005	7	7893	0.000	7	7893	0.005
10:00 - 10:30	7	7893	0.002	7	7893	0.002	7	7893	0.004
10:30 - 11:00	7	7893	0.007	7	7893	0.005	7	7893	0.012
11:00 - 11:30	7	7893	0.009	7	7893	0.007	7	7893	0.016
11:30 - 12:00	7	7893	0.000	7	7893	0.000	7	7893	0.000
12:00 - 12:30	7	7893	0.002	7	7893	0.002	7	7893	0.004
12:30 - 13:00	7	7893	0.000	7	7893	0.002	7	7893	0.002
13:00 - 13:30	7	7893	0.004	7	7893	0.002	7	7893	0.006
13:30 - 14:00	7	7893	0.004	7	7893	0.004	7	7893	0.008
14:00 - 14:30	7	7893	0.000	7	7893	0.000	7	7893	0.000
14:30 - 15:00	7	7893	0.000	7	7893	0.002	7	7893	0.002
15:00 - 15:30	7	7893	0.000	7	7893	0.002	7	7893	0.002
15:30 - 16:00	7	7893	0.002	7	7893	0.007	7	7893	0.009
16:00 - 16:30	7	7893	0.002	7	7893	0.005	7	7893	0.007
16:30 - 17:00	7	7893	0.004	7	7893	0.007	7	7893	0.011
17:00 - 17:30	7	7893	0.000	7	7893	0.007	7	7893	0.007
17:30 - 18:00	7	7893	0.002	7	7893	0.004	7	7893	0.006
18:00 - 18:30	7	7893	0.004	7	7893	0.004	7	7893	0.008
18:30 - 19:00	7	7893	0.004	7	7893	0.004	7	7893	0.008
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.074			0.073			0.147

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

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

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE
MULTI-MODAL 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 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	7	7893	0.000	7	7893	0.000	7	7893	0.000
07:30 - 08:00	7	7893	0.000	7	7893	0.000	7	7893	0.000
08:00 - 08:30	7	7893	0.002	7	7893	0.002	7	7893	0.004
08:30 - 09:00	7	7893	0.000	7	7893	0.000	7	7893	0.000
09:00 - 09:30	7	7893	0.007	7	7893	0.004	7	7893	0.011
09:30 - 10:00	7	7893	0.002	7	7893	0.002	7	7893	0.004
10:00 - 10:30	7	7893	0.000	7	7893	0.002	7	7893	0.002
10:30 - 11:00	7	7893	0.002	7	7893	0.000	7	7893	0.002
11:00 - 11:30	7	7893	0.000	7	7893	0.004	7	7893	0.004
11:30 - 12:00	7	7893	0.000	7	7893	0.000	7	7893	0.000
12:00 - 12:30	7	7893	0.002	7	7893	0.000	7	7893	0.002
12:30 - 13:00	7	7893	0.000	7	7893	0.002	7	7893	0.002
13:00 - 13:30	7	7893	0.000	7	7893	0.000	7	7893	0.000
13:30 - 14:00	7	7893	0.000	7	7893	0.000	7	7893	0.000
14:00 - 14:30	7	7893	0.000	7	7893	0.000	7	7893	0.000
14:30 - 15:00	7	7893	0.000	7	7893	0.000	7	7893	0.000
15:00 - 15:30	7	7893	0.000	7	7893	0.000	7	7893	0.000
15:30 - 16:00	7	7893	0.000	7	7893	0.000	7	7893	0.000
16:00 - 16:30	7	7893	0.000	7	7893	0.000	7	7893	0.000
16:30 - 17:00	7	7893	0.000	7	7893	0.000	7	7893	0.000
17:00 - 17:30	7	7893	0.000	7	7893	0.000	7	7893	0.000
17:30 - 18:00	7	7893	0.000	7	7893	0.000	7	7893	0.000
18:00 - 18:30	7	7893	0.000	7	7893	0.000	7	7893	0.000
18:30 - 19:00	7	7893	0.000	7	7893	0.000	7	7893	0.000
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.015			0.016			0.031

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

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

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE
MULTI-MODAL 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 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	7	7893	0.022	7	7893	0.000	7	7893	0.022
07:30 - 08:00	7	7893	0.022	7	7893	0.002	7	7893	0.024
08:00 - 08:30	7	7893	0.071	7	7893	0.002	7	7893	0.073
08:30 - 09:00	7	7893	0.100	7	7893	0.000	7	7893	0.100
09:00 - 09:30	7	7893	0.090	7	7893	0.007	7	7893	0.097
09:30 - 10:00	7	7893	0.029	7	7893	0.004	7	7893	0.033
10:00 - 10:30	7	7893	0.029	7	7893	0.013	7	7893	0.042
10:30 - 11:00	7	7893	0.009	7	7893	0.009	7	7893	0.018
11:00 - 11:30	7	7893	0.014	7	7893	0.005	7	7893	0.019
11:30 - 12:00	7	7893	0.009	7	7893	0.005	7	7893	0.014
12:00 - 12:30	7	7893	0.005	7	7893	0.007	7	7893	0.012
12:30 - 13:00	7	7893	0.005	7	7893	0.018	7	7893	0.023
13:00 - 13:30	7	7893	0.009	7	7893	0.013	7	7893	0.022
13:30 - 14:00	7	7893	0.000	7	7893	0.005	7	7893	0.005
14:00 - 14:30	7	7893	0.005	7	7893	0.011	7	7893	0.016
14:30 - 15:00	7	7893	0.004	7	7893	0.002	7	7893	0.006
15:00 - 15:30	7	7893	0.007	7	7893	0.007	7	7893	0.014
15:30 - 16:00	7	7893	0.002	7	7893	0.011	7	7893	0.013
16:00 - 16:30	7	7893	0.002	7	7893	0.004	7	7893	0.006
16:30 - 17:00	7	7893	0.004	7	7893	0.020	7	7893	0.024
17:00 - 17:30	7	7893	0.000	7	7893	0.051	7	7893	0.051
17:30 - 18:00	7	7893	0.002	7	7893	0.092	7	7893	0.094
18:00 - 18:30	7	7893	0.000	7	7893	0.101	7	7893	0.101
18:30 - 19:00	7	7893	0.000	7	7893	0.047	7	7893	0.047
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.440			0.436			0.876

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

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

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE
MULTI-MODAL Servicing 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 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	7	7893	0.000	7	7893	0.000	7	7893	0.000
07:30 - 08:00	7	7893	0.000	7	7893	0.000	7	7893	0.000
08:00 - 08:30	7	7893	0.004	7	7893	0.004	7	7893	0.008
08:30 - 09:00	7	7893	0.002	7	7893	0.000	7	7893	0.002
09:00 - 09:30	7	7893	0.005	7	7893	0.002	7	7893	0.007
09:30 - 10:00	7	7893	0.002	7	7893	0.002	7	7893	0.004
10:00 - 10:30	7	7893	0.000	7	7893	0.004	7	7893	0.004
10:30 - 11:00	7	7893	0.004	7	7893	0.002	7	7893	0.006
11:00 - 11:30	7	7893	0.002	7	7893	0.004	7	7893	0.006
11:30 - 12:00	7	7893	0.000	7	7893	0.000	7	7893	0.000
12:00 - 12:30	7	7893	0.007	7	7893	0.007	7	7893	0.014
12:30 - 13:00	7	7893	0.004	7	7893	0.004	7	7893	0.008
13:00 - 13:30	7	7893	0.000	7	7893	0.002	7	7893	0.002
13:30 - 14:00	7	7893	0.002	7	7893	0.000	7	7893	0.002
14:00 - 14:30	7	7893	0.000	7	7893	0.000	7	7893	0.000
14:30 - 15:00	7	7893	0.002	7	7893	0.004	7	7893	0.006
15:00 - 15:30	7	7893	0.002	7	7893	0.002	7	7893	0.004
15:30 - 16:00	7	7893	0.000	7	7893	0.000	7	7893	0.000
16:00 - 16:30	7	7893	0.002	7	7893	0.002	7	7893	0.004
16:30 - 17:00	7	7893	0.000	7	7893	0.000	7	7893	0.000
17:00 - 17:30	7	7893	0.002	7	7893	0.002	7	7893	0.004
17:30 - 18:00	7	7893	0.000	7	7893	0.000	7	7893	0.000
18:00 - 18:30	7	7893	0.000	7	7893	0.000	7	7893	0.000
18:30 - 19:00	7	7893	0.000	7	7893	0.000	7	7893	0.000
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.040			0.041			0.081

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

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

Calculation Reference: AUDIT-656801-190317-0321

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 06 - HOTEL, FOOD & DRINK
Category : A - HOTELS
MULTI-MODAL VEHICLES

Selected regions and areas:

01	GREATER LONDON		
	GR	GREENWICH	1 days
05	EAST MIDLANDS		
	NT	NOTTINGHAMSHIRE	1 days
08	NORTH WEST		
	GM	GREATER MANCHESTER	1 days
09	NORTH		
	TW	TYNE & WEAR	1 days

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

Secondary 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: 1450 to 6000 (units: sqm)
Range Selected by User: 320 to 16500 (units: sqm)

Parking Spaces Range: Selected: 0 to 362 Actual: 0 to 362

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/10 to 23/11/16

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

Selected survey days:

Monday	2 days
Tuesday	1 days
Friday	1 days

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

Selected survey types:

Manual count	4 days
Directional ATC Count	0 days

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

Selected Locations:

Town Centre	2
Edge of Town Centre	2

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

Selected Location Sub Categories:

Built-Up Zone	3
No Sub Category	1

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

Secondary Filtering selection:

Use Class:

C1	4 days

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

Secondary Filtering selection (Cont.):

Population within 1 mile:

25,001 to 50,000	3 days
50,001 to 100,000	1 days

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

Population within 5 miles:

500,001 or More	4 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	4 days

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

Travel Plan:

No	4 days

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

PTAL Rating:

No PTAL Present	3 days
4 Good	1 days

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

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/A - HOTELS
MULTI-MODAL 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									
07:00 - 08:00	4	3589	0.063	4	3589	0.188	4	3589	0.251
08:00 - 09:00	4	3589	0.237	4	3589	0.432	4	3589	0.669
09:00 - 10:00	4	3589	0.223	4	3589	0.286	4	3589	0.509
10:00 - 11:00	4	3589	0.167	4	3589	0.237	4	3589	0.404
11:00 - 12:00	4	3589	0.167	4	3589	0.223	4	3589	0.390
12:00 - 13:00	4	3589	0.084	4	3589	0.063	4	3589	0.147
13:00 - 14:00	4	3589	0.105	4	3589	0.077	4	3589	0.182
14:00 - 15:00	4	3589	0.056	4	3589	0.084	4	3589	0.140
15:00 - 16:00	4	3589	0.105	4	3589	0.098	4	3589	0.203
16:00 - 17:00	4	3589	0.125	4	3589	0.098	4	3589	0.223
17:00 - 18:00	4	3589	0.188	4	3589	0.111	4	3589	0.299
18:00 - 19:00	4	3589	0.160	4	3589	0.111	4	3589	0.271
19:00 - 20:00	4	3589	0.202	4	3589	0.091	4	3589	0.293
20:00 - 21:00	4	3589	0.070	4	3589	0.049	4	3589	0.119
21:00 - 22:00	4	3589	0.056	4	3589	0.035	4	3589	0.091
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.008			2.183			4.191

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.*

Parameter summary

Trip rate parameter range selected:	1450 - 6000 (units: sqm)
Survey date date range:	01/01/10 - 23/11/16
Number of weekdays (Monday-Friday):	4
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

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

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/A - HOTELS
MULTI-MODAL 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									
07:00 - 08:00	4	3589	0.014	4	3589	0.014	4	3589	0.028
08:00 - 09:00	4	3589	0.014	4	3589	0.014	4	3589	0.028
09:00 - 10:00	4	3589	0.021	4	3589	0.021	4	3589	0.042
10:00 - 11:00	4	3589	0.014	4	3589	0.014	4	3589	0.028
11:00 - 12:00	4	3589	0.021	4	3589	0.021	4	3589	0.042
12:00 - 13:00	4	3589	0.000	4	3589	0.000	4	3589	0.000
13:00 - 14:00	4	3589	0.021	4	3589	0.021	4	3589	0.042
14:00 - 15:00	4	3589	0.007	4	3589	0.007	4	3589	0.014
15:00 - 16:00	4	3589	0.007	4	3589	0.007	4	3589	0.014
16:00 - 17:00	4	3589	0.007	4	3589	0.007	4	3589	0.014
17:00 - 18:00	4	3589	0.028	4	3589	0.028	4	3589	0.056
18:00 - 19:00	4	3589	0.028	4	3589	0.028	4	3589	0.056
19:00 - 20:00	4	3589	0.042	4	3589	0.042	4	3589	0.084
20:00 - 21:00	4	3589	0.014	4	3589	0.014	4	3589	0.028
21:00 - 22:00	4	3589	0.021	4	3589	0.021	4	3589	0.042
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.259			0.259			0.518

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

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

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/A - HOTELS
MULTI-MODAL 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									
07:00 - 08:00	4	3589	0.007	4	3589	0.007	4	3589	0.014
08:00 - 09:00	4	3589	0.014	4	3589	0.014	4	3589	0.028
09:00 - 10:00	4	3589	0.014	4	3589	0.014	4	3589	0.028
10:00 - 11:00	4	3589	0.000	4	3589	0.000	4	3589	0.000
11:00 - 12:00	4	3589	0.000	4	3589	0.000	4	3589	0.000
12:00 - 13:00	4	3589	0.014	4	3589	0.014	4	3589	0.028
13:00 - 14:00	4	3589	0.000	4	3589	0.000	4	3589	0.000
14:00 - 15:00	4	3589	0.000	4	3589	0.000	4	3589	0.000
15:00 - 16:00	4	3589	0.000	4	3589	0.000	4	3589	0.000
16:00 - 17:00	4	3589	0.000	4	3589	0.000	4	3589	0.000
17:00 - 18:00	4	3589	0.000	4	3589	0.000	4	3589	0.000
18:00 - 19:00	4	3589	0.000	4	3589	0.000	4	3589	0.000
19:00 - 20:00	4	3589	0.000	4	3589	0.000	4	3589	0.000
20:00 - 21:00	4	3589	0.000	4	3589	0.000	4	3589	0.000
21:00 - 22:00	4	3589	0.000	4	3589	0.000	4	3589	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.049			0.049			0.098

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

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

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/A - HOTELS
MULTI-MODAL 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									
07:00 - 08:00	4	3589	0.021	4	3589	0.000	4	3589	0.021
08:00 - 09:00	4	3589	0.007	4	3589	0.000	4	3589	0.007
09:00 - 10:00	4	3589	0.000	4	3589	0.000	4	3589	0.000
10:00 - 11:00	4	3589	0.000	4	3589	0.007	4	3589	0.007
11:00 - 12:00	4	3589	0.000	4	3589	0.000	4	3589	0.000
12:00 - 13:00	4	3589	0.000	4	3589	0.000	4	3589	0.000
13:00 - 14:00	4	3589	0.007	4	3589	0.007	4	3589	0.014
14:00 - 15:00	4	3589	0.000	4	3589	0.000	4	3589	0.000
15:00 - 16:00	4	3589	0.000	4	3589	0.000	4	3589	0.000
16:00 - 17:00	4	3589	0.000	4	3589	0.000	4	3589	0.000
17:00 - 18:00	4	3589	0.000	4	3589	0.007	4	3589	0.007
18:00 - 19:00	4	3589	0.014	4	3589	0.007	4	3589	0.021
19:00 - 20:00	4	3589	0.000	4	3589	0.000	4	3589	0.000
20:00 - 21:00	4	3589	0.000	4	3589	0.000	4	3589	0.000
21:00 - 22:00	4	3589	0.000	4	3589	0.000	4	3589	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.049			0.028			0.077

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

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

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/A - HOTELS
MULTI-MODAL 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									
07:00 - 08:00	4	3589	0.035	4	3589	0.091	4	3589	0.126
08:00 - 09:00	4	3589	0.195	4	3589	0.300	4	3589	0.495
09:00 - 10:00	4	3589	0.125	4	3589	0.209	4	3589	0.334
10:00 - 11:00	4	3589	0.118	4	3589	0.202	4	3589	0.320
11:00 - 12:00	4	3589	0.098	4	3589	0.125	4	3589	0.223
12:00 - 13:00	4	3589	0.049	4	3589	0.035	4	3589	0.084
13:00 - 14:00	4	3589	0.056	4	3589	0.021	4	3589	0.077
14:00 - 15:00	4	3589	0.028	4	3589	0.035	4	3589	0.063
15:00 - 16:00	4	3589	0.035	4	3589	0.063	4	3589	0.098
16:00 - 17:00	4	3589	0.077	4	3589	0.056	4	3589	0.133
17:00 - 18:00	4	3589	0.125	4	3589	0.049	4	3589	0.174
18:00 - 19:00	4	3589	0.077	4	3589	0.028	4	3589	0.105
19:00 - 20:00	4	3589	0.056	4	3589	0.070	4	3589	0.126
20:00 - 21:00	4	3589	0.035	4	3589	0.021	4	3589	0.056
21:00 - 22:00	4	3589	0.021	4	3589	0.000	4	3589	0.021
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.130			1.305			2.435

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

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

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/A - HOTELS
MULTI-MODAL 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									
07:00 - 08:00	4	3589	0.007	4	3589	0.014	4	3589	0.021
08:00 - 09:00	4	3589	0.007	4	3589	0.021	4	3589	0.028
09:00 - 10:00	4	3589	0.042	4	3589	0.028	4	3589	0.070
10:00 - 11:00	4	3589	0.035	4	3589	0.028	4	3589	0.063
11:00 - 12:00	4	3589	0.028	4	3589	0.042	4	3589	0.070
12:00 - 13:00	4	3589	0.021	4	3589	0.007	4	3589	0.028
13:00 - 14:00	4	3589	0.000	4	3589	0.021	4	3589	0.021
14:00 - 15:00	4	3589	0.000	4	3589	0.000	4	3589	0.000
15:00 - 16:00	4	3589	0.014	4	3589	0.014	4	3589	0.028
16:00 - 17:00	4	3589	0.007	4	3589	0.007	4	3589	0.014
17:00 - 18:00	4	3589	0.007	4	3589	0.000	4	3589	0.007
18:00 - 19:00	4	3589	0.007	4	3589	0.000	4	3589	0.007
19:00 - 20:00	4	3589	0.000	4	3589	0.000	4	3589	0.000
20:00 - 21:00	4	3589	0.000	4	3589	0.000	4	3589	0.000
21:00 - 22:00	4	3589	0.000	4	3589	0.000	4	3589	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.175			0.182			0.357

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

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

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/A - HOTELS
MULTI-MODAL Servicing Vehicles
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

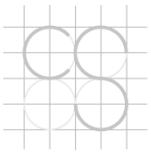
	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	4	3589	0.000	4	3589	0.000	4	3589	0.000
08:00 - 09:00	4	3589	0.007	4	3589	0.007	4	3589	0.014
09:00 - 10:00	4	3589	0.000	4	3589	0.000	4	3589	0.000
10:00 - 11:00	4	3589	0.007	4	3589	0.007	4	3589	0.014
11:00 - 12:00	4	3589	0.000	4	3589	0.000	4	3589	0.000
12:00 - 13:00	4	3589	0.000	4	3589	0.000	4	3589	0.000
13:00 - 14:00	4	3589	0.000	4	3589	0.000	4	3589	0.000
14:00 - 15:00	4	3589	0.000	4	3589	0.000	4	3589	0.000
15:00 - 16:00	4	3589	0.000	4	3589	0.000	4	3589	0.000
16:00 - 17:00	4	3589	0.000	4	3589	0.000	4	3589	0.000
17:00 - 18:00	4	3589	0.000	4	3589	0.000	4	3589	0.000
18:00 - 19:00	4	3589	0.000	4	3589	0.000	4	3589	0.000
19:00 - 20:00	4	3589	0.000	4	3589	0.000	4	3589	0.000
20:00 - 21:00	4	3589	0.000	4	3589	0.000	4	3589	0.000
21:00 - 22:00	4	3589	0.000	4	3589	0.000	4	3589	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.014			0.014			0.028

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.*

Appendix C

Traffic Flow Matrices



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2017 AM Peak (07:45-08:45) — **SURVEYED TRAFFIC FLOWS**

From \ To	New Wapping St North	Mayor St Upper East	New Wapping St South	Mayor St Upper West	TOTALS
New Wapping St North	0	48	266	8	322
Mayor St Upper East	5	0	14	1	20
New Wapping St South	118	7	0	0	125
Mayor St Upper West	2	2	1	0	5
TOTALS	125	57	281	9	472

2017 PM Peak (17:00-18:00) — **SURVEYED TRAFFIC FLOWS**

From \ To	New Wapping St North	Mayor St Upper East	New Wapping St South	Mayor St Upper West	TOTALS
New Wapping St North	0	19	78	2	99
Mayor St Upper East	1	0	7	2	10
New Wapping St South	164	5	0	4	173
Mayor St Upper West	2	1	5	0	8
TOTALS	167	25	90	8	290

2019 AM Peak — **BASE YEAR** (existing + TII growth factor)

From \ To	New Wapping St North	Mayor St Upper East	New Wapping St South	Mayor St Upper West	TOTALS
New Wapping St North	0	48	267	8	323
Mayor St Upper East	5	0	14	1	20
New Wapping St South	118	7	0	0	126
Mayor St Upper West	2	2	1	0	5
TOTALS	126	57	282	9	474

2019 PM Peak — **BASE YEAR** (existing + TII growth factor)

From \ To	New Wapping St North	Mayor St Upper East	New Wapping St South	Mayor St Upper West	TOTALS
New Wapping St North	0	19	78	2	99
Mayor St Upper East	1	0	7	2	10
New Wapping St South	165	5	0	4	174
Mayor St Upper West	2	1	5	0	8
TOTALS	168	25	90	8	291

2022 AM Peak — **Other committed development flows**

From \ To	New Wapping St North	Mayor St Upper East	New Wapping St South	Mayor St Upper West	TOTALS
New Wapping St North	0	2	110	0	112
Mayor St Upper East	0	0	5	0	5
New Wapping St South	32	2	0	0	34
Mayor St Upper West	0	0	0	0	0
TOTALS	33	3	116	0	152

2022 PM Peak — **Other committed development flows**

From \ To	New Wapping St North	Mayor St Upper East	New Wapping St South	Mayor St Upper West	TOTALS
New Wapping St North	0	1	26	0	27
Mayor St Upper East	0	0	2	0	2
New Wapping St South	123	3	0	2	128
Mayor St Upper West	0	0	2	0	2
TOTALS	123	4	30	3	159

2022 AM Peak — **NO DEVELOPMENT** (existing + TII growth factor + committed development)

From \ To	New Wapping St North	Mayor St Upper East	New Wapping St South	Mayor St Upper West	TOTALS
New Wapping St North	0	50	379	8	437
Mayor St Upper East	5	0	19	1	26
New Wapping St South	152	9	0	0	160
Mayor St Upper West	2	2	1	0	5
TOTALS	159	61	399	9	628

2022 PM Peak — **NO DEVELOPMENT** (existing + TII growth factor + committed development)

From \ To	New Wapping St North	Mayor St Upper East	New Wapping St South	Mayor St Upper West	TOTALS
New Wapping St North	0	20	105	2	127
Mayor St Upper East	1	0	9	2	12
New Wapping St South	288	8	0	7	303
Mayor St Upper West	2	1	7	0	10
TOTALS	292	29	121	11	452

2022 AM Peak — **DEVELOPMENT FLOWS**

From \ To	New Wapping St North	Mayor St Upper East	New Wapping St South	Mayor St Upper West	TOTALS
New Wapping St North	0	2	11	0	14
Mayor St Upper East	0	0	0	0	0
New Wapping St South	3	0	0	0	3
Mayor St Upper West	0	0	0	0	0
TOTALS	4	2	11	0	17

2022 PM Peak — **DEVELOPMENT FLOWS**

From \ To	New Wapping St North	Mayor St Upper East	New Wapping St South	Mayor St Upper West	TOTALS
New Wapping St North	0	1	3	0	3
Mayor St Upper East	0	0	0	0	0
New Wapping St South	26	0	0	0	26
Mayor St Upper West	0	0	0	0	0
TOTALS	27	1	3	0	30

2022 AM Peak — **WITH DEVELOPMENT** (existing + TII growth factor + committed dev. + dev. flows)

From \ To	New Wapping St North	Mayor St Upper East	New Wapping St South	Mayor St Upper West	TOTALS
New Wapping St North	0	52	390	9	451
Mayor St Upper East	5	0	19	1	26
New Wapping St South	155	9	0	0	164
Mayor St Upper West	2	2	1	0	6
TOTALS	162	63	411	10	646

2022 PM Peak — **WITH DEVELOPMENT** (existing + TII growth factor + committed dev. + dev. flows)

From \ To	New Wapping St North	Mayor St Upper East	New Wapping St South	Mayor St Upper West	TOTALS
New Wapping St North	0	20	107	2	130
Mayor St Upper East	1	0	9	2	13
New Wapping St South	315	8	0	7	330
Mayor St Upper West	3	1	7	0	10
TOTALS	319	30	123	11	482

2027 AM Peak — **NO DEVELOPMENT** (existing + TII growth factor + committed development)

From \ To	New Wapping St North	Mayor St Upper East	New Wapping St South	Mayor St Upper West	TOTALS
New Wapping St North	0	51	381	8	440
Mayor St Upper East	5	0	20	1	26
New Wapping St South	153	9	0	0	162
Mayor St Upper West	2	2	1	0	6
TOTALS	160	61	402	9	633

2027 PM Peak — **NO DEVELOPMENT** (existing + TII growth factor + committed development)

From \ To	New Wapping St North	Mayor St Upper East	New Wapping St South	Mayor St Upper West	TOTALS
New Wapping St North	0	20	106	2	128
Mayor St Upper East	1	0	9	2	12
New Wapping St South	290	8	0	7	305
Mayor St Upper West	2	1	7	0	10
TOTALS	293	29	122	11	455

2027 AM Peak — **WITH DEVELOPMENT** (existing + TII growth factor + committed dev. + dev. flows)

From \ To	New Wapping St North	Mayor St Upper East	New Wapping St South	Mayor St Upper West	TOTALS
New Wapping St North	0	53	393	9	454
Mayor St Upper East	5	0	20	1	26
New Wapping St South	156	9	0	0	165
Mayor St Upper West	2	2	1	0	6
TOTALS	164	64	414	10	651

2027 PM Peak — **WITH DEVELOPMENT** (existing + TII growth factor + committed dev. + dev. flows)

From \ To	New Wapping St North	Mayor St Upper East	New Wapping St South	Mayor St Upper West	TOTALS
New Wapping St North	0	21	108	2	131
Mayor St Upper East	1	0	9	2	13
New Wapping St South	316	8	0	7	331
Mayor St Upper West	3	1	7	0	10
TOTALS	320	30	124	11	485

2032 AM Peak — **NO DEVELOPMENT** (existing + TII growth factor + committed development)

From \ To	New Wapping St North	Mayor St Upper East	New Wapping St South	Mayor St Upper West	TOTALS
New Wapping St North	0	51	384	9	444
Mayor St Upper East	5	0	20	1	26
New Wapping St South	154	9	0	0	163
Mayor St Upper West	2	2	1	0	6
TOTALS	161	62	405	10	638

2032 PM Peak — **NO DEVELOPMENT** (existing + TII growth factor + committed development)

From \ To	New Wapping St North	Mayor St Upper East	New Wapping St South	Mayor St Upper West	TOTALS
New Wapping St North	0	20	106	2	129
Mayor St Upper East	1	0	9	2	13
New Wapping St South	292	8	0	7	307
Mayor St Upper West	2	1	7	0	10
TOTALS	295	29	122	11	458

2032 AM Peak — **WITH DEVELOPMENT** (existing + TII growth factor + committed dev. + dev. flows)

From \ To	New Wapping St North	Mayor St Upper East	New Wapping St South	Mayor St Upper West	TOTALS
New Wapping St North	0	53	395	9	457
Mayor St Upper East	5	0	20	1	26
New Wapping St South	157	9	0	0	166
Mayor St Upper West	2	2	1	0	6
TOTALS	165	64	417	10	655

2032 PM Peak — **WITH DEVELOPMENT** (existing + TII growth factor + committed dev. + dev. flows)

From \ To	New Wapping St North	Mayor St Upper East	New Wapping St South	Mayor St Upper West	TOTALS
New Wapping St North	0	21	109	2	132
Mayor St Upper East	1	0	9	2	13
New Wapping St South	318	8	0	7	333
Mayor St Upper West	3	1	7	0	10
TOTALS	322	30	125	11	488

2037 AM Peak — **NO DEVELOPMENT** (existing + TII growth factor + committed development)

From \ To	New Wapping St North	Mayor St Upper East	New Wapping St South	Mayor St Upper West	TOTALS
New Wapping St North	0	52	387	9	447
Mayor St Upper East	5	0	20	1	26
New Wapping St South	155	9	0	0	164
Mayor St Upper West	2	2	1	0	6
TOTALS	163	63	408	10	643

2037 PM Peak — **NO DEVELOPMENT** (existing + TII growth factor + committed development)

From \ To	New Wapping St North	Mayor St Upper East	New Wapping St South	Mayor St Upper West	TOTALS
New Wapping St North	0	20	107	2	130
Mayor St Upper East	1	0	9	2	13
New Wapping St South	293	8	0	7	308
Mayor St Upper West	2	1	7	0	10
TOTALS	297	30	123	11	461

2037 AM Peak — **WITH DEVELOPMENT** (existing + TII growth factor + committed dev. + dev. flows)

From \ To	New Wapping St North	Mayor St Upper East	New Wapping St South	Mayor St Upper West	TOTALS
New Wapping St North	0	54	398	9	461
Mayor St Upper East	5	0	20	1	26
New Wapping St South	159	9	0	0	168
Mayor St Upper West	2	2	1	0	6
TOTALS	166	65	419	10	660

2037 PM Peak — **WITH DEVELOPMENT** (existing + TII growth factor + committed dev. + dev. flows)

From \ To	New Wapping St North	Mayor St Upper East	New Wapping St South	Mayor St Upper West	TOTALS
New Wapping St North	0	21	110	2	133
Mayor St Upper East	1	0	9	2	13
New Wapping St South	320	8	0	7	335
Mayor St Upper West	3	1	7	0	10
TOTALS	324	30	126	11	491

2017 AM Peak (07:45-08:45) **SURVEYED TRAFFIC FLOWS**

From \ To	New Wapping St North	Mayor St Upper East	New Wapping St South	Mayor St Upper West	TOTALS
New Wapping St North	0	0	0	0	0
Mayor St Upper East	0	0	0	6	6
New Wapping St South	0	0	0	0	0
Mayor St Upper West	0	5	0	0	5
TOTALS	0	5	0	6	11

2017 PM Peak (17:00-18:00) **SURVEYED TRAFFIC FLOWS**

From \ To	New Wapping St North	Mayor St Upper East	New Wapping St South	Mayor St Upper West	TOTALS
New Wapping St North	0	0	0	0	0
Mayor St Upper East	0	0	0	7	7
New Wapping St South	0	0	0	0	0
Mayor St Upper West	0	6	0	0	6
TOTALS	0	6	0	7	13

2019 AM Peak **BASE YEAR** (existing + TII growth factor)

From \ To	New Wapping St North	Mayor St Upper East	New Wapping St South	Mayor St Upper West	TOTALS
New Wapping St North	0	0	0	0	0
Mayor St Upper East	0	0	0	6	6
New Wapping St South	0	0	0	0	0
Mayor St Upper West	0	5	0	0	5
TOTALS	0	5	0	6	11

2019 PM Peak **BASE YEAR** (existing + TII growth factor)

From \ To	New Wapping St North	Mayor St Upper East	New Wapping St South	Mayor St Upper West	TOTALS
New Wapping St North	0	0	0	0	0
Mayor St Upper East	0	0	0	7	7
New Wapping St South	0	0	0	0	0
Mayor St Upper West	0	6	0	0	6
TOTALS	0	6	0	7	13

2022 AM Peak **Other committed development flows**

From \ To	New Wapping St North	Mayor St Upper East	New Wapping St South	Mayor St Upper West	TOTALS
New Wapping St North					0
Mayor St Upper East					0
New Wapping St South					0
Mayor St Upper West					0
TOTALS	0	0	0	0	0

2022 PM Peak **Other committed development flows**

From \ To	New Wapping St North	Mayor St Upper East	New Wapping St South	Mayor St Upper West	TOTALS
New Wapping St North					0
Mayor St Upper East					0
New Wapping St South					0
Mayor St Upper West					0
TOTALS	0	0	0	0	0

2022 AM Peak **NO DEVELOPMENT** (existing + TII growth factor + committed development)

From \ To	New Wapping St North	Mayor St Upper East	New Wapping St South	Mayor St Upper West	TOTALS
New Wapping St North	0	0	0	0	0
Mayor St Upper East	0	0	0	6	6
New Wapping St South	0	0	0	0	0
Mayor St Upper West	0	5	0	0	5
TOTALS	0	5	0	6	11

2022 PM Peak **NO DEVELOPMENT** (existing + TII growth factor + committed development)

From \ To	New Wapping St North	Mayor St Upper East	New Wapping St South	Mayor St Upper West	TOTALS
New Wapping St North	0	0	0	0	0
Mayor St Upper East	0	0	0	7	7
New Wapping St South	0	0	0	0	0
Mayor St Upper West	0	6	0	0	6
TOTALS	0	6	0	7	13

2022 AM Peak **DEVELOPMENT FLOWS**

From \ To	New Wapping St North	Mayor St Upper East	New Wapping St South	Mayor St Upper West	TOTALS
New Wapping St North					0
Mayor St Upper East					0
New Wapping St South					0
Mayor St Upper West					0
TOTALS	0	0	0	0	0

2022 PM Peak **DEVELOPMENT FLOWS**

From \ To	New Wapping St North	Mayor St Upper East	New Wapping St South	Mayor St Upper West	TOTALS
New Wapping St North					0
Mayor St Upper East					0
New Wapping St South					0
Mayor St Upper West					0
TOTALS	0	0	0	0	0

2022 AM Peak **WITH DEVELOPMENT** (existing + TII growth factor + committed dev. + dev. flows)

From \ To	New Wapping St North	Mayor St Upper East	New Wapping St South	Mayor St Upper West	TOTALS
New Wapping St North	0	0	0	0	0
Mayor St Upper East	0	0	0	6	6
New Wapping St South	0	0	0	0	0
Mayor St Upper West	0	5	0	0	5
TOTALS	0	5	0	6	11

2022 PM Peak **WITH DEVELOPMENT** (existing + TII growth factor + committed dev. + dev. flows)

From \ To	New Wapping St North	Mayor St Upper East	New Wapping St South	Mayor St Upper West	TOTALS
New Wapping St North	0	0	0	0	0
Mayor St Upper East	0	0	0	7	7
New Wapping St South	0	0	0	0	0
Mayor St Upper West	0	6	0	0	6
TOTALS	0	6	0	7	13

2027 AM Peak **NO DEVELOPMENT** (existing + TII growth factor + committed development)

From \ To	New Wapping St North	Mayor St Upper East	New Wapping St South	Mayor St Upper West	TOTALS
New Wapping St North	0	0	0	0	0
Mayor St Upper East	0	0	0	6	6
New Wapping St South	0	0	0	0	0
Mayor St Upper West	0	5	0	0	5
TOTALS	0	5	0	6	11

2027 PM Peak **NO DEVELOPMENT** (existing + TII growth factor + committed development)

From \ To	New Wapping St North	Mayor St Upper East	New Wapping St South	Mayor St Upper West	TOTALS
New Wapping St North	0	0	0	0	0
Mayor St Upper East	0	0	0	7	7
New Wapping St South	0	0	0	0	0
Mayor St Upper West	0	6	0	0	6
TOTALS	0	6	0	7	13

2027 AM Peak **WITH DEVELOPMENT** (existing + TII growth factor + committed dev. + dev. flows)

From \ To	New Wapping St North	Mayor St Upper East	New Wapping St South	Mayor St Upper West	TOTALS
New Wapping St North	0	0	0	0	0
Mayor St Upper East	0	0	0	6	6
New Wapping St South	0	0	0	0	0
Mayor St Upper West	0	5	0	0	5
TOTALS	0	5	0	6	11

2027 PM Peak **WITH DEVELOPMENT** (existing + TII growth factor + committed dev. + dev. flows)

From \ To	New Wapping St North	Mayor St Upper East	New Wapping St South	Mayor St Upper West	TOTALS
New Wapping St North	0	0	0	0	0
Mayor St Upper East	0	0	0	7	7
New Wapping St South	0	0	0	0	0
Mayor St Upper West	0	6	0	0	6
TOTALS	0	6	0	7	13

2032 AM Peak **NO DEVELOPMENT** (existing + TII growth factor + committed development)

From \ To	New Wapping St North	Mayor St Upper East	New Wapping St South	Mayor St Upper West	TOTALS
New Wapping St North	0	0	0	0	0
Mayor St Upper East	0	0	0	6	6
New Wapping St South	0	0	0	0	0
Mayor St Upper West	0	5	0	0	5
TOTALS	0	5	0	6	11

2032 PM Peak **NO DEVELOPMENT** (existing + TII growth factor + committed development)

From \ To	New Wapping St North	Mayor St Upper East	New Wapping St South	Mayor St Upper West	TOTALS
New Wapping St North	0	0	0	0	0
Mayor St Upper East	0	0	0	7	7
New Wapping St South	0	0	0	0	0
Mayor St Upper West	0	6	0	0	6
TOTALS	0	6	0	7	13

2032 AM Peak **WITH DEVELOPMENT** (existing + TII growth factor + committed dev. + dev. flows)

From \ To	New Wapping St North	Mayor St Upper East	New Wapping St South	Mayor St Upper West	TOTALS
New Wapping St North	0	0	0	0	0
Mayor St Upper East	0	0	0	6	6
New Wapping St South	0	0	0	0	0
Mayor St Upper West	0	5	0	0	5
TOTALS	0	5	0	6	11

2032 PM Peak **WITH DEVELOPMENT** (existing + TII growth factor + committed dev. + dev. flows)

From \ To	New Wapping St North	Mayor St Upper East	New Wapping St South	Mayor St Upper West	TOTALS
New Wapping St North	0	0	0	0	0
Mayor St Upper East	0	0	0	7	7
New Wapping St South	0	0	0	0	0
Mayor St Upper West	0	6	0	0	6
TOTALS	0	6	0	7	13

2037 AM Peak **NO DEVELOPMENT** (existing + TII growth factor + committed development)

From \ To	New Wapping St North	Mayor St Upper East	New Wapping St South	Mayor St Upper West	TOTALS
New Wapping St North	0	0	0	0	0
Mayor St Upper East	0	0	0	6	6
New Wapping St South	0	0	0	0	0
Mayor St Upper West	0	5	0	0	5
TOTALS	0	5	0	6	11

2037 PM Peak **NO DEVELOPMENT** (existing + TII growth factor + committed development)

From \ To	New Wapping St North	Mayor St Upper East	New Wapping St South	Mayor St Upper West	TOTALS
New Wapping St North	0	0	0	0	0
Mayor St Upper East	0	0	0	7	7
New Wapping St South	0	0	0	0	0
Mayor St Upper West	0	6	0	0	6
TOTALS	0	6	0	7	13

2037 AM Peak **WITH DEVELOPMENT** (existing + TII growth factor + committed dev. + dev. flows)

From \ To	New Wapping St North	Mayor St Upper East	New Wapping St South	Mayor St Upper West	TOTALS
New Wapping St North	0	0	0	0	0
Mayor St Upper East	0	0	0	6	6
New Wapping St South	0	0	0	0	0
Mayor St Upper West	0	5	0	0	5
TOTALS	0	5	0	6	11

2037 PM Peak **WITH DEVELOPMENT** (existing + TII growth factor + committed dev. + dev. flows)

From \ To	New Wapping St North	Mayor St Upper East	New Wapping St South	Mayor St Upper West	TOTALS
New Wapping St North	0	0	0	0	0
Mayor St Upper East	0	0	0	7	7
New Wapping St South	0	0	0	0	0
Mayor St Upper West	0	6	0	0	6
TOTALS	0	6	0	7	13

2017 AM Peak (07:45-08:45) — **SURVEYED TRAFFIC FLOWS**

From \ To	East Road	Sheriff St Upper East	New Wapping Street	Sheriff St Upper West	TOTALS
East Road	0	92	241	241	574
Sheriff St Upper East	24	0	24	39	87
New Wapping Street	52	7	0	66	125
Sheriff St Upper West	153	149	65	0	367
TOTALS	229	248	330	346	1153

2017 PM Peak (17:00-18:00) — **SURVEYED TRAFFIC FLOWS**

From \ To	East Road	Sheriff St Upper East	New Wapping Street	Sheriff St Upper West	TOTALS
East Road	0	23	66	93	182
Sheriff St Upper East	41	0	13	48	102
New Wapping Street	96	9	0	70	175
Sheriff St Upper West	281	163	24	0	468
TOTALS	418	195	103	211	927

2019 AM Peak — **BASE YEAR** (existing + TII growth factor)

From \ To	East Road	Sheriff St Upper East	New Wapping Street	Sheriff St Upper West	TOTALS
East Road	0	92	242	242	576
Sheriff St Upper East	24	0	24	39	87
New Wapping Street	52	7	0	66	126
Sheriff St Upper West	154	150	65	0	368
TOTALS	230	249	331	347	1158

2019 PM Peak — **BASE YEAR** (existing + TII growth factor)

From \ To	East Road	Sheriff St Upper East	New Wapping Street	Sheriff St Upper West	TOTALS
East Road	0	23	66	93	183
Sheriff St Upper East	41	0	13	48	102
New Wapping Street	96	9	0	70	176
Sheriff St Upper West	282	164	24	0	470
TOTALS	420	196	103	212	931

2022 AM Peak — **Other committed development flows**

From \ To	East Road	Sheriff St Upper East	New Wapping Street	Sheriff St Upper West	TOTALS
East Road	0	0	81	0	81
Sheriff St Upper East	0	0	8	0	8
New Wapping Street	23	3	0	29	55
Sheriff St Upper West	0	0	22	0	22
TOTALS	23	3	111	29	165

2022 PM Peak — **Other committed development flows**

From \ To	East Road	Sheriff St Upper East	New Wapping Street	Sheriff St Upper West	TOTALS
East Road	0	0	33	0	33
Sheriff St Upper East	0	0	6	0	6
New Wapping Street	73	7	0	53	133
Sheriff St Upper West	0	0	12	0	12
TOTALS	73	7	51	53	184

2022 AM Peak — **NO DEVELOPMENT** (existing + TII growth factor + committed development)

From \ To	East Road	Sheriff St Upper East	New Wapping Street	Sheriff St Upper West	TOTALS
East Road	0	93	324	243	660
Sheriff St Upper East	24	0	32	39	96
New Wapping Street	75	10	0	96	181
Sheriff St Upper West	155	150	87	0	392
TOTALS	254	254	444	378	1330

2022 PM Peak — **NO DEVELOPMENT** (existing + TII growth factor + committed development)

From \ To	East Road	Sheriff St Upper East	New Wapping Street	Sheriff St Upper West	TOTALS
East Road	0	23	100	94	217
Sheriff St Upper East	41	0	20	48	110
New Wapping Street	170	16	0	124	310
Sheriff St Upper West	284	165	36	0	485
TOTALS	495	204	156	266	1121

2022 AM Peak — **DEVELOPMENT FLOWS**

From \ To	East Road	Sheriff St Upper East	New Wapping Street	Sheriff St Upper West	TOTALS
East Road	0	0	9	0	9
Sheriff St Upper East	0	0	1	0	1
New Wapping Street	14	2	0	17	33
Sheriff St Upper West	0	0	3	0	3
TOTALS	14	2	13	17	45

2022 PM Peak — **DEVELOPMENT FLOWS**

From \ To	East Road	Sheriff St Upper East	New Wapping Street	Sheriff St Upper West	TOTALS
East Road	0	0	23	0	23
Sheriff St Upper East	0	0	5	0	5
New Wapping Street	22	2	0	16	40
Sheriff St Upper West	0	0	8	0	8
TOTALS	22	2	36	16	75

2022 AM Peak — **WITH DEVELOPMENT** (existing + TII growth factor + committed dev. + dev. flows)

From \ To	East Road	Sheriff St Upper East	New Wapping Street	Sheriff St Upper West	TOTALS
East Road	0	93	334	243	670
Sheriff St Upper East	24	0	33	39	97
New Wapping Street	89	12	0	113	213
Sheriff St Upper West	155	150	90	0	395
TOTALS	268	255	457	396	1375

2022 PM Peak — **WITH DEVELOPMENT** (existing + TII growth factor + committed dev. + dev. flows)

From \ To	East Road	Sheriff St Upper East	New Wapping Street	Sheriff St Upper West	TOTALS
East Road	0	23	123	94	240
Sheriff St Upper East	41	0	24	48	114
New Wapping Street	192	18	0	140	349
Sheriff St Upper West	284	165	45	0	493
TOTALS	517	206	191	282	1196

2027 AM Peak — **NO DEVELOPMENT** (existing + TII growth factor + committed development)

From \ To	East Road	Sheriff St Upper East	New Wapping Street	Sheriff St Upper West	TOTALS
East Road	0	94	327	246	666
Sheriff St Upper East	24	0	33	40	97
New Wapping Street	76	10	0	96	182
Sheriff St Upper West	156	152	88	0	396
TOTALS	256	256	447	382	1342

2027 PM Peak — **NO DEVELOPMENT** (existing + TII growth factor + committed development)

From \ To	East Road	Sheriff St Upper East	New Wapping Street	Sheriff St Upper West	TOTALS
East Road	0	23	100	95	219
Sheriff St Upper East	42	0	20	49	111
New Wapping Street	171	16	0	125	311
Sheriff St Upper West	287	166	36	0	489
TOTALS	499	206	157	268	1130

2027 AM Peak — **WITH DEVELOPMENT** (existing + TII growth factor + committed dev. + dev. flows)

From \ To	East Road	Sheriff St Upper East	New Wapping Street	Sheriff St Upper West	TOTALS
East Road	0	94	336	246	676
Sheriff St Upper East	24	0	33	40	98
New Wapping Street	89	12	0	113	215
Sheriff St Upper West	156	152	91	0	399
TOTALS	270	258	460	399	1387

2027 PM Peak — **WITH DEVELOPMENT** (existing + TII growth factor + committed dev. + dev. flows)

From \ To	East Road	Sheriff St Upper East	New Wapping Street	Sheriff St Upper West	TOTALS
East Road	0	23	123	95	242
Sheriff St Upper East	42	0	24	49	115
New Wapping Street	192	18	0	140	351
Sheriff St Upper West	287	166	45	0	498
TOTALS	521	208	192	284	1205

2032 AM Peak — **NO DEVELOPMENT** (existing + TII growth factor + committed development)

From \ To	East Road	Sheriff St Upper East	New Wapping Street	Sheriff St Upper West	TOTALS
East Road	0	95	329	248	672
Sheriff St Upper East	25	0	33	40	98
New Wapping Street	76	10	0	97	184
Sheriff St Upper West	158	154	89	0	400
TOTALS	259	259	451	385	1353

2032 PM Peak — **NO DEVELOPMENT** (existing + TII growth factor + committed development)

From \ To	East Road	Sheriff St Upper East	New Wapping Street	Sheriff St Upper West	TOTALS
East Road	0	24	101	96	221
Sheriff St Upper East	42	0	20	49	112
New Wapping Street	172	16	0	125	313
Sheriff St Upper West	290	168	37	0	494
TOTALS	504	208	158	271	1140

2032 AM Peak — **WITH DEVELOPMENT** (existing + TII growth factor + committed dev. + dev. flows)

From \ To	East Road	Sheriff St Upper East	New Wapping Street	Sheriff St Upper West	TOTALS
East Road	0	95	338	248	682
Sheriff St Upper East	25	0	34	40	99
New Wapping Street	90	12	0	114	216
Sheriff St Upper West	158	154	91	0	402
TOTALS	272	260	463	403	1399

2032 PM Peak — **WITH DEVELOPMENT** (existing + TII growth factor + committed dev. + dev. flows)

From \ To	East Road	Sheriff St Upper East	New Wapping Street	Sheriff St Upper West	TOTALS
East Road	0	24	124	96	243
Sheriff St Upper East	42	0	24	49	116
New Wapping Street	193	18	0	141	353
Sheriff St Upper West	290	168	45	0	503
TOTALS	525	210	193	286	1215

2037 AM Peak — **NO DEVELOPMENT** (existing + TII growth factor + committed development)

From \ To	East Road	Sheriff St Upper East	New Wapping Street	Sheriff St Upper West	TOTALS
East Road	0	96	332	251	678
Sheriff St Upper East	25	0	33	41	99
New Wapping Street	77	10	0	98	185
Sheriff St Upper West	159	155	89	0	404
TOTALS	261	261	454	389	1365

2037 PM Peak — **NO DEVELOPMENT** (existing + TII growth factor + committed development)

From \ To	East Road	Sheriff St Upper East	New Wapping Street	Sheriff St Upper West	TOTALS
East Road	0	24	102	97	222
Sheriff St Upper East	43	0	20	50	113
New Wapping Street	173	16	0	126	315
Sheriff St Upper West	292	170	37	0	499
TOTALS	508	210	159	273	1149

2037 AM Peak — **WITH DEVELOPMENT** (existing + TII growth factor + committed dev. + dev. flows)

From \ To	East Road	Sheriff St Upper East	New Wapping Street	Sheriff St Upper West	TOTALS
East Road	0	96	341	251	688
Sheriff St Upper East	25	0	34	41	100
New Wapping Street	90	12	0	115	217
Sheriff St Upper West	159	155	92	0	406
TOTALS	275	263	467	406	1411

2037 PM Peak — **WITH DEVELOPMENT** (existing + TII growth factor + committed dev. + dev. flows)

From \ To	East Road	Sheriff St Upper East	New Wapping Street	Sheriff St Upper West	TOTALS
East Road	0	24	125	97	245
Sheriff St Upper East	43	0	25	50	117
New Wapping Street	194	18	0	142	355
Sheriff St Upper West	292	170	45	0	507
TOTALS	530	212	195	289	1224

2017 AM Peak (07:45-08:45) **SURVEYED TRAFFIC FLOWS**

From \ To	New Wapping St South	Southern Dev Access	New Wapping St North	TOTALS
New Wapping St South	0	0	125	**125**
Southern Dev Access	0	0	0	**0**
New Wapping St North	326	0	0	**326**
TOTALS	**326**	**0**	**125**	**451**

2017 PM Peak (17:00-18:00) **SURVEYED TRAFFIC FLOWS**

From \ To	New Wapping St South	Southern Dev Access	New Wapping St North	TOTALS
New Wapping St South	0	0	171	**171**
Southern Dev Access	0	0	0	**0**
New Wapping St North	101	0	0	**101**
TOTALS	**101**	**0**	**171**	**272**

2019 AM Peak **BASE YEAR** (existing + TII growth factor)

From \ To	New Wapping St South	Southern Dev Access	New Wapping St North	TOTALS
New Wapping St South	0	0	126	**126**
Southern Dev Access	0	0	0	**0**
New Wapping St North	327	0	0	**327**
TOTALS	**327**	**0**	**126**	**453**

2019 PM Peak **BASE YEAR** (existing + TII growth factor)

From \ To	New Wapping St South	Southern Dev Access	New Wapping St North	TOTALS
New Wapping St South	0	0	172	**172**
Southern Dev Access	0	0	0	**0**
New Wapping St North	101	0	0	**101**
TOTALS	**101**	**0**	**172**	**273**

2022 AM Peak **Other committed development flows**

From \ To	New Wapping St South	Southern Dev Access	New Wapping St North	TOTALS
New Wapping St South	0	0	33	**33**
Southern Dev Access	0	0	0	**0**
New Wapping St North	112	0	0	**112**
TOTALS	**112**	**0**	**33**	**144**

2022 PM Peak **Other committed development flows**

From \ To	New Wapping St South	Southern Dev Access	New Wapping St North	TOTALS
New Wapping St South	0	0	123	**123**
Southern Dev Access	0	0	0	**0**
New Wapping St North	27	0	0	**27**
TOTALS	**27**	**0**	**123**	**150**

2022 AM Peak **NO DEVELOPMENT** (existing + TII growth factor + committed development)

From \ To	New Wapping St South	Southern Dev Access	New Wapping St North	TOTALS
New Wapping St South	0	0	159	**159**
Southern Dev Access	0	0	0	**0**
New Wapping St North	441	0	0	**441**
TOTALS	**441**	**0**	**159**	**600**

2022 PM Peak **NO DEVELOPMENT** (existing + TII growth factor + committed development)

From \ To	New Wapping St South	Southern Dev Access	New Wapping St North	TOTALS
New Wapping St South	0	0	296	**296**
Southern Dev Access	0	0	0	**0**
New Wapping St North	129	0	0	**129**
TOTALS	**129**	**0**	**296**	**424**

2022 AM Peak **DEVELOPMENT FLOWS**

From \ To	New Wapping St South	Southern Dev Access	New Wapping St North	TOTALS
New Wapping St South	0	1	2	**4**
Southern Dev Access	5	0	12	**17**
New Wapping St North	9	5	0	**14**
TOTALS	**14**	**7**	**14**	**34**

2022 PM Peak **DEVELOPMENT FLOWS**

From \ To	New Wapping St South	Southern Dev Access	New Wapping St North	TOTALS
New Wapping St South	0	10	17	**27**
Southern Dev Access	1	0	14	**15**
New Wapping St North	2	13	0	**15**
TOTALS	**3**	**23**	**31**	**58**

2022 AM Peak **WITH DEVELOPMENT** (existing + TII growth factor + committed dev. + dev. flows)

From \ To	New Wapping St South	Southern Dev Access	New Wapping St North	TOTALS
New Wapping St South	0	1	161	**162**
Southern Dev Access	5	0	12	**17**
New Wapping St North	450	5	0	**455**
TOTALS	**455**	**7**	**173**	**634**

2022 PM Peak **WITH DEVELOPMENT** (existing + TII growth factor + committed dev. + dev. flows)

From \ To	New Wapping St South	Southern Dev Access	New Wapping St North	TOTALS
New Wapping St South	0	10	313	**323**
Southern Dev Access	1	0	14	**15**
New Wapping St North	131	13	0	**144**
TOTALS	**132**	**23**	**327**	**482**

2027 AM Peak **NO DEVELOPMENT** (existing + TII growth factor + committed development)

From \ To	New Wapping St South	Southern Dev Access	New Wapping St North	TOTALS
New Wapping St South	0	0	160	**160**
Southern Dev Access	0	0	0	**0**
New Wapping St North	444	0	0	**444**
TOTALS	**444**	**0**	**160**	**604**

2027 PM Peak **NO DEVELOPMENT** (existing + TII growth factor + committed development)

From \ To	New Wapping St South	Southern Dev Access	New Wapping St North	TOTALS
New Wapping St South	0	0	298	**298**
Southern Dev Access	0	0	0	**0**
New Wapping St North	130	0	0	**130**
TOTALS	**130**	**0**	**298**	**427**

2027 AM Peak **WITH DEVELOPMENT** (existing + TII growth factor + committed dev. + dev. flows)

From \ To	New Wapping St South	Southern Dev Access	New Wapping St North	TOTALS
New Wapping St South	0	1	162	**164**
Southern Dev Access	5	0	12	**17**
New Wapping St North	453	5	0	**458**
TOTALS	**458**	**7**	**174**	**639**

2027 PM Peak **WITH DEVELOPMENT** (existing + TII growth factor + committed dev. + dev. flows)

From \ To	New Wapping St South	Southern Dev Access	New Wapping St North	TOTALS
New Wapping St South	0	10	315	**324**
Southern Dev Access	1	0	14	**15**
New Wapping St North	132	13	0	**145**
TOTALS	**133**	**23**	**329**	**485**

2032 AM Peak **NO DEVELOPMENT** (existing + TII growth factor + committed development)

From \ To	New Wapping St South	Southern Dev Access	New Wapping St North	TOTALS
New Wapping St South	0	0	161	**161**
Southern Dev Access	0	0	0	**0**
New Wapping St North	448	0	0	**448**
TOTALS	**448**	**0**	**161**	**609**

2032 PM Peak **NO DEVELOPMENT** (existing + TII growth factor + committed development)

From \ To	New Wapping St South	Southern Dev Access	New Wapping St North	TOTALS
New Wapping St South	0	0	299	**299**
Southern Dev Access	0	0	0	**0**
New Wapping St North	131	0	0	**131**
TOTALS	**131**	**0**	**299**	**430**

2032 AM Peak **WITH DEVELOPMENT** (existing + TII growth factor + committed dev. + dev. flows)

From \ To	New Wapping St South	Southern Dev Access	New Wapping St North	TOTALS
New Wapping St South	0	1	163	**165**
Southern Dev Access	5	0	12	**17**
New Wapping St North	456	5	0	**461**
TOTALS	**461**	**7**	**175**	**643**

2032 PM Peak **WITH DEVELOPMENT** (existing + TII growth factor + committed dev. + dev. flows)

From \ To	New Wapping St South	Southern Dev Access	New Wapping St North	TOTALS
New Wapping St South	0	10	316	**326**
Southern Dev Access	1	0	14	**15**
New Wapping St North	133	13	0	**146**
TOTALS	**134**	**23**	**331**	**488**

2037 AM Peak **NO DEVELOPMENT** (existing + TII growth factor + committed development)

From \ To	New Wapping St South	Southern Dev Access	New Wapping St North	TOTALS
New Wapping St South	0	0	163	**163**
Southern Dev Access	0	0	0	**0**
New Wapping St North	451	0	0	**451**
TOTALS	**451**	**0**	**163**	**614**

2037 PM Peak **NO DEVELOPMENT** (existing + TII growth factor + committed development)

From \ To	New Wapping St South	Southern Dev Access	New Wapping St North	TOTALS
New Wapping St South	0	0	301	**301**
Southern Dev Access	0	0	0	**0**
New Wapping St North	132	0	0	**132**
TOTALS	**132**	**0**	**301**	**433**

2037 AM Peak **WITH DEVELOPMENT** (existing + TII growth factor + committed dev. + dev. flows)

From \ To	New Wapping St South	Southern Dev Access	New Wapping St North	TOTALS
New Wapping St South	0	1	165	**166**
Southern Dev Access	5	0	12	**17**
New Wapping St North	460	5	0	**465**
TOTALS	**465**	**7**	**177**	**648**

2037 PM Peak **WITH DEVELOPMENT** (existing + TII growth factor + committed dev. + dev. flows)

From \ To	New Wapping St South	Southern Dev Access	New Wapping St North	TOTALS
New Wapping St South	0	10	318	**328**
Southern Dev Access	1	0	14	**15**
New Wapping St North	134	13	0	**147**
TOTALS	**135**	**23**	**332**	**490**

2017 AM Peak (07:45-08:45) **SURVEYED TRAFFIC FLOWS**

From \ To	New Wapping St South	Northern Dev Access	New Wapping St North	TOTALS
New Wapping St South	0	0	125	**125**
Northern Dev Access	0	0	0	**0**
New Wapping St North	326	0	0	**326**
TOTALS	**326**	**0**	**125**	**451**

2017 PM Peak (17:00-18:00) **SURVEYED TRAFFIC FLOWS**

From \ To	New Wapping St South	Northern Dev Access	New Wapping St North	TOTALS
New Wapping St South	0	0	171	**171**
Northern Dev Access	0	0	0	**0**
New Wapping St North	101	0	0	**101**
TOTALS	**101**	**0**	**171**	**272**

2019 AM Peak **BASE YEAR** (existing + TII growth factor)

From \ To	New Wapping St South	Northern Dev Access	New Wapping St North	TOTALS
New Wapping St South	0	0	126	**126**
Northern Dev Access	0	0	0	**0**
New Wapping St North	327	0	0	**327**
TOTALS	**327**	**0**	**126**	**453**

2019 PM Peak **BASE YEAR** (existing + TII growth factor)

From \ To	New Wapping St South	Northern Dev Access	New Wapping St North	TOTALS
New Wapping St South	0	0	172	**172**
Northern Dev Access	0	0	0	**0**
New Wapping St North	101	0	0	**101**
TOTALS	**101**	**0**	**172**	**273**

2022 AM Peak **Other committed development flows**

From \ To	New Wapping St South	Northern Dev Access	New Wapping St North	TOTALS
New Wapping St South	0	0	55	**55**
Northern Dev Access	0	0	0	**0**
New Wapping St North	111	0	0	**111**
TOTALS	**111**	**0**	**55**	**165**

2022 PM Peak **Other committed development flows**

From \ To	New Wapping St South	Northern Dev Access	New Wapping St North	TOTALS
New Wapping St South	0	0	133	**133**
Northern Dev Access	0	0	0	**0**
New Wapping St North	51	0	0	**51**
TOTALS	**51**	**0**	**133**	**184**

2022 AM Peak **NO DEVELOPMENT** (existing + TII growth factor + committed development)

From \ To	New Wapping St South	Northern Dev Access	New Wapping St North	TOTALS
New Wapping St South	0	0	181	**181**
Northern Dev Access	0	0	0	**0**
New Wapping St North	440	0	0	**440**
TOTALS	**440**	**0**	**181**	**621**

2022 PM Peak **NO DEVELOPMENT** (existing + TII growth factor + committed development)

From \ To	New Wapping St South	Northern Dev Access	New Wapping St North	TOTALS
New Wapping St South	0	0	306	**306**
Northern Dev Access	0	0	0	**0**
New Wapping St North	153	0	0	**153**
TOTALS	**153**	**0**	**306**	**459**

2022 AM Peak **DEVELOPMENT FLOWS**

From \ To	New Wapping St South	Northern Dev Access	New Wapping St North	TOTALS
New Wapping St South	0	2	12	**14**
Northern Dev Access	9	0	20	**29**
New Wapping St North	5	8	0	**13**
TOTALS	**14**	**10**	**33**	**56**

2022 PM Peak **DEVELOPMENT FLOWS**

From \ To	New Wapping St South	Northern Dev Access	New Wapping St North	TOTALS
New Wapping St South	0	17	14	**31**
Northern Dev Access	2	0	25	**27**
New Wapping St North	13	23	0	**36**
TOTALS	**15**	**40**	**40**	**95**

2022 AM Peak **WITH DEVELOPMENT** (existing + TII growth factor + committed dev. + dev. flows)

From \ To	New Wapping St South	Northern Dev Access	New Wapping St North	TOTALS
New Wapping St South	0	2	193	**195**
Northern Dev Access	9	0	20	**29**
New Wapping St North	445	8	0	**453**
TOTALS	**454**	**10**	**213**	**677**

2022 PM Peak **WITH DEVELOPMENT** (existing + TII growth factor + committed dev. + dev. flows)

From \ To	New Wapping St South	Northern Dev Access	New Wapping St North	TOTALS
New Wapping St South	0	17	320	**337**
Northern Dev Access	2	0	25	**27**
New Wapping St North	167	23	0	**189**
TOTALS	**169**	**40**	**345**	**554**

2027 AM Peak **NO DEVELOPMENT** (existing + TII growth factor + committed development)

From \ To	New Wapping St South	Northern Dev Access	New Wapping St North	TOTALS
New Wapping St South	0	0	182	**182**
Northern Dev Access	0	0	0	**0**
New Wapping St North	443	0	0	**443**
TOTALS	**443**	**0**	**182**	**625**

2027 PM Peak **NO DEVELOPMENT** (existing + TII growth factor + committed development)

From \ To	New Wapping St South	Northern Dev Access	New Wapping St North	TOTALS
New Wapping St South	0	0	307	**307**
Northern Dev Access	0	0	0	**0**
New Wapping St North	155	0	0	**155**
TOTALS	**155**	**0**	**307**	**462**

2027 AM Peak **WITH DEVELOPMENT** (existing + TII growth factor + committed dev. + dev. flows)

From \ To	New Wapping St South	Northern Dev Access	New Wapping St North	TOTALS
New Wapping St South	0	2	194	**196**
Northern Dev Access	9	0	20	**29**
New Wapping St North	448	8	0	**456**
TOTALS	**457**	**10**	**215**	**682**

2027 PM Peak **WITH DEVELOPMENT** (existing + TII growth factor + committed dev. + dev. flows)

From \ To	New Wapping St South	Northern Dev Access	New Wapping St North	TOTALS
New Wapping St South	0	17	322	**339**
Northern Dev Access	2	0	25	**27**
New Wapping St North	168	23	0	**190**
TOTALS	**170**	**40**	**347**	**556**

2032 AM Peak **NO DEVELOPMENT** (existing + TII growth factor + committed development)

From \ To	New Wapping St South	Northern Dev Access	New Wapping St North	TOTALS
New Wapping St South	0	0	184	**184**
Northern Dev Access	0	0	0	**0**
New Wapping St North	446	0	0	**446**
TOTALS	**446**	**0**	**184**	**630**

2032 PM Peak **NO DEVELOPMENT** (existing + TII growth factor + committed development)

From \ To	New Wapping St South	Northern Dev Access	New Wapping St North	TOTALS
New Wapping St South	0	0	309	**309**
Northern Dev Access	0	0	0	**0**
New Wapping St North	156	0	0	**156**
TOTALS	**156**	**0**	**309**	**465**

2032 AM Peak **WITH DEVELOPMENT** (existing + TII growth factor + committed dev. + dev. flows)

From \ To	New Wapping St South	Northern Dev Access	New Wapping St North	TOTALS
New Wapping St South	0	2	196	**198**
Northern Dev Access	9	0	20	**29**
New Wapping St North	452	8	0	**459**
TOTALS	**460**	**10**	**216**	**686**

2032 PM Peak **WITH DEVELOPMENT** (existing + TII growth factor + committed dev. + dev. flows)

From \ To	New Wapping St South	Northern Dev Access	New Wapping St North	TOTALS
New Wapping St South	0	17	323	**340**
Northern Dev Access	2	0	25	**27**
New Wapping St North	169	23	0	**191**
TOTALS	**171**	**40**	**349**	**559**

2037 AM Peak **NO DEVELOPMENT** (existing + TII growth factor + committed development)

From \ To	New Wapping St South	Northern Dev Access	New Wapping St North	TOTALS
New Wapping St South	0	0	185	**185**
Northern Dev Access	0	0	0	**0**
New Wapping St North	450	0	0	**450**
TOTALS	**450**	**0**	**185**	**635**

2037 PM Peak **NO DEVELOPMENT** (existing + TII growth factor + committed development)

From \ To	New Wapping St South	Northern Dev Access	New Wapping St North	TOTALS
New Wapping St South	0	0	311	**311**
Northern Dev Access	0	0	0	**0**
New Wapping St North	157	0	0	**157**
TOTALS	**157**	**0**	**311**	**467**

2037 AM Peak **WITH DEVELOPMENT** (existing + TII growth factor + committed dev. + dev. flows)

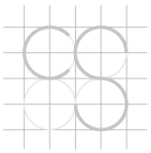
From \ To	New Wapping St South	Northern Dev Access	New Wapping St North	TOTALS
New Wapping St South	0	2	197	**199**
Northern Dev Access	9	0	20	**29**
New Wapping St North	455	8	0	**463**
TOTALS	**464**	**10**	**217**	**691**

2037 PM Peak **WITH DEVELOPMENT** (existing + TII growth factor + committed dev. + dev. flows)

From \ To	New Wapping St South	Northern Dev Access	New Wapping St North	TOTALS
New Wapping St South	0	17	325	**342**
Northern Dev Access	2	0	25	**27**
New Wapping St North	170	23	0	**192**
TOTALS	**172**	**40**	**350**	**562**

Appendix D

TRANSYT Model Results



CS CONSULTING
GROUP
DUBLIN - LONDON - LIMERICK

TRANSYT 14

Version: 14.1.2.315 [26-09-12]

For sales and distribution information, program advice and maintenance, contact TRL:
Tel: +44 (0)1344 770758 E-mail: software@trl.co.uk Web: http://www.trlsoftware.co.uk

Last run: 25/07/2019 12:14:35
Analysis Set used for last run: A1 -

Filename: R043 TRANSYT Model 20190719.t14
Path: J:\R_JOBS\Job-R043\B_Documents\C_Civil\A_CS Reports\4.0 SHD Application for Additional Floors\Traffic\Modelling
Report generation date: 25/07/2019 12:14:59

File summary

File Description

Title	Spencer North
Location	Dublin 1
Site Number	
UTCRegion	
Driving Side	Left
Date	27/03/2018
Version	
Status	
Identifier	
Client	
Jobnumber	R043
Enumerator	GF
Description	

Units

Speed Units	Distance Units	Fuel Economy Units	Fuel Rate Units	Mass Units	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
kph	m	l/100km	l/h	kg	perHour	s	-Hour	perHour

Sorting

Show Names Instead of IDs (For Aimsun)	Sorting Direction	Sorting Type	Ignore Prefixes When Sorting	Link Grouping	Source Grouping
	Ascending	Numerical		Normal	Normal

A1 - : D1 - 2019 Base Year 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)	Cycle Time Used (s)	Total Network Delay (PCU-hr/hr)	Highest DOS (%)	LTSWith Highest DOS	Number Of Oversaturated LTS	Percentage Of Oversaturated LTS (%)	LTSWith Worst Signalised PRC	LTSWith Worst Unsignalised PRC	LTSWith Worst Overall PRC	Network Within Capacity
A1 -	25/07/2019 12:14:23	25/07/2019 12:14:35	07:45	120	14.17	84.83	2A/1	0	0	2A/1	4B/1	4B/1	✓

Analysis Set Details

Name	Description	Demand Set	Include In Report	Locked
		D1	✓	

Demand Set Details

Name	Description	Composite	Demand Sets	Start Time (HH:mm)	Locked
2019 Base Year AM				07:45	

Network Options

Network Timings

Network Cycle Time (s)	Resolution	Number Of Steps	Time Segment Length (min)	Number Of Time Segments	Modelled Time Period (min)
120	1	120	60	1	60

Signals Options

Equal Length Multiple Cycling	Start Displacement (s)	End Displacement (s)	Phase Minimum Broken Penalty (£)	Phase Maximum Broken Penalty (£)	Intergreen Broken Penalty (£)
✓	2	3	10000.00	10000.00	10000.00

Traffic Options

Traffic Model	DOS Threshold (%)	Flow Scaling Factor (%)	Cruise Scaling Factor (%)	Cruise Times Or Speeds	Use Link Stop Weightings	Use Link Delay Weightings	Exclude Pedestrian Links	Random Delay Mode	Type of Vehicle-in-Service	Type Of Random Parameter	PCU Length (m)
Quick PDM	90	100	100	Cruise Speeds	✓	✓		Complex	Uniform (TRANSYT)	Uniform (TRANSYT)	5.75

Bus Parameters

Dispersion Coefficient1	Dispersion Coefficient2	Acceleration (ms^[-2])	Travel Time Coefficient1	Travel Time Coefficient2
70	15	0.47	30	85

Tram Parameters

Dispersion Coefficient1	Dispersion Coefficient2	Acceleration (ms^[-2])	Travel Time Coefficient1	Travel Time Coefficient2
80	20	0.20	40	90

Optimisation Options

Auto Redistribute	Optimisation Type	Optimisation Level	Hill Climb Increments	Use Enhanced Optimisation	Optimisation Order	Locked Green Splits	Full Simulation
✓	Hill Climb (Fast)	Offsets And Green Splits	15,40,-1,15,40,1,-1,1		1,2		

Economics

Unit Of Cost	Monetary Value Of Delay (£ per PCU-hr)	Monetary Value Of Stops (£ per 100 stops)
£	14.20	2.60

Traffic Nodes

Traffic Nodes

Traffic Node	Name	Description
1	New Wapping St / Mayor St	
2	East Rd / Sheriff St / New Wapping St	
3	New Wapping St / South Dev Access	
4	New Wapping St / North Dev Access	

Links

Links

Link	Name	Description	Traffic Node	Length (m)	Traffic Model	Has Restricted Flow	Saturation Flow (PCU/hr)	Is Signal Controlled	Controller Stream	Phase	Phase2 Enabled	Is Give Way	Is Pedestrian	Is Minor Shared	Major Link
1P	(untitled)		1	100.00	[QuickPDM]		N/A	✓	1	G			✓		N/A
1T1	(untitled)		1	100.00	[QuickPDM]	✓	1800	✓	1	E					N/A
1T1x	(untitled)			100.00	[QuickPDM]		N/A		N/A	N/A					N/A
1T2	(untitled)		1	100.00	[QuickPDM]	✓	1800	✓	1	F					N/A
1T2x	(untitled)			100.00	[QuickPDM]		N/A		N/A	N/A					N/A

Modelling

Link	Stop Weighting (%)	Delay Weighting (%)	Exclude From Results Calculation	Max Queue Storage (PCU)	Has Queue Limit	Has Degree Of Saturation Limit
1P	100	100		0.00		
1T1	100	100		0.00		
1T1x	100	100		0.00		
1T2	100	100		0.00		
1T2x	100	100		0.00		

Modelling - Advanced

Link	Normal Dispersal Type	Normal Dispersal Coefficient	Normal Travel Time Coefficient	Initial Queue (PCU)	Point1 Time Step (s)	Point2 Time Step (s)	Type of Vehicle-in-Service	Vehicle-in-Service	Type Of Random Parameter	Random Parameter
1P	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
1T1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
1T1x	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
1T2	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
1T2x	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50

Flows

Link	Total Flow (On Link) (PCU/hr)	Uniform Flow Name	Uniform Flow (Into Link) (PCU/hr)	Upstream Flow (Into Link) (PCU/hr)	Link Sensitivity Multiplier (%)	Cruise Sensitivity Multiplier (%)	Calculated Cruise Speed (kph)	Detectors
1P	1		0	1	100	100	1.00	
1T1	6		0	6	100	100	1.00	
1T1x	5		0	5	100	100	1.00	
1T2	5		0	5	100	100	1.00	
1T2x	6		0	6	100	100	1.00	

Sources - default sources for entry links

Link	Entry Source Traffic Type	Entry Cruise Time (seconds)	Entry Cruise Speed (kph)	Entry Free Running Speed (kph)	Entry Stationary Time (seconds)	Entry Profile Type	Entry DIRECTFlows (PCU/hr)
1P	Normal	12.00	30.00	N/A	N/A	FLAT	1
1T1	Trams	N/A	N/A	15.00	0.00	FLAT	6
1T2	Trams	N/A	N/A	15.00	0.00	FLAT	5

Sources - sources for internal links

Link	Source	Source Type	Source Link	Source Traffic Type	Source Flow (PCU/hr)	Free Running Speed (kph)	Stationary Time (seconds)
1T1x	1	Link	1T2	Trams	5	15.00	0.00
1T2x	1	Link	1T1	Trams	6	15.00	0.00

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic Node
1A	New Wapping Street (North)		1
1Ax			
1B	Mayor Street Upper (East)		1

1Bx			
1C	New Wapping Street (South)		1
1Cx			
1D	Mayor Street Upper (West)		1
1Dx			
2A	East Road		2
2Ax			
2B	Sheriff Street Upper (East)		2
2Bx			
2C	New Wapping Street		2
2Cx			
2D	Sheriff Street Upper (West)		2
2Dx			
3A	New Wapping Street (South)		3
3Ax			
3B	South Dev Access		3
3Bx			
3C	New Wapping Street (North)		3
3Cx			
4A	New Wapping Street (South)		4
4Ax			
4B	North Dev Access		4
4Bx			
4C	New Wapping Street (North)		4
4Cx			

Traffic Streams

Arm	Traffic Stream	Name	Description	Length (m)	Traffic Model	Has Restricted Flow	Saturation Flow Source	Saturation Flow (PCU/hr)	Is Signal Controlled	Controller Stream	Phase	Phase2 Enabled	Phase2	Is Give Way	Traffic Type
1A	1			60.00	[QuickPDM]	✓	SumOfLanes	1800	✓	1	A		N/A	✓	Normal, Bus
1Ax	1			0.00	[QuickPDM]		N/A	N/A		N/A	N/A		N/A		Normal, Bus
1B	1			192.00	[QuickPDM]	✓	SumOfLanes	1800	✓	1	B		N/A	✓	Normal, Bus
1Bx	1			192.00	[QuickPDM]		N/A	N/A		N/A	N/A		N/A		Normal, Bus
1C	1			30.00	[QuickPDM]	✓	SumOfLanes	1800	✓	1	C		N/A	✓	Normal, Bus
1Cx	1			0.00	[QuickPDM]		N/A	N/A		N/A	N/A		N/A		Normal, Bus
1D	1			57.00	[QuickPDM]	✓	SumOfLanes	1800	✓	1	D		N/A	✓	Normal, Bus
1Dx	1			57.00	[QuickPDM]		N/A	N/A		N/A	N/A		N/A		Normal, Bus
2A	1			35.00	[QuickPDM]	✓	SumOfLanes	1800	✓	2	A	✓	C	✓	Normal
2Ax	1			35.00	[QuickPDM]		N/A	N/A		N/A	N/A		N/A		Normal
2B	1			190.00	[QuickPDM]	✓	SumOfLanes	1800	✓	2	B		N/A	✓	Normal
2Bx	1			190.00	[QuickPDM]		N/A	N/A		N/A	N/A		N/A		Normal
2C	1			40.00	[QuickPDM]	✓	SumOfLanes	1800	✓	2	C		N/A	✓	Normal
2Cx	1			0.00	[QuickPDM]		N/A	N/A		N/A	N/A		N/A		Normal
2D	1			65.00	[QuickPDM]	✓	SumOfLanes	1800	✓	2	D	✓	B	✓	Normal
2Dx	1			65.00	[QuickPDM]		N/A	N/A		N/A	N/A		N/A		Normal
3A	1			60.00	[QuickPDM]		N/A	N/A		N/A	N/A		N/A		Normal
3Ax	1			0.00	[QuickPDM]		N/A	N/A		N/A	N/A		N/A		Normal
3B	1			40.00	[QuickPDM]		N/A	N/A		N/A	N/A		N/A	✓	Normal
3Bx	1			40.00	[QuickPDM]		N/A	N/A		N/A	N/A		N/A		Normal
3C	1			55.00	[QuickPDM]		N/A	N/A		N/A	N/A		N/A	✓	Normal
3Cx	1			0.00	[QuickPDM]		N/A	N/A		N/A	N/A		N/A		Normal
4A	1			55.00	[QuickPDM]		N/A	N/A		N/A	N/A		N/A		Normal
4Ax	1			0.00	[QuickPDM]		N/A	N/A		N/A	N/A		N/A		Normal
4B	1			40.00	[QuickPDM]		N/A	N/A		N/A	N/A		N/A	✓	Normal
4Bx	1			40.00	[QuickPDM]		N/A	N/A		N/A	N/A		N/A		Normal
4C	1			40.00	[QuickPDM]		N/A	N/A		N/A	N/A		N/A	✓	Normal
4Cx	1			0.00	[QuickPDM]		N/A	N/A		N/A	N/A		N/A		Normal

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Saturation Flow (PCU/hr)
1A	1	1	(untitled)			1800
1Ax	1	1	(untitled)			1800
1B	1	1	(untitled)			1800
1Bx	1	1	(untitled)			1800
1C	1	1	(untitled)			1800
1Cx	1	1	(untitled)			1800
1D	1	1	(untitled)			1800
1Dx	1	1	(untitled)			1800
2A	1	1	(untitled)			1800
2Ax	1	1	(untitled)			1800
2B	1	1	(untitled)			1800
2Bx	1	1	(untitled)			1800
2C	1	1	(untitled)			1800
2Cx	1	1	(untitled)			1800
2D	1	1	(untitled)			1800
2Dx	1	1	(untitled)			1800
3A	1	1				9999
3Ax	1	1				1800
3B	1	1				1800
3Bx	1	1				1800
3C	1	1				1800
3Cx	1	1				1800
4A	1	1				9999
4Ax	1	1				1800
4B	1	1				1800
4Bx	1	1				1800
4C	1	1				1800

4Cx	1	1				1800

Modelling

Arm	Traffic Stream	Stop Weighting Multiplier (%)	Delay Weighting Multiplier (%)	Exclude From Results Calculation	Max Queue Storage (PCU)	Has Queue Limit	Has Degree Of Saturation Limit
1A	1	100	100		0.00		
1Ax	1	100	100		0.00		
1B	1	100	100		0.00		
1Bx	1	100	100		0.00		
1C	1	100	100		0.00		
1Cx	1	100	100		0.00		
1D	1	100	100		0.00		
1Dx	1	100	100		0.00		
2A	1	100	100		0.00		
2Ax	1	100	100		0.00		
2B	1	100	100		0.00		
2Bx	1	100	100		0.00		
2C	1	100	100		0.00		
2Cx	1	100	100		0.00		
2D	1	100	100		0.00		
2Dx	1	100	100		0.00		
3A	1	100	100		0.00		
3Ax	1	100	100		0.00		
3B	1	100	100		0.00		
3Bx	1	100	100		0.00		
3C	1	100	100		0.00		
3Cx	1	100	100		0.00		
4A	1	100	100		0.00		
4Ax	1	100	100		0.00		
4B	1	100	100		0.00		
4Bx	1	100	100		0.00		
4C	1	100	100		0.00		
4Cx	1	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Normal Dispersal Type	Normal Dispersal Coefficient	Normal Travel Time Coefficient	Initial Queue (PCU)	Point1 Time Step (s)	Point2 Time Step (s)	Type of Vehicle-in-Service	Vehicle-in-Service	Type Of Random Parameter	Random Parameter
1A	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
1Ax	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
1B	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
1Bx	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
1C	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
1Cx	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
1D	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
1Dx	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
2A	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
2Ax	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
2B	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
2Bx	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
2C	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
2Cx	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
2D	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
2Dx	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
3A	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
3Ax	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
3B	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
3Bx	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
3C	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
3Cx	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
4A	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
4Ax	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
4B	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
4Bx	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
4C	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
4Cx	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50

Flows

Arm	Traffic Stream	Total Flow (PCU/hr)	Normal Flow (PCU/hr)	Bus Flow (PCU/hr)	Tram Flow (PCU/hr)	Cruise Sensitivity Multiplier (%)	Calculated Cruise Speed (kph)
1A	1	323	323	0	0	100	1.00
1Ax	1	125	125	0	0	100	1.00
1B	1	20	20	0	0	100	1.00
1Bx	1	57	57	0	0	100	1.00
1C	1	125	125	0	0	100	1.00
1Cx	1	282	282	0	0	100	1.00
1D	1	5	5	0	0	100	1.00
1Dx	1	9	9	0	0	100	1.00
2A	1	576	576	0	0	100	1.00
2Ax	1	230	230	0	0	100	1.00
2B	1	87	87	0	0	100	1.00
2Bx	1	249	249	0	0	100	1.00
2C	1	125	125	0	0	100	1.00
2Cx	1	331	331	0	0	100	1.00
2D	1	369	369	0	0	100	1.00
2Dx	1	347	347	0	0	100	1.00
3A	1	126	126	0	0	100	1.00
3Ax	1	327	327	0	0	100	1.00
3B	1	0	0	0	0	100	1.00
3Bx	1	0	0	0	0	100	1.00
3C	1	327	327	0	0	100	1.00
3Cx	1	126	126	0	0	100	1.00
4A	1	126	126	0	0	100	1.00
4Ax	1	327	327	0	0	100	1.00

4B	1	0	0	0	0	100	1.00
4Bx	1	0	0	0	0	100	1.00
4C	1	327	327	0	0	100	1.00
4Cx	1	126	126	0	0	100	1.00

Normal - Modelling

Arm	Traffic Stream	Stop Weighting (%)	Delay Weighting (%)
1A	1	100	100
1Ax	1	100	100
1B	1	100	100
1Bx	1	100	100
1C	1	100	100
1Cx	1	100	100
1D	1	100	100
1Dx	1	100	100
2A	1	100	100
2Ax	1	100	100
2B	1	100	100
2Bx	1	100	100
2C	1	100	100
2Cx	1	100	100
2D	1	100	100
2Dx	1	100	100
3A	1	100	100
3Ax	1	100	100
3B	1	100	100
3Bx	1	100	100
3C	1	100	100
3Cx	1	100	100
4A	1	100	100
4Ax	1	100	100
4B	1	100	100
4Bx	1	100	100
4C	1	100	100
4Cx	1	100	100

Bus - Modelling

Arm	Traffic Stream	Stationary Time (seconds)	Stop Weighting (%)	Delay Weighting (%)
1A	1	0.00	100	100
1Ax	1	0.00	100	100
1B	1	0.00	100	100
1Bx	1	0.00	100	100
1C	1	0.00	100	100
1Cx	1	0.00	100	100
1D	1	0.00	100	100
1Dx	1	0.00	100	100
2A	1	Buses Not Permitted	Buses Not Permitted	Buses Not Permitted
2Ax	1	Buses Not Permitted	Buses Not Permitted	Buses Not Permitted
2B	1	Buses Not Permitted	Buses Not Permitted	Buses Not Permitted
2Bx	1	Buses Not Permitted	Buses Not Permitted	Buses Not Permitted
2C	1	Buses Not Permitted	Buses Not Permitted	Buses Not Permitted
2Cx	1	Buses Not Permitted	Buses Not Permitted	Buses Not Permitted
2D	1	Buses Not Permitted	Buses Not Permitted	Buses Not Permitted
2Dx	1	Buses Not Permitted	Buses Not Permitted	Buses Not Permitted
3A	1	Buses Not Permitted	Buses Not Permitted	Buses Not Permitted
3Ax	1	Buses Not Permitted	Buses Not Permitted	Buses Not Permitted
3B	1	Buses Not Permitted	Buses Not Permitted	Buses Not Permitted
3Bx	1	Buses Not Permitted	Buses Not Permitted	Buses Not Permitted
3C	1	Buses Not Permitted	Buses Not Permitted	Buses Not Permitted
3Cx	1	Buses Not Permitted	Buses Not Permitted	Buses Not Permitted
4A	1	Buses Not Permitted	Buses Not Permitted	Buses Not Permitted
4Ax	1	Buses Not Permitted	Buses Not Permitted	Buses Not Permitted
4B	1	Buses Not Permitted	Buses Not Permitted	Buses Not Permitted
4Bx	1	Buses Not Permitted	Buses Not Permitted	Buses Not Permitted
4C	1	Buses Not Permitted	Buses Not Permitted	Buses Not Permitted
4Cx	1	Buses Not Permitted	Buses Not Permitted	Buses Not Permitted

Sources - default sources for entries

Arm	Traffic Stream	Normal Cruise Time (seconds)	Normal Cruise Speed (kph)	Bus Free Running Speed (kph)	Tram Free Running Speed (kph)
1B	1	23.04	30.00	15.00	Trams Not Permitted
1C	1	3.60	30.00	15.00	Trams Not Permitted
1D	1	6.84	30.00	15.00	Trams Not Permitted
2A	1	4.20	30.00	Buses Not Permitted	Trams Not Permitted
2B	1	22.80	30.00	Buses Not Permitted	Trams Not Permitted
2D	1	7.80	30.00	Buses Not Permitted	Trams Not Permitted
3B	1	4.80	30.00	Buses Not Permitted	Trams Not Permitted
4B	1	4.80	30.00	Buses Not Permitted	Trams Not Permitted

Sources - sources for internals

Arm	Traffic Stream	Source	Source Type	Source Traffic Stream	Source Total Flow (PCU/hr)	Source Normal Flow (PCU/hr)	Source Bus Flow (PCU/hr)	Source Tram Flow (PCU/hr)	Normal Cruise Time (seconds)	Normal Cruise Speed (kph)	Bus Free Running Speed (kph)	Tram Free Running Speed (kph)
1A	1	1	TrafficStream	3Ax/1	327	0	0	0	7.20	30.00	15.00	Trams Not Permitted
1Ax	1	1	TrafficStream	1D/1	2	2	0	0	1.00	30.00	15.00	Trams Not Permitted
1Ax	1	2	TrafficStream	1B/1	5	5	0	0	1.00	30.00	15.00	Trams Not Permitted
1Ax	1	3	TrafficStream	1C/1	118	118	0	0	1.00	30.00	15.00	Trams Not Permitted
1Bx	1	1	TrafficStream	1D/1	2	2	0	0	23.04	30.00	15.00	Trams Not Permitted
1Bx	1	2	TrafficStream	1C/1	7	7	0	0	23.04	30.00	15.00	Trams Not Permitted
1Bx	1	3	TrafficStream	1A/1	48	48	0	0	23.04	30.00	15.00	Trams Not Permitted
1Cx	1	1	TrafficStream	1D/1	1	1	0	0	1.00	30.00	15.00	Trams Not Permitted
1Cx	1	2	TrafficStream	1B/1	14	14	0	0	1.00	30.00	15.00	Trams Not Permitted

1Cx	1	3	TrafficStream	1A/1	267	267	0	0	1.00	30.00	15.00	Trams Not Permitted
1Dx	1	1	TrafficStream	1B/1	1	1	0	0	6.84	30.00	15.00	Trams Not Permitted
1Dx	1	2	TrafficStream	1C/1	0	0	0	0	6.84	30.00	15.00	Trams Not Permitted
1Dx	1	3	TrafficStream	1A/1	8	8	0	0	6.84	30.00	15.00	Trams Not Permitted
2Ax	1	1	TrafficStream	2C/1	52	52	0	0	4.20	30.00	Buses Not Permitted	Trams Not Permitted
2Ax	1	2	TrafficStream	2D/1	154	154	0	0	4.20	30.00	Buses Not Permitted	Trams Not Permitted
2Ax	1	3	TrafficStream	2B/1	24	24	0	0	4.20	30.00	Buses Not Permitted	Trams Not Permitted
2Bx	1	1	TrafficStream	2A/1	92	92	0	0	22.80	30.00	Buses Not Permitted	Trams Not Permitted
2Bx	1	2	TrafficStream	2C/1	7	7	0	0	22.80	30.00	Buses Not Permitted	Trams Not Permitted
2Bx	1	3	TrafficStream	2D/1	150	150	0	0	22.80	30.00	Buses Not Permitted	Trams Not Permitted
2C	1	1	TrafficStream	4Cx/1	126	0	0	0	4.80	30.00	Buses Not Permitted	Trams Not Permitted
2Cx	1	1	TrafficStream	2A/1	242	242	0	0	1.00	30.00	Buses Not Permitted	Trams Not Permitted
2Cx	1	2	TrafficStream	2D/1	65	65	0	0	1.00	30.00	Buses Not Permitted	Trams Not Permitted
2Cx	1	3	TrafficStream	2B/1	24	24	0	0	1.00	30.00	Buses Not Permitted	Trams Not Permitted
2Dx	1	1	TrafficStream	2A/1	242	242	0	0	7.80	30.00	Buses Not Permitted	Trams Not Permitted
2Dx	1	2	TrafficStream	2C/1	66	66	0	0	7.80	30.00	Buses Not Permitted	Trams Not Permitted
2Dx	1	3	TrafficStream	2B/1	39	39	0	0	7.80	30.00	Buses Not Permitted	Trams Not Permitted
3A	1	1	TrafficStream	1Ax/1	125	0	0	0	7.20	30.00	Buses Not Permitted	Trams Not Permitted
3Ax	1	1	TrafficStream	3B/1	0	0	0	0	1.00	30.00	Buses Not Permitted	Trams Not Permitted
3Ax	1	2	TrafficStream	3C/1	327	327	0	0	1.00	30.00	Buses Not Permitted	Trams Not Permitted
3Bx	1	1	TrafficStream	3A/1	0	0	0	0	4.80	30.00	Buses Not Permitted	Trams Not Permitted
3Bx	1	2	TrafficStream	3C/1	0	0	0	0	4.80	30.00	Buses Not Permitted	Trams Not Permitted
3C	1	1	TrafficStream	4Ax/1	327	0	0	0	6.60	30.00	Buses Not Permitted	Trams Not Permitted
3Cx	1	1	TrafficStream	3A/1	126	126	0	0	1.00	30.00	Buses Not Permitted	Trams Not Permitted
3Cx	1	2	TrafficStream	3B/1	0	0	0	0	1.00	30.00	Buses Not Permitted	Trams Not Permitted
4A	1	1	TrafficStream	3Cx/1	126	0	0	0	6.60	30.00	Buses Not Permitted	Trams Not Permitted
4Ax	1	1	TrafficStream	4B/1	0	0	0	0	1.00	30.00	Buses Not Permitted	Trams Not Permitted
4Ax	1	2	TrafficStream	4C/1	327	327	0	0	1.00	30.00	Buses Not Permitted	Trams Not Permitted
4Bx	1	1	TrafficStream	4A/1	0	0	0	0	4.80	30.00	Buses Not Permitted	Trams Not Permitted
4Bx	1	2	TrafficStream	4C/1	0	0	0	0	4.80	30.00	Buses Not Permitted	Trams Not Permitted
4C	1	1	TrafficStream	2Cx/1	331	0	0	0	4.80	30.00	Buses Not Permitted	Trams Not Permitted
4Cx	1	1	TrafficStream	4A/1	126	126	0	0	1.00	30.00	Buses Not Permitted	Trams Not Permitted
4Cx	1	2	TrafficStream	4B/1	0	0	0	0	1.00	30.00	Buses Not Permitted	Trams Not Permitted

Give Way Data

Arm	Traffic Stream	Opposed Traffic	Use Stop-wise Opposed Turn Model	Visibility Restricted
1A	1	Movement		
1B	1	Movement		
1C	1	Movement		
1D	1	Movement		
2A	1	Movement		
2B	1	Movement		
2C	1	Movement		
2D	1	Movement		
3B	1	Movement		
3C	1	Movement		
4B	1	Movement		
4C	1	Movement		

Give Way Data - Movements

Arm	Traffic Stream	Movement	Destination Traffic Stream	Max Flow (Opposed) (PCU/hr)	Max Flow (Unopposed) (PCU/hr)	Percentage Opposed (%)
1A	1	1	1Dx/1	900	1800	100
1A	1	2	1Bx/1	1799	1800	0
1A	1	3	1Cx/1	1799	1800	0
1B	1	1	1Ax/1	900	1800	100
1B	1	2	1Cx/1	1799	1800	0
1B	1	3	1Dx/1	1799	1800	0
1C	1	1	1Bx/1	900	1800	100
1C	1	2	1Ax/1	1799	1800	0
1C	1	3	1Dx/1	1799	1800	0
1D	1	1	1Cx/1	900	1800	100
1D	1	2	1Ax/1	1799	1800	0
1D	1	3	1Bx/1	1799	1800	0
2A	1	1	2Dx/1	900	1800	100
2A	1	2	2Bx/1	1799	1800	0
2A	1	3	2Cx/1	1799	1800	0
2B	1	1	2Ax/1	900	1800	100
2B	1	2	2Cx/1	1799	1800	0
2B	1	3	2Dx/1	1799	1800	0
2C	1	1	2Bx/1	900	1800	100
2C	1	2	2Ax/1	1799	1800	0
2C	1	3	2Dx/1	1799	1800	0

2D	1	1	2Cx/1	900	1800	100
2D	1	2	2Ax/1	1799	1800	0
2D	1	3	2Bx/1	1799	1800	0
3B	1	1	3Cx/1	637	637	100
3B	1	2	3Ax/1	494	494	100
3C	1	1	3Bx/1	612	612	100
3C	1	2	3Ax/1	1800	1800	100
4B	1	1	4Cx/1	637	637	100
4B	1	2	4Ax/1	494	494	100
4C	1	1	4Bx/1	638	638	100
4C	1	2	4Ax/1	1800	1800	100

Give Way Data - Movements - Conflicts

Arm	Traffic Stream	Movement	Destination Traffic Stream	Description	Controlling Type	Controlling Link	Controlling From Traffic Stream	Controlling To Traffic Stream	Percentage Opposing (%)	Slope Coefficient	Upstream Signals Visible	Conflict Shift	Conflict Duration
1A	1	1	1Dx/1		TrafficStreamMovement	N/A	1C/1	1Ax/1	100	0.26	✓	0	0
1A	1	1	1Dx/1		TrafficStreamMovement	N/A	1C/1	1Dx/1	100	0.26	✓	0	0
1B	1	1	1Ax/1		Link	1T2	N/A	N/A	100	0.26	✓	0	0
1B	1	1	1Ax/1		TrafficStreamMovement	N/A	1D/1	1Bx/1	100	0.26	✓	0	0
1B	1	1	1Ax/1		TrafficStreamMovement	N/A	1D/1	1Ax/1	100	0.26	✓	0	0
1C	1	1	1Bx/1		TrafficStreamMovement	N/A	1A/1	1Cx/1	100	0.26	✓	0	0
1C	1	1	1Bx/1		TrafficStreamMovement	N/A	1A/1	1Bx/1	100	0.26	✓	0	0
1D	1	1	1Cx/1		Link	1T1	N/A	N/A	100	0.26	✓	0	0
1D	1	1	1Cx/1		TrafficStreamMovement	N/A	1B/1	1Dx/1	100	0.26	✓	0	0
1D	1	1	1Cx/1		TrafficStreamMovement	N/A	1B/1	1Cx/1	100	0.26	✓	0	0
2A	1	1	2Dx/1		TrafficStreamMovement	N/A	2C/1	2Ax/1	100	0.26		0	0
2A	1	1	2Dx/1		TrafficStreamMovement	N/A	2C/1	2Dx/1	100	0.26		0	0
2B	1	1	2Ax/1		TrafficStreamMovement	N/A	2D/1	2Bx/1	100	0.26		0	0
2B	1	1	2Ax/1		TrafficStreamMovement	N/A	2D/1	2Ax/1	100	0.26		0	0
2C	1	1	2Bx/1		TrafficStreamMovement	N/A	2A/1	2Cx/1	100	0.26		0	0
2C	1	1	2Bx/1		TrafficStreamMovement	N/A	2A/1	2Bx/1	100	0.26		0	0
2D	1	1	2Cx/1		TrafficStreamMovement	N/A	2B/1	2Dx/1	100	0.26		0	0
2D	1	1	2Cx/1		TrafficStreamMovement	N/A	2B/1	2Cx/1	100	0.26		0	0
3B	1	1	3Cx/1	T-junction opposing flow	TrafficStreamMovement	N/A	3A/1	3Bx/1	100	0.10		0	0
3B	1	1	3Cx/1	T-junction opposing flow	TrafficStreamMovement	N/A	3A/1	3Cx/1	100	0.25		0	0
3B	1	2	3Ax/1	T-junction opposing flow	TrafficStreamMovement	N/A	3A/1	3Bx/1	100	0.09		0	0
3B	1	2	3Ax/1	T-junction opposing flow	TrafficStreamMovement	N/A	3A/1	3Cx/1	100	0.23		0	0
3B	1	2	3Ax/1	T-junction opposing flow	TrafficStreamMovement	N/A	3C/1	3Ax/1	100	0.14		0	0
3B	1	2	3Ax/1	T-junction opposing flow	TrafficStreamMovement	N/A	3C/1	3Bx/1	100	0.32		0	0
3C	1	1	3Bx/1	T-junction opposing flow	TrafficStreamMovement	N/A	3A/1	3Bx/1	100	0.24		0	0
3C	1	1	3Bx/1	T-junction opposing flow	TrafficStreamMovement	N/A	3A/1	3Cx/1	100	0.24		0	0
4B	1	1	4Cx/1	T-junction opposing flow	TrafficStreamMovement	N/A	4A/1	4Bx/1	100	0.10		0	0
4B	1	1	4Cx/1	T-junction opposing flow	TrafficStreamMovement	N/A	4A/1	4Cx/1	100	0.25		0	0
4B	1	2	4Ax/1	T-junction opposing flow	TrafficStreamMovement	N/A	4A/1	4Bx/1	100	0.09		0	0
4B	1	2	4Ax/1	T-junction opposing flow	TrafficStreamMovement	N/A	4A/1	4Cx/1	100	0.23		0	0
4B	1	2	4Ax/1	T-junction opposing flow	TrafficStreamMovement	N/A	4C/1	4Ax/1	100	0.14		0	0
4B	1	2	4Ax/1	T-junction opposing flow	TrafficStreamMovement	N/A	4C/1	4Bx/1	100	0.32		0	0
4C	1	1	4Bx/1	T-junction opposing flow	TrafficStreamMovement	N/A	4A/1	4Bx/1	100	0.25		0	0
4C	1	1	4Bx/1	T-junction opposing flow	TrafficStreamMovement	N/A	4A/1	4Cx/1	100	0.25		0	0

T-Junctions

T- Junctions

T-Junction	Name	Description	Auto Assign Priority	Type	Traffic direction on Arm A	Entry AB	Entry AC	Exit A	Traffic direction on Arm B	Entry BA	Entry BC	Exit B	Traffic direction on Arm C	Entry CA	Entry CB	Exit C	Calculate Slope and Intercept
3	Dev Access South		✓	TrafficStream	Two-Way	3A/1	3A/1	3Ax/1	Two-Way	3B/1	3B/1	3Bx/1	Two-Way	3C/1	3C/1	3Cx/1	✓
4	Dev Access North		✓	TrafficStream	Two-Way	4A/1	4A/1	4Ax/1	Two-Way	4B/1	4B/1	4Bx/1	Two-Way	4C/1	4C/1	4Cx/1	✓

T- Junction Majors

T-Junction	Total Carriageway Width (m)	Kerbed Central Reserve Width (m)	Width for C-B traffic (m)	Visibility for C-B traffic (m)
3	6.00	0.00	2.20	65.00
4	6.00	0.00	2.20	110.00

T- Junction Minors

T-Junction	B-C Lane Width (m)	B-A Lane Width (m)	B-C Visibility (m)	B-A Visibility (m)
3	3.00	3.00	20.00	20.00
4	3.00	3.00	20.00	20.00

T- Junction Slope Intercept

T-Junction	BCIntercept (PCU/hr)	BC- ABSlope	BC- ACSlope	BAIntercept (PCU/hr)	BA- ABSlope	BA- ACSlope	BA- CASlope	BA- CBSlope	CBIntercept (PCU/hr)	CB- ABSlope	CB- ACSlope
3	637	0.10	0.25	494	0.09	0.23	0.14	0.32	612	0.24	0.24
4	637	0.10	0.25	494	0.09	0.23	0.14	0.32	638	0.25	0.25

Flow Allocation Tool Tables - Local Matrix: 1

Normal Input Flows (PCU/hr)

		To			
		1-1	1-2	1-3	1-4
From	1-1	0	48	267	8
	1-2	5	0	14	1
	1-3	118	7	0	0
	1-4	2	2	1	0

Bus Input Flows not shown as they are blank.

Tram Input Flows (PCU/hr)

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

Locations

Local Matrix	Location	Name	Entries	Exits	Total Flow In (PCU/hr)	Normal Flow In (PCU/hr)	Bus Flow In (PCU/hr)	Tram Flow In (PCU/hr)	Total Flow Out (PCU/hr)	Normal Flow Out (PCU/hr)	Bus Flow Out (PCU/hr)	Tram Flow Out (PCU/hr)
1	1-1		1A/1	1Ax/1	323	323	0	0	125	125	0	0
1	1-2		1B/1,1T1	1Bx/1,1T1x	26	20	0	6	62	57	0	5
1	1-3		1C/1	1Cx/1	125	125	0	0	282	282	0	0
1	1-4		1D/1,1T2	1Dx/1,1T2x	10	5	0	5	15	9	0	6

Paths

Local Matrix	Path	Description	Path Items	Calculated Total Flow (PCU/hr)
1	1		1D/1,1Ax/1	2
1	2		1D/1,1Bx/1	2
1	3		1D/1,1Cx/1	1
1	4		1T2,1T1x	5
1	5		1A/1,1Bx/1	48
1	6		1A/1,1Cx/1	267
1	7		1A/1,1Dx/1	8
1	8		1B/1,1Ax/1	5
1	9		1B/1,1Cx/1	14
1	10		1B/1,1Dx/1	1
1	11		1T1,1T2x	6
1	12		1C/1,1Ax/1	118
1	13		1C/1,1Bx/1	7
1	14		1C/1,1Dx/1	0

Normal Path Flows

Local Matrix	Path	Permitted Flow Type	Allocation Type	Percentage (%)	Fixed Flow (PCU/hr)	Calculated Flow (PCU/hr)
1	1	✓	Normal	N/A	N/A	2
1	2	✓	Normal	N/A	N/A	2
1	3	✓	Normal	N/A	N/A	1
1	5	✓	Normal	N/A	N/A	48
1	6	✓	Normal	N/A	N/A	267
1	7	✓	Normal	N/A	N/A	8
1	8	✓	Normal	N/A	N/A	5
1	9	✓	Normal	N/A	N/A	14
1	10	✓	Normal	N/A	N/A	1
1	12	✓	Normal	N/A	N/A	118
1	13	✓	Normal	N/A	N/A	7
1	14	✓	Normal	N/A	N/A	0

Bus Path Flows

Local Matrix	Path	Permitted Flow Type	Allocation Type	Percentage (%)	Fixed Flow (PCU/hr)	Calculated Flow (PCU/hr)
1	1	✓	Disabled	N/A	N/A	0
1	2	✓	Disabled	N/A	N/A	0
1	3	✓	Disabled	N/A	N/A	0
1	5	✓	Disabled	N/A	N/A	0
1	6	✓	Disabled	N/A	N/A	0
1	7	✓	Disabled	N/A	N/A	0
1	8	✓	Disabled	N/A	N/A	0
1	9	✓	Disabled	N/A	N/A	0
1	10	✓	Disabled	N/A	N/A	0
1	12	✓	Disabled	N/A	N/A	0
1	13	✓	Disabled	N/A	N/A	0
1	14	✓	Disabled	N/A	N/A	0

Tram Path Flows

Local Matrix	Path	Permitted Flow Type	Allocation Type	Percentage (%)	Fixed Flow (PCU/hr)	Calculated Flow (PCU/hr)
1	4	✓	Normal	N/A	N/A	5
1	11	✓	Normal	N/A	N/A	6

Flow Allocation Tool Tables - Local Matrix: 4

Normal Input Flows (PCU/hr)

		To		
		4-1	4-2	4-3
From	4-1	0	0	126
	4-2	0	0	0
	4-3	327	0	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Locations

Local Matrix	Location	Name	Entries	Exits	Total Flow In (PCU/hr)	Normal Flow In (PCU/hr)	Bus Flow In (PCU/hr)	Tram Flow In (PCU/hr)	Total Flow Out (PCU/hr)	Normal Flow Out (PCU/hr)	Bus Flow Out (PCU/hr)	Tram Flow Out (PCU/hr)
4	4-1		4A/1	4Ax/1	126	126	0	0	327	327	0	0
4	4-2		4B/1	4Bx/1	0	0	0	0	0	0	0	0
4	4-3		4C/1	4Cx/1	327	327	0	0	126	126	0	0

Paths

Local Matrix	Path	Description	Path Items	Calculated Total Flow (PCU/hr)
4	1		4C/1,4Bx/1	0
4	2		4C/1,4Ax/1	327
4	3		4A/1,4Bx/1	0
4	4		4A/1,4Cx/1	126
4	5		4B/1,4Cx/1	0
4	6		4B/1,4Ax/1	0

Normal Path Flows

Local Matrix	Path	Permitted Flow Type	Allocation Type	Percentage (%)	Fixed Flow (PCU/hr)	Calculated Flow (PCU/hr)
4	1	✓	Normal	N/A	N/A	0
4	2	✓	Normal	N/A	N/A	327
4	3	✓	Normal	N/A	N/A	0
4	4	✓	Normal	N/A	N/A	126
4	5	✓	Normal	N/A	N/A	0
4	6	✓	Normal	N/A	N/A	0

Flow Allocation Tool Tables - Local Matrix: 2

Normal Input Flows (PCU/hr)

		To			
		2-1	2-2	2-3	2-4
From	2-1	0	92	242	242
	2-2	24	0	24	39
	2-3	52	7	0	66
	2-4	154	150	65	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Locations

Local Matrix	Location	Name	Entries	Exits	Total Flow In (PCU/hr)	Normal Flow In (PCU/hr)	Bus Flow In (PCU/hr)	Tram Flow In (PCU/hr)	Total Flow Out (PCU/hr)	Normal Flow Out (PCU/hr)	Bus Flow Out (PCU/hr)	Tram Flow Out (PCU/hr)
2	2-1		2A/1	2Ax/1	576	576	0	0	230	230	0	0
2	2-2		2B/1	2Bx/1	87	87	0	0	249	249	0	0
2	2-3		2C/1	2Cx/1	125	125	0	0	331	331	0	0
2	2-4		2D/1	2Dx/1	369	369	0	0	347	347	0	0

Paths

Local Matrix	Path	Description	Path Items	Calculated Total Flow (PCU/hr)
2	1		2A/1,2Bx/1	92
2	2		2A/1,2Cx/1	242
2	3		2A/1,2Dx/1	242
2	4		2B/1,2Cx/1	24
2	5		2B/1,2Dx/1	39
2	6		2B/1,2Ax/1	24
2	7		2C/1,2Bx/1	7
2	8		2C/1,2Dx/1	66
2	9		2C/1,2Ax/1	52
2	10		2D/1,2Bx/1	150
2	11		2D/1,2Cx/1	65
2	12		2D/1,2Ax/1	154

Normal Path Flows

Local Matrix	Path	Permitted Flow Type	Allocation Type	Percentage (%)	Fixed Flow (PCU/hr)	Calculated Flow (PCU/hr)
2	1	✓	Normal	N/A	N/A	92
2	2	✓	Normal	N/A	N/A	242
2	3	✓	Normal	N/A	N/A	242
2	4	✓	Normal	N/A	N/A	24
2	5	✓	Normal	N/A	N/A	39
2	6	✓	Normal	N/A	N/A	24
2	7	✓	Normal	N/A	N/A	7
2	8	✓	Normal	N/A	N/A	66
2	9	✓	Normal	N/A	N/A	52
2	10	✓	Normal	N/A	N/A	150
2	11	✓	Normal	N/A	N/A	65
2	12	✓	Normal	N/A	N/A	154

Flow Allocation Tool Tables - Local Matrix: 3

Normal Input Flows (PCU/hr)

		To		
		3-1	3-2	3-3
From	3-1	0	0	126
	3-2	0	0	0
	3-3	327	0	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Locations

Local Matrix	Location	Name	Entries	Exits	Total Flow In (PCU/hr)	Normal Flow In (PCU/hr)	Bus Flow In (PCU/hr)	Tram Flow In (PCU/hr)	Total Flow Out (PCU/hr)	Normal Flow Out (PCU/hr)	Bus Flow Out (PCU/hr)	Tram Flow Out (PCU/hr)
3	3-1		3A/1	3Ax/1	126	126	0	0	327	327	0	0
3	3-2		3B/1	3Bx/1	0	0	0	0	0	0	0	0
3	3-3		3C/1	3Cx/1	327	327	0	0	126	126	0	0

Paths

Local Matrix	Path	Description	Path Items	Calculated Total Flow (PCU/hr)
3	1		3C/1,3Bx/1	0
3	2		3C/1,3Ax/1	327
3	3		3A/1,3Bx/1	0
3	4		3A/1,3Cx/1	126
3	5		3B/1,3Cx/1	0
3	6		3B/1,3Ax/1	0

Normal Path Flows

Local Matrix	Path	Permitted Flow Type	Allocation Type	Percentage (%)	Fixed Flow (PCU/hr)	Calculated Flow (PCU/hr)
3	1	✓	Normal	N/A	N/A	0
3	2	✓	Normal	N/A	N/A	327
3	3	✓	Normal	N/A	N/A	0
3	4	✓	Normal	N/A	N/A	126
3	5	✓	Normal	N/A	N/A	0
3	6	✓	Normal	N/A	N/A	0

Signal Timings

120s cycle time; 120 steps

Controller Stream

Controller Stream	Name	Description	Gaining Delay Type	Signals Manipulation Mode	Multiple Cycling	Offset Relative To	Offset Valid	Offset Positive (s)	Offset Negative (s)	Auto Redistribute	Optimisation Level	Use Sequence
1	New Wapping St / Mayor St		Absolute	StageBased	Single	1	✓	0	0	✓	Offsets And Green Splits	1
2	East Rd / Sheriff St / New Wapping St		Absolute	StageBased	Single	1	✓	91	-29	✓	Offsets And Green Splits	1

Phases

Controller Stream	Phase	Name	Minimum Green (s)	Maximum Green (s)	Relative Start Displacement (s)	Relative End Displacement (s)	Dummy
1	A	(untitled)	6	300	0	0	
1	B	(untitled)	6	300	0	0	
1	C	(untitled)	6	300	0	0	
1	D	(untitled)	6	300	0	0	
1	E	(untitled)	6	300	0	0	
1	F	(untitled)	6	300	0	0	
1	G	(untitled)	8	300	0	0	
2	A	(untitled)	6	300	0	0	
2	B	(untitled)	6	300	0	0	
2	C	(untitled)	6	300	0	0	
2	D	(untitled)	6	300	0	0	
2	E	(untitled)	3	300	0	0	✓

Library Stages

Controller Stream	Library Stage	Phases In Stage	User Stage Minimum (s)
1	1	A,C	6
1	2	B,D,E,F	6
1	3	G	12
2	1	A,C	1
2	2	B,D	1
2	3	E	1
2	4	A	1
2	5	B	1
2	6	C	1
2	7	D	1

Stage Sequences

Controller Stream	Stage Sequence	Name	Stage IDs	Stage Ends	Multiple Cycling Stage IDs	Multiple Cycling Stage Ends
1	1	(untitled)	1,2,3	86,97,115		
1	2	(untitled)	1,3,2	0,42,82		
2	1	(untitled)	1,2,3	41,81,89		
2	2	(untitled)	1,3,2	0,37,78		

2	3	(untitled)	1,3,2,5	0,30,64,87		
2	4	(untitled)	1,3,7,5	0,28,60,86		
2	5	(untitled)	1,3,4,2	0,27,58,88		
2	6	(untitled)	2,6,3,4	0,30,57,88		
2	7	(untitled)	1,7,3,5	0,30,57,88		
2	8	(untitled)	2,4,6,3	0,31,57,85		
2	9	(untitled)	1,3,5,2	0,30,59,87		
2	10	(untitled)	1,3,2,6	0,30,64,92		

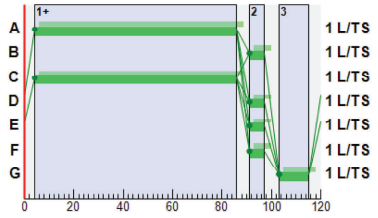
Resultant Stages

Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases In This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
1	1	✓	1	A,C	4	86	82	6	6
1	2	✓	2	B,D,E,F	91	97	6	6	6
1	3	✓	3	G	103	115	12	12	12
2	1	✓	1	A,C	95	41	66	1	6
2	2	✓	2	B,D	46	81	35	1	6
2	3	✓	3	E	86	89	3	1	3

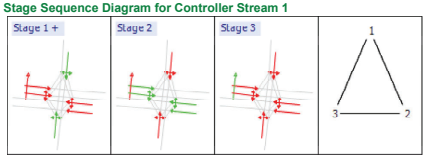
Resultant Phase Green Periods

Controller Stream	Phase	Green Period	Is Base Green Period	Start Time (s)	End Time (s)	Duration (s)
1	A	1	✓	4	86	82
1	B	1	✓	91	97	6
1	C	1	✓	4	86	82
1	D	1	✓	91	97	6
1	E	1	✓	91	97	6
1	F	1	✓	91	97	6
1	G	1	✓	103	115	12
2	A	1	✓	95	41	66
2	B	1	✓	46	81	35
2	C	1	✓	95	41	66
2	D	1	✓	46	81	35
2	E	1	✓	86	89	3

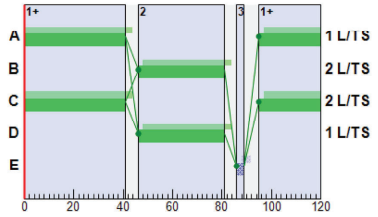
Phase Timings Diagram for Controller Stream 1



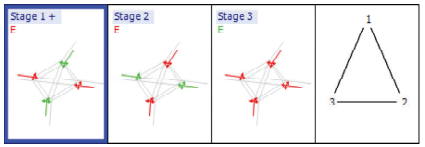
Stage Sequence Diagram for Controller Stream 1



Phase Timings Diagram for Controller Stream 2



Stage Sequence Diagram for Controller Stream 2



Final Prediction Table

Link Results

Link	Name	Major Link	Traffic Node	Controller Stream	Phase	Calculated Flow Entering LTS (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s (per cycle))	Wasted Time Total (s (per cycle))	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Journey Time Per PCU (s)	Mean Delay Per PCU (s)	Mean Stops Per PCU (%)	Mean Max Queue (PCU)	Max End Of Red Queue (PCU)	Delay Weighting (%)	Stop Weighting (%)	Cost Of Penalties (£ per hr)	P.I.
1P P	(untitled)	N/A	1	1	G	1	Unrestricted	12.00	0.00	0	Unrestricted	12.00	0.00	0.00	0.00	0.00	100	100	0.00	0.00
1T1 T	(untitled)	N/A	1	1	E	6	1800	6.00	0.00	6	1475	78.71	54.71	94.59	0.19	0.19	100	100	0.00	1.31
1T1x T	(untitled)	N/A		N/A	N/A	5	Unrestricted	120.00	76.00	0	Unrestricted	24.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
1T2 T	(untitled)	N/A	1	1	F	5	1800	6.00	0.00	5	1790	78.53	54.53	94.44	0.16	0.16	100	100	0.00	1.09
1T2x T	(untitled)	N/A		N/A	N/A	6	Unrestricted	120.00	75.00	0	Unrestricted	24.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00

Traffic Stream Results

Arm	Traffic Stream	Name	Traffic Node	Controller Stream	Phase	Phase2	Calculated Flow Entering LTS (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s (per cycle))	Wasted Time Total (s (per cycle))	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Journey Time Per PCU (s)	Mean Delay Per PCU (s)	Mean Stops Per PCU (%)	Mean Max Queue (PCU)	Max End Of Red Queue (PCU)	Delay Weighting Multiplier (%)	Stop Weighting Multiplier (%)	Cost Of Penalties (£ per hr)	P.I.
1A	1 NB		1	1	A	N/A	323	1751	82.00	0.00	27	238	11.60	4.40	17.39	2.04	1.65	100	100	0.00	6.32
1Ax	1 NB			N/A	N/A	N/A	125	Unrestricted	120.00	22.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
1B	1 NB		1	1	B	N/A	20	1409	6.00	0.00	24	270	84.13	61.09	99.75	0.67	0.67	100	100	0.00	5.07
1Bx	1 NB			N/A	N/A	N/A	57	Unrestricted	120.00	0.00	0	Unrestricted	23.04	0.00	0.00	0.00	N/A	100	100	0.00	0.00
1C	1 NB		1	1	C	N/A	125	1675	82.00	0.00	11	734	10.00	6.40	32.32	1.40	1.29	100	100	0.00	3.66
1Cx	1 NB			N/A	N/A	N/A	282	Unrestricted	120.00	21.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
1D	1 NB		1	1	D	N/A	5	1430	6.00	0.00	6	1402	61.89	55.05	94.32	0.16	0.16	100	100	0.00	1.14
1Dx	1 NB			N/A	N/A	N/A	9	Unrestricted	120.00	9.00	0	Unrestricted	6.84	0.00	0.00	0.00	N/A	100	100	0.00	0.00
2A	1		2	2	A	C	576	1216	66.00	0.00	85	6	40.97	36.77	92.48	18.24 +	10.72	100	100	0.00	90.23
2Ax	1			N/A	N/A	N/A	230	Unrestricted	120.00	0.00	0	Unrestricted	4.20	0.00	0.00	0.00	N/A	100	100	0.00	0.00
2B	1		2	2	B	N/A	87	1190	35.00	0.00	24	269	56.21	33.41	75.36	2.21	2.07	100	100	0.00	12.29
2Bx	1			N/A	N/A	N/A	249	Unrestricted	120.00	0.00	0	Unrestricted	22.80	0.00	0.00	0.00	N/A	100	100	0.00	0.00
2C	1		2	2	C	N/A	125	1667	66.00	0.00	13	570	17.59	12.79	45.00	1.93	1.79	100	100	0.00	7.01
2Cx	1			N/A	N/A	N/A	331	Unrestricted	120.00	7.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
2D	1		2	2	D	B	369	1498	35.00	0.00	82	10	64.32	56.52	105.08	13,15 +	10.38	100	100	0.00	87.13
2Dx	1			N/A	N/A	N/A	347	Unrestricted	120.00	0.00	0	Unrestricted	7.80	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3A	1		3	N/A	N/A	N/A	126	Unrestricted	120.00	8.00	0	Unrestricted	7.20	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3Ax	1			N/A	N/A	N/A	327	Unrestricted	120.00	0.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3B	1		3	N/A	N/A	N/A	0	0	120.00	120.00	0	-100	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3Bx	1			N/A	N/A	N/A	0	Unrestricted	120.00	120.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3C	1		3	N/A	N/A	N/A	327	1800	120.00	0.00	18	395	6.82	0.22	0.00	0.02	N/A	100	100	0.00	0.29
3Cx	1			N/A	N/A	N/A	126	Unrestricted	120.00	6.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4A	1		4	N/A	N/A	N/A	126	Unrestricted	120.00	0.00	0	Unrestricted	6.60	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4Ax	1			N/A	N/A	N/A	327	Unrestricted	120.00	0.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4B	1		4	N/A	N/A	N/A	0	0	120.00	120.00	0	-100	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4Bx	1			N/A	N/A	N/A	0	Unrestricted	120.00	120.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4C	1		4	N/A	N/A	N/A	327	1800	120.00	0.00	18	395	5.02	0.22	0.00	0.02	N/A	100	100	0.00	0.29
4Cx	1			N/A	N/A	N/A	126	Unrestricted	120.00	0.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00

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)
TOTAL	230.16	22.37	10.29	9.97	4.19	201.21	14.62	0.00	215.83
BUSES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TRAMS	2.20	0.31	7.02	0.16	0.00	2.37	0.03	0.00	2.40
OTHER (NORMAL)	227.96	22.06	10.33	9.81	4.19	198.84	14.59	0.00	213.43

- *B = at least one source for this link carries buses*
- *T = at least one source for this link carries trams*
- *P = this link is a pedestrian link*
- *< = adjusted flow warning (upstream links are over-saturated)*
- *! = DOS threshold exceeded*
- *f = average saturation flow for flared link*
- ** = 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 excess queue is greater than 0*
- ***P.I. = PERFORMANCE INDEX***

TRANSYT 14

Version: 14.1.2.315 [26-09-12]

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Tel: +44 (0)1344 770758 E-mail: software@trl.co.uk Web: http://www.trlsoftware.co.uk

Last run: 25/07/2019 12:17:53
Analysis Set used for last run: A2 -

Filename: R043 TRANSYT Model 20190719.t14
Path: J:\R_JOBS\Job-R043\B_Documents\C_Civil\A_CS Reports\4.0 SHD Application for Additional Floors\Traffic\Modelling
Report generation date: 25/07/2019 12:17:57

File summary

File Description

Title	Spencer North
Location	Dublin 1
Site Number	
UTCRegion	
Driving Side	Left
Date	27/03/2018
Version	
Status	
Identifier	
Client	
Jobnumber	R043
Enumerator	GF
Description	

Units

Speed Units	Distance Units	Fuel Economy Units	Fuel Rate Units	Mass Units	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
kph	m	l/100km	l/h	kg	perHour	s	-Hour	perHour

Sorting

Show Names Instead of IDs (For Aimsun)	Sorting Direction	Sorting Type	Ignore Prefixes When Sorting	Link Grouping	Source Grouping
	Ascending	Numerical		Normal	Normal

A2 - : D2 - 2019 Base Year 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)	Cycle Time Used (s)	Total Network Delay (PCU-hr/hr)	Highest DOS (%)	LTSWith Highest DOS	Number Of Oversaturated LTS	Percentage Of Oversaturated LTS (%)	LTSWith Worst Signalised PRC	LTSWith Worst Unsignalised PRC	LTSWith Worst Overall PRC	Network Within Capacity
A2 -	25/07/2019 12:17:40	25/07/2019 12:17:53	17:00	120	7.34	54.48	2A/1	0	0	2A/1	4B/1	4B/1	✓

Analysis Set Details

Name	Description	Demand Set	Include In Report	Locked
		D2	✓	

Demand Set Details

Name	Description	Composite	Demand Sets	Start Time (HH:mm)	Locked
2019 Base Year PM				17:00	

Network Options

Network Timings

Network Cycle Time (s)	Resolution	Number Of Steps	Time Segment Length (min)	Number Of Time Segments	Modelled Time Period (min)
120	1	120	60	1	60

Signals Options

Equal Length Multiple Cycling	Start Displacement (s)	End Displacement (s)	Phase Minimum Broken Penalty (£)	Phase Maximum Broken Penalty (£)	Intergreen Broken Penalty (£)
✓	2	3	10000.00	10000.00	10000.00

Traffic Options

Traffic Model	DOS Threshold (%)	Flow Scaling Factor (%)	Cruise Scaling Factor (%)	Cruise Times Or Speeds	Use Link Stop Weightings	Use Link Delay Weightings	Exclude Pedestrian Links	Random Delay Mode	Type of Vehicle-in-Service	Type Of Random Parameter	PCU Length (m)
Quick PDM	90	100	100	Cruise Speeds	✓	✓		Complex	Uniform (TRANSYT)	Uniform (TRANSYT)	5.75

Bus Parameters

Dispersion Coefficient1	Dispersion Coefficient2	Acceleration (ms^[-2])	Travel Time Coefficient1	Travel Time Coefficient2
70	15	0.47	30	85

Tram Parameters

Dispersion Coefficient1	Dispersion Coefficient2	Acceleration (ms^[-2])	Travel Time Coefficient1	Travel Time Coefficient2
80	20	0.20	40	90

Optimisation Options

Auto Redistribute	Optimisation Type	Optimisation Level	Hill Climb Increments	Use Enhanced Optimisation	Optimisation Order	Locked Green Splits	Full Simulation
✓	Hill Climb (Fast)	Offsets And Green Splits	15,40,-1,15,40,1,-1,1		1,2		

Economics

Unit Of Cost	Monetary Value Of Delay (£ per PCU-hr)	Monetary Value Of Stops (£ per 100 stops)
£	14.20	2.60

Traffic Nodes

Traffic Nodes

Traffic Node	Name	Description
1	New Wapping St / Mayor St	
2	East Rd / Sheriff St / New Wapping St	
3	New Wapping St / South Dev Access	
4	New Wapping St / North Dev Access	

Links

Links

Link	Name	Description	Traffic Node	Length (m)	Traffic Model	Has Restricted Flow	Saturation Flow (PCU/hr)	Is Signal Controlled	Controller Stream	Phase	Phase2 Enabled	Is Give Way	Is Pedestrian	Is Minor Shared	Major Link
1P	(untitled)		1	100.00	[QuickPDM]		N/A	✓	1	G			✓		N/A
1T1	(untitled)		1	100.00	[QuickPDM]	✓	1800	✓	1	E					N/A
1T1x	(untitled)			100.00	[QuickPDM]		N/A		N/A	N/A					N/A
1T2	(untitled)		1	100.00	[QuickPDM]	✓	1800	✓	1	F					N/A
1T2x	(untitled)			100.00	[QuickPDM]		N/A		N/A	N/A					N/A

Modelling

Link	Stop Weighting (%)	Delay Weighting (%)	Exclude From Results Calculation	Max Queue Storage (PCU)	Has Queue Limit	Has Degree Of Saturation Limit
1P	100	100		0.00		
1T1	100	100		0.00		
1T1x	100	100		0.00		
1T2	100	100		0.00		
1T2x	100	100		0.00		

Modelling - Advanced

Link	Normal Dispersal Type	Normal Dispersal Coefficient	Normal Travel Time Coefficient	Initial Queue (PCU)	Point1 Time Step (s)	Point2 Time Step (s)	Type of Vehicle-in-Service	Vehicle-in-Service	Type Of Random Parameter	Random Parameter
1P	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
1T1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
1T1x	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
1T2	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
1T2x	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50

Flows

Link	Total Flow (On Link) (PCU/hr)	Uniform Flow Name	Uniform Flow (Into Link) (PCU/hr)	Upstream Flow (Into Link) (PCU/hr)	Link Sensitivity Multiplier (%)	Cruise Sensitivity Multiplier (%)	Calculated Cruise Speed (kph)	Detectors
1P	1		0	1	100	100	1.00	
1T1	7		0	7	100	100	1.00	
1T1x	6		0	6	100	100	1.00	
1T2	6		0	6	100	100	1.00	
1T2x	7		0	7	100	100	1.00	

Sources - default sources for entry links

Link	Entry Source Traffic Type	Entry Cruise Time (seconds)	Entry Cruise Speed (kph)	Entry Free Running Speed (kph)	Entry Stationary Time (seconds)	Entry Profile Type	Entry DIRECTFlows (PCU/hr)
1P	Normal	12.00	30.00	N/A	N/A	FLAT	1
1T1	Trams	N/A	N/A	15.00	0.00	FLAT	7
1T2	Trams	N/A	N/A	15.00	0.00	FLAT	6

Sources - sources for internal links

Link	Source	Source Type	Source Link	Source Traffic Type	Source Flow (PCU/hr)	Free Running Speed (kph)	Stationary Time (seconds)
1T1x	1	Link	1T2	Trams	6	15.00	0.00
1T2x	1	Link	1T1	Trams	7	15.00	0.00

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic Node
1A	New Wapping Street (North)		1
1Ax			
1B	Mayor Street Upper (East)		1

1Bx			
1C	New Wapping Street (South)		1
1Cx			
1D	Mayor Street Upper (West)		1
1Dx			
2A	East Road		2
2Ax			
2B	Sheriff Street Upper (East)		2
2Bx			
2C	New Wapping Street		2
2Cx			
2D	Sheriff Street Upper (West)		2
2Dx			
3A	New Wapping Street (South)		3
3Ax			
3B	South Dev Access		3
3Bx			
3C	New Wapping Street (North)		3
3Cx			
4A	New Wapping Street (South)		4
4Ax			
4B	North Dev Access		4
4Bx			
4C	New Wapping Street (North)		4
4Cx			

Traffic Streams

Arm	Traffic Stream	Name	Description	Length (m)	Traffic Model	Has Restricted Flow	Saturation Flow Source	Saturation Flow (PCU/hr)	Is Signal Controlled	Controller Stream	Phase	Phase2 Enabled	Phase2	Is Give Way	Traffic Type
1A	1			60.00	[QuickPDM]	✓	SumOfLanes	1800	✓	1	A		N/A	✓	Normal, Bus
1Ax	1			0.00	[QuickPDM]		N/A	N/A		N/A	N/A		N/A		Normal, Bus
1B	1			192.00	[QuickPDM]	✓	SumOfLanes	1800	✓	1	B		N/A	✓	Normal, Bus
1Bx	1			192.00	[QuickPDM]		N/A	N/A		N/A	N/A		N/A		Normal, Bus
1C	1			30.00	[QuickPDM]	✓	SumOfLanes	1800	✓	1	C		N/A	✓	Normal, Bus
1Cx	1			0.00	[QuickPDM]		N/A	N/A		N/A	N/A		N/A		Normal, Bus
1D	1			57.00	[QuickPDM]	✓	SumOfLanes	1800	✓	1	D		N/A	✓	Normal, Bus
1Dx	1			57.00	[QuickPDM]		N/A	N/A		N/A	N/A		N/A		Normal, Bus
2A	1			35.00	[QuickPDM]	✓	SumOfLanes	1800	✓	2	A	✓	C	✓	Normal
2Ax	1			35.00	[QuickPDM]		N/A	N/A		N/A	N/A		N/A		Normal
2B	1			190.00	[QuickPDM]	✓	SumOfLanes	1800	✓	2	B		N/A	✓	Normal
2Bx	1			190.00	[QuickPDM]		N/A	N/A		N/A	N/A		N/A		Normal
2C	1			40.00	[QuickPDM]	✓	SumOfLanes	1800	✓	2	C		N/A	✓	Normal
2Cx	1			0.00	[QuickPDM]		N/A	N/A		N/A	N/A		N/A		Normal
2D	1			65.00	[QuickPDM]	✓	SumOfLanes	1800	✓	2	D	✓	B	✓	Normal
2Dx	1			65.00	[QuickPDM]		N/A	N/A		N/A	N/A		N/A		Normal
3A	1			60.00	[QuickPDM]		N/A	N/A		N/A	N/A		N/A		Normal
3Ax	1			0.00	[QuickPDM]		N/A	N/A		N/A	N/A		N/A		Normal
3B	1			40.00	[QuickPDM]		N/A	N/A		N/A	N/A		N/A	✓	Normal
3Bx	1			40.00	[QuickPDM]		N/A	N/A		N/A	N/A		N/A		Normal
3C	1			55.00	[QuickPDM]		N/A	N/A		N/A	N/A		N/A	✓	Normal
3Cx	1			0.00	[QuickPDM]		N/A	N/A		N/A	N/A		N/A		Normal
4A	1			55.00	[QuickPDM]		N/A	N/A		N/A	N/A		N/A		Normal
4Ax	1			0.00	[QuickPDM]		N/A	N/A		N/A	N/A		N/A		Normal
4B	1			40.00	[QuickPDM]		N/A	N/A		N/A	N/A		N/A	✓	Normal
4Bx	1			40.00	[QuickPDM]		N/A	N/A		N/A	N/A		N/A		Normal
4C	1			40.00	[QuickPDM]		N/A	N/A		N/A	N/A		N/A	✓	Normal
4Cx	1			0.00	[QuickPDM]		N/A	N/A		N/A	N/A		N/A		Normal

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Saturation Flow (PCU/hr)
1A	1	1	(untitled)			1800
1Ax	1	1	(untitled)			1800
1B	1	1	(untitled)			1800
1Bx	1	1	(untitled)			1800
1C	1	1	(untitled)			1800
1Cx	1	1	(untitled)			1800
1D	1	1	(untitled)			1800
1Dx	1	1	(untitled)			1800
2A	1	1	(untitled)			1800
2Ax	1	1	(untitled)			1800
2B	1	1	(untitled)			1800
2Bx	1	1	(untitled)			1800
2C	1	1	(untitled)			1800
2Cx	1	1	(untitled)			1800
2D	1	1	(untitled)			1800
2Dx	1	1	(untitled)			1800
3A	1	1				9999
3Ax	1	1				1800
3B	1	1				1800
3Bx	1	1				1800
3C	1	1				1800
3Cx	1	1				1800
4A	1	1				9999
4Ax	1	1				1800
4B	1	1				1800
4Bx	1	1				1800
4C	1	1				1800

4Cx	1	1				1800

Modelling

Arm	Traffic Stream	Stop Weighting Multiplier (%)	Delay Weighting Multiplier (%)	Exclude From Results Calculation	Max Queue Storage (PCU)	Has Queue Limit	Has Degree Of Saturation Limit
1A	1	100	100		0.00		
1Ax	1	100	100		0.00		
1B	1	100	100		0.00		
1Bx	1	100	100		0.00		
1C	1	100	100		0.00		
1Cx	1	100	100		0.00		
1D	1	100	100		0.00		
1Dx	1	100	100		0.00		
2A	1	100	100		0.00		
2Ax	1	100	100		0.00		
2B	1	100	100		0.00		
2Bx	1	100	100		0.00		
2C	1	100	100		0.00		
2Cx	1	100	100		0.00		
2D	1	100	100		0.00		
2Dx	1	100	100		0.00		
3A	1	100	100		0.00		
3Ax	1	100	100		0.00		
3B	1	100	100		0.00		
3Bx	1	100	100		0.00		
3C	1	100	100		0.00		
3Cx	1	100	100		0.00		
4A	1	100	100		0.00		
4Ax	1	100	100		0.00		
4B	1	100	100		0.00		
4Bx	1	100	100		0.00		
4C	1	100	100		0.00		
4Cx	1	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Normal Dispersal Type	Normal Dispersal Coefficient	Normal Travel Time Coefficient	Initial Queue (PCU)	Point1 Time Step (s)	Point2 Time Step (s)	Type of Vehicle-in-Service	Vehicle-in-Service	Type Of Random Parameter	Random Parameter
1A	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
1Ax	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
1B	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
1Bx	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
1C	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
1Cx	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
1D	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
1Dx	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
2A	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
2Ax	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
2B	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
2Bx	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
2C	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
2Cx	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
2D	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
2Dx	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
3A	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
3Ax	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
3B	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
3Bx	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
3C	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
3Cx	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
4A	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
4Ax	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
4B	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
4Bx	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
4C	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
4Cx	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50

Flows

Arm	Traffic Stream	Total Flow (PCU/hr)	Normal Flow (PCU/hr)	Bus Flow (PCU/hr)	Tram Flow (PCU/hr)	Cruise Sensitivity Multiplier (%)	Calculated Cruise Speed (kph)
1A	1	99	99	0	0	100	1.00
1Ax	1	168	168	0	0	100	1.00
1B	1	10	10	0	0	100	1.00
1Bx	1	25	25	0	0	100	1.00
1C	1	174	174	0	0	100	1.00
1Cx	1	90	90	0	0	100	1.00
1D	1	8	8	0	0	100	1.00
1Dx	1	8	8	0	0	100	1.00
2A	1	182	182	0	0	100	1.00
2Ax	1	419	419	0	0	100	1.00
2B	1	102	102	0	0	100	1.00
2Bx	1	196	196	0	0	100	1.00
2C	1	175	175	0	0	100	1.00
2Cx	1	103	103	0	0	100	1.00
2D	1	470	470	0	0	100	1.00
2Dx	1	211	211	0	0	100	1.00
3A	1	172	172	0	0	100	1.00
3Ax	1	101	101	0	0	100	1.00
3B	1	0	0	0	0	100	1.00
3Bx	1	0	0	0	0	100	1.00
3C	1	101	101	0	0	100	1.00
3Cx	1	172	172	0	0	100	1.00
4A	1	172	172	0	0	100	1.00
4Ax	1	101	101	0	0	100	1.00

4B	1	0	0	0	0	100	1.00
4Bx	1	0	0	0	0	100	1.00
4C	1	101	101	0	0	100	1.00
4Cx	1	172	172	0	0	100	1.00

Normal - Modelling

Arm	Traffic Stream	Stop Weighting (%)	Delay Weighting (%)
1A	1	100	100
1Ax	1	100	100
1B	1	100	100
1Bx	1	100	100
1C	1	100	100
1Cx	1	100	100
1D	1	100	100
1Dx	1	100	100
2A	1	100	100
2Ax	1	100	100
2B	1	100	100
2Bx	1	100	100
2C	1	100	100
2Cx	1	100	100
2D	1	100	100
2Dx	1	100	100
3A	1	100	100
3Ax	1	100	100
3B	1	100	100
3Bx	1	100	100
3C	1	100	100
3Cx	1	100	100
4A	1	100	100
4Ax	1	100	100
4B	1	100	100
4Bx	1	100	100
4C	1	100	100
4Cx	1	100	100

Bus - Modelling

Arm	Traffic Stream	Stationary Time (seconds)	Stop Weighting (%)	Delay Weighting (%)
1A	1	0.00	100	100
1Ax	1	0.00	100	100
1B	1	0.00	100	100
1Bx	1	0.00	100	100
1C	1	0.00	100	100
1Cx	1	0.00	100	100
1D	1	0.00	100	100
1Dx	1	0.00	100	100
2A	1	Buses Not Permitted	Buses Not Permitted	Buses Not Permitted
2Ax	1	Buses Not Permitted	Buses Not Permitted	Buses Not Permitted
2B	1	Buses Not Permitted	Buses Not Permitted	Buses Not Permitted
2Bx	1	Buses Not Permitted	Buses Not Permitted	Buses Not Permitted
2C	1	Buses Not Permitted	Buses Not Permitted	Buses Not Permitted
2Cx	1	Buses Not Permitted	Buses Not Permitted	Buses Not Permitted
2D	1	Buses Not Permitted	Buses Not Permitted	Buses Not Permitted
2Dx	1	Buses Not Permitted	Buses Not Permitted	Buses Not Permitted
3A	1	Buses Not Permitted	Buses Not Permitted	Buses Not Permitted
3Ax	1	Buses Not Permitted	Buses Not Permitted	Buses Not Permitted
3B	1	Buses Not Permitted	Buses Not Permitted	Buses Not Permitted
3Bx	1	Buses Not Permitted	Buses Not Permitted	Buses Not Permitted
3C	1	Buses Not Permitted	Buses Not Permitted	Buses Not Permitted
3Cx	1	Buses Not Permitted	Buses Not Permitted	Buses Not Permitted
4A	1	Buses Not Permitted	Buses Not Permitted	Buses Not Permitted
4Ax	1	Buses Not Permitted	Buses Not Permitted	Buses Not Permitted
4B	1	Buses Not Permitted	Buses Not Permitted	Buses Not Permitted
4Bx	1	Buses Not Permitted	Buses Not Permitted	Buses Not Permitted
4C	1	Buses Not Permitted	Buses Not Permitted	Buses Not Permitted
4Cx	1	Buses Not Permitted	Buses Not Permitted	Buses Not Permitted

Sources - default sources for entries

Arm	Traffic Stream	Normal Cruise Time (seconds)	Normal Cruise Speed (kph)	Bus Free Running Speed (kph)	Tram Free Running Speed (kph)
1B	1	23.04	30.00	15.00	Trams Not Permitted
1C	1	3.60	30.00	15.00	Trams Not Permitted
1D	1	6.84	30.00	15.00	Trams Not Permitted
2A	1	4.20	30.00	Buses Not Permitted	Trams Not Permitted
2B	1	22.80	30.00	Buses Not Permitted	Trams Not Permitted
2D	1	7.80	30.00	Buses Not Permitted	Trams Not Permitted
3B	1	4.80	30.00	Buses Not Permitted	Trams Not Permitted
4B	1	4.80	30.00	Buses Not Permitted	Trams Not Permitted

Sources - sources for internals

Arm	Traffic Stream	Source	Source Type	Source Traffic Stream	Source Total Flow (PCU/hr)	Source Normal Flow (PCU/hr)	Source Bus Flow (PCU/hr)	Source Tram Flow (PCU/hr)	Normal Cruise Time (seconds)	Normal Cruise Speed (kph)	Bus Free Running Speed (kph)	Tram Free Running Speed (kph)
1A	1	1	TrafficStream	3Ax/1	101	0	0	0	7.20	30.00	15.00	Trams Not Permitted
1Ax	1	1	TrafficStream	1D/1	2	2	0	0	1.00	30.00	15.00	Trams Not Permitted
1Ax	1	2	TrafficStream	1B/1	1	1	0	0	1.00	30.00	15.00	Trams Not Permitted
1Ax	1	3	TrafficStream	1C/1	165	165	0	0	1.00	30.00	15.00	Trams Not Permitted
1Bx	1	1	TrafficStream	1D/1	1	1	0	0	23.04	30.00	15.00	Trams Not Permitted
1Bx	1	2	TrafficStream	1C/1	5	5	0	0	23.04	30.00	15.00	Trams Not Permitted
1Bx	1	3	TrafficStream	1A/1	19	19	0	0	23.04	30.00	15.00	Trams Not Permitted
1Cx	1	1	TrafficStream	1D/1	5	5	0	0	1.00	30.00	15.00	Trams Not Permitted
1Cx	1	2	TrafficStream	1B/1	7	7	0	0	1.00	30.00	15.00	Trams Not Permitted

1Cx	1	3	TrafficStream	1A/1	78	78	0	0	1.00	30.00	15.00	Trams Not Permitted
1Dx	1	1	TrafficStream	1B/1	2	2	0	0	6.84	30.00	15.00	Trams Not Permitted
1Dx	1	2	TrafficStream	1C/1	4	4	0	0	6.84	30.00	15.00	Trams Not Permitted
1Dx	1	3	TrafficStream	1A/1	2	2	0	0	6.84	30.00	15.00	Trams Not Permitted
2Ax	1	1	TrafficStream	2C/1	96	96	0	0	4.20	30.00	Buses Not Permitted	Trams Not Permitted
2Ax	1	2	TrafficStream	2D/1	282	282	0	0	4.20	30.00	Buses Not Permitted	Trams Not Permitted
2Ax	1	3	TrafficStream	2B/1	41	41	0	0	4.20	30.00	Buses Not Permitted	Trams Not Permitted
2Bx	1	1	TrafficStream	2A/1	23	23	0	0	22.80	30.00	Buses Not Permitted	Trams Not Permitted
2Bx	1	2	TrafficStream	2C/1	9	9	0	0	22.80	30.00	Buses Not Permitted	Trams Not Permitted
2Bx	1	3	TrafficStream	2D/1	164	164	0	0	22.80	30.00	Buses Not Permitted	Trams Not Permitted
2C	1	1	TrafficStream	4Cx/1	172	0	0	0	4.80	30.00	Buses Not Permitted	Trams Not Permitted
2Cx	1	1	TrafficStream	2A/1	66	66	0	0	1.00	30.00	Buses Not Permitted	Trams Not Permitted
2Cx	1	2	TrafficStream	2D/1	24	24	0	0	1.00	30.00	Buses Not Permitted	Trams Not Permitted
2Cx	1	3	TrafficStream	2B/1	13	13	0	0	1.00	30.00	Buses Not Permitted	Trams Not Permitted
2Dx	1	1	TrafficStream	2A/1	93	93	0	0	7.80	30.00	Buses Not Permitted	Trams Not Permitted
2Dx	1	2	TrafficStream	2C/1	70	70	0	0	7.80	30.00	Buses Not Permitted	Trams Not Permitted
2Dx	1	3	TrafficStream	2B/1	48	48	0	0	7.80	30.00	Buses Not Permitted	Trams Not Permitted
3A	1	1	TrafficStream	1Ax/1	168	0	0	0	7.20	30.00	Buses Not Permitted	Trams Not Permitted
3Ax	1	1	TrafficStream	3B/1	0	0	0	0	1.00	30.00	Buses Not Permitted	Trams Not Permitted
3Ax	1	2	TrafficStream	3C/1	101	101	0	0	1.00	30.00	Buses Not Permitted	Trams Not Permitted
3Bx	1	1	TrafficStream	3A/1	0	0	0	0	4.80	30.00	Buses Not Permitted	Trams Not Permitted
3Bx	1	2	TrafficStream	3C/1	0	0	0	0	4.80	30.00	Buses Not Permitted	Trams Not Permitted
3C	1	1	TrafficStream	4Ax/1	101	0	0	0	6.60	30.00	Buses Not Permitted	Trams Not Permitted
3Cx	1	1	TrafficStream	3A/1	172	172	0	0	1.00	30.00	Buses Not Permitted	Trams Not Permitted
3Cx	1	2	TrafficStream	3B/1	0	0	0	0	1.00	30.00	Buses Not Permitted	Trams Not Permitted
4A	1	1	TrafficStream	3Cx/1	172	0	0	0	6.60	30.00	Buses Not Permitted	Trams Not Permitted
4Ax	1	1	TrafficStream	4B/1	0	0	0	0	1.00	30.00	Buses Not Permitted	Trams Not Permitted
4Ax	1	2	TrafficStream	4C/1	101	101	0	0	1.00	30.00	Buses Not Permitted	Trams Not Permitted
4Bx	1	1	TrafficStream	4A/1	0	0	0	0	4.80	30.00	Buses Not Permitted	Trams Not Permitted
4Bx	1	2	TrafficStream	4C/1	0	0	0	0	4.80	30.00	Buses Not Permitted	Trams Not Permitted
4C	1	1	TrafficStream	2Cx/1	103	0	0	0	4.80	30.00	Buses Not Permitted	Trams Not Permitted
4Cx	1	1	TrafficStream	4A/1	172	172	0	0	1.00	30.00	Buses Not Permitted	Trams Not Permitted
4Cx	1	2	TrafficStream	4B/1	0	0	0	0	1.00	30.00	Buses Not Permitted	Trams Not Permitted

Give Way Data

Arm	Traffic Stream	Opposed Traffic	Use Stop-wise Opposed Turn Model	Visibility Restricted
1A	1	Movement		
1B	1	Movement		
1C	1	Movement		
1D	1	Movement		
2A	1	Movement		
2B	1	Movement		
2C	1	Movement		
2D	1	Movement		
3B	1	Movement		
3C	1	Movement		
4B	1	Movement		
4C	1	Movement		

Give Way Data - Movements

Arm	Traffic Stream	Movement	Destination Traffic Stream	Max Flow (Opposed) (PCU/hr)	Max Flow (Unopposed) (PCU/hr)	Percentage Opposed (%)
1A	1	1	1Dx/1	900	1800	100
1A	1	2	1Bx/1	1799	1800	0
1A	1	3	1Cx/1	1799	1800	0
1B	1	1	1Ax/1	900	1800	100
1B	1	2	1Cx/1	1799	1800	0
1B	1	3	1Dx/1	1799	1800	0
1C	1	1	1Bx/1	900	1800	100
1C	1	2	1Ax/1	1799	1800	0
1C	1	3	1Dx/1	1799	1800	0
1D	1	1	1Cx/1	900	1800	100
1D	1	2	1Ax/1	1799	1800	0
1D	1	3	1Bx/1	1799	1800	0
2A	1	1	2Dx/1	900	1800	100
2A	1	2	2Bx/1	1799	1800	0
2A	1	3	2Cx/1	1799	1800	0
2B	1	1	2Ax/1	900	1800	100
2B	1	2	2Cx/1	1799	1800	0
2B	1	3	2Dx/1	1799	1800	0
2C	1	1	2Bx/1	900	1800	100
2C	1	2	2Ax/1	1799	1800	0
2C	1	3	2Dx/1	1799	1800	0

2D	1	1	2Cx/1	900	1800	100
2D	1	2	2Ax/1	1799	1800	0
2D	1	3	2Bx/1	1799	1800	0
3B	1	1	3Cx/1	637	637	100
3B	1	2	3Ax/1	494	494	100
3C	1	1	3Bx/1	612	612	100
3C	1	2	3Ax/1	1800	1800	100
4B	1	1	4Cx/1	637	637	100
4B	1	2	4Ax/1	494	494	100
4C	1	1	4Bx/1	638	638	100
4C	1	2	4Ax/1	1800	1800	100

Give Way Data - Movements - Conflicts

Arm	Traffic Stream	Movement	Destination Traffic Stream	Description	Controlling Type	Controlling Link	Controlling From Traffic Stream	Controlling To Traffic Stream	Percentage Opposing (%)	Slope Coefficient	Upstream Signals Visible	Conflict Shift	Conflict Duration
1A	1	1	1Dx/1		TrafficStreamMovement	N/A	1C/1	1Ax/1	100	0.26	✓	0	0
1A	1	1	1Dx/1		TrafficStreamMovement	N/A	1C/1	1Dx/1	100	0.26	✓	0	0
1B	1	1	1Ax/1		Link	1T2	N/A	N/A	100	0.26	✓	0	0
1B	1	1	1Ax/1		TrafficStreamMovement	N/A	1D/1	1Bx/1	100	0.26	✓	0	0
1B	1	1	1Ax/1		TrafficStreamMovement	N/A	1D/1	1Ax/1	100	0.26	✓	0	0
1C	1	1	1Bx/1		TrafficStreamMovement	N/A	1A/1	1Cx/1	100	0.26	✓	0	0
1C	1	1	1Bx/1		TrafficStreamMovement	N/A	1A/1	1Bx/1	100	0.26	✓	0	0
1D	1	1	1Cx/1		Link	1T1	N/A	N/A	100	0.26	✓	0	0
1D	1	1	1Cx/1		TrafficStreamMovement	N/A	1B/1	1Dx/1	100	0.26	✓	0	0
1D	1	1	1Cx/1		TrafficStreamMovement	N/A	1B/1	1Cx/1	100	0.26	✓	0	0
2A	1	1	2Dx/1		TrafficStreamMovement	N/A	2C/1	2Ax/1	100	0.26		0	0
2A	1	1	2Dx/1		TrafficStreamMovement	N/A	2C/1	2Dx/1	100	0.26		0	0
2B	1	1	2Ax/1		TrafficStreamMovement	N/A	2D/1	2Bx/1	100	0.26		0	0
2B	1	1	2Ax/1		TrafficStreamMovement	N/A	2D/1	2Ax/1	100	0.26		0	0
2C	1	1	2Bx/1		TrafficStreamMovement	N/A	2A/1	2Cx/1	100	0.26		0	0
2C	1	1	2Bx/1		TrafficStreamMovement	N/A	2A/1	2Bx/1	100	0.26		0	0
2D	1	1	2Cx/1		TrafficStreamMovement	N/A	2B/1	2Dx/1	100	0.26		0	0
2D	1	1	2Cx/1		TrafficStreamMovement	N/A	2B/1	2Cx/1	100	0.26		0	0
3B	1	1	3Cx/1	T-junction opposing flow	TrafficStreamMovement	N/A	3A/1	3Bx/1	100	0.10		0	0
3B	1	1	3Cx/1	T-junction opposing flow	TrafficStreamMovement	N/A	3A/1	3Cx/1	100	0.25		0	0
3B	1	2	3Ax/1	T-junction opposing flow	TrafficStreamMovement	N/A	3A/1	3Bx/1	100	0.09		0	0
3B	1	2	3Ax/1	T-junction opposing flow	TrafficStreamMovement	N/A	3A/1	3Cx/1	100	0.23		0	0
3B	1	2	3Ax/1	T-junction opposing flow	TrafficStreamMovement	N/A	3C/1	3Ax/1	100	0.14		0	0
3B	1	2	3Ax/1	T-junction opposing flow	TrafficStreamMovement	N/A	3C/1	3Bx/1	100	0.32		0	0
3C	1	1	3Bx/1	T-junction opposing flow	TrafficStreamMovement	N/A	3A/1	3Bx/1	100	0.24		0	0
3C	1	1	3Bx/1	T-junction opposing flow	TrafficStreamMovement	N/A	3A/1	3Cx/1	100	0.24		0	0
4B	1	1	4Cx/1	T-junction opposing flow	TrafficStreamMovement	N/A	4A/1	4Bx/1	100	0.10		0	0
4B	1	1	4Cx/1	T-junction opposing flow	TrafficStreamMovement	N/A	4A/1	4Cx/1	100	0.25		0	0
4B	1	2	4Ax/1	T-junction opposing flow	TrafficStreamMovement	N/A	4A/1	4Bx/1	100	0.09		0	0
4B	1	2	4Ax/1	T-junction opposing flow	TrafficStreamMovement	N/A	4A/1	4Cx/1	100	0.23		0	0
4B	1	2	4Ax/1	T-junction opposing flow	TrafficStreamMovement	N/A	4C/1	4Ax/1	100	0.14		0	0
4B	1	2	4Ax/1	T-junction opposing flow	TrafficStreamMovement	N/A	4C/1	4Bx/1	100	0.32		0	0
4C	1	1	4Bx/1	T-junction opposing flow	TrafficStreamMovement	N/A	4A/1	4Bx/1	100	0.25		0	0
4C	1	1	4Bx/1	T-junction opposing flow	TrafficStreamMovement	N/A	4A/1	4Cx/1	100	0.25		0	0

T-Junctions

T- Junctions

T-Junction	Name	Description	Auto Assign Priority	Type	Traffic direction on Arm A	Entry AB	Entry AC	Exit A	Traffic direction on Arm B	Entry BA	Entry BC	Exit B	Traffic direction on Arm C	Entry CA	Entry CB	Exit C	Calculate Slope and Intercept
3	Dev Access South		✓	TrafficStream	Two-Way	3A/1	3A/1	3Ax/1	Two-Way	3B/1	3B/1	3Bx/1	Two-Way	3C/1	3C/1	3Cx/1	✓
4	Dev Access North		✓	TrafficStream	Two-Way	4A/1	4A/1	4Ax/1	Two-Way	4B/1	4B/1	4Bx/1	Two-Way	4C/1	4C/1	4Cx/1	✓

T- Junction Majors

T-Junction	Total Carriageway Width (m)	Kerbed Central Reserve Width (m)	Width for C-B traffic (m)	Visibility for C-B traffic (m)
3	6.00	0.00	2.20	65.00
4	6.00	0.00	2.20	110.00

T- Junction Minors

T-Junction	B-C Lane Width (m)	B-A Lane Width (m)	B-C Visibility (m)	B-A Visibility (m)
3	3.00	3.00	20.00	20.00
4	3.00	3.00	20.00	20.00

T- Junction Slope Intercept

T-Junction	BCIntercept (PCU/hr)	BC- ABSlope	BC- ACSlope	BAIntercept (PCU/hr)	BA- ABSlope	BA- ACSlope	BA- CASlope	BA- CBSlope	CBIntercept (PCU/hr)	CB- ABSlope	CB- ACSlope
3	637	0.10	0.25	494	0.09	0.23	0.14	0.32	612	0.24	0.24
4	637	0.10	0.25	494	0.09	0.23	0.14	0.32	638	0.25	0.25

Flow Allocation Tool Tables - Local Matrix: 1

Normal Input Flows (PCU/hr)

		To			
		1-1	1-2	1-3	1-4
From	1-1	0	19	78	2
	1-2	1	0	7	2
	1-3	165	5	0	4
	1-4	2	1	5	0

Bus Input Flows not shown as they are blank.

Tram Input Flows (PCU/hr)

		To			
		1-1	1-2	1-3	1-4
From	1-1	0	0	0	0
	1-2	0	0	0	7
	1-3	0	0	0	0
	1-4	0	6	0	0

Locations

Local Matrix	Location	Name	Entries	Exits	Total Flow In (PCU/hr)	Normal Flow In (PCU/hr)	Bus Flow In (PCU/hr)	Tram Flow In (PCU/hr)	Total Flow Out (PCU/hr)	Normal Flow Out (PCU/hr)	Bus Flow Out (PCU/hr)	Tram Flow Out (PCU/hr)
1	1-1		1A/1	1Ax/1	99	99	0	0	168	168	0	0
1	1-2		1B/1,1T1	1Bx/1,1T1x	17	10	0	7	31	25	0	6
1	1-3		1C/1	1Cx/1	174	174	0	0	90	90	0	0
1	1-4		1D/1,1T2	1Dx/1,1T2x	14	8	0	6	15	8	0	7

Paths

Local Matrix	Path	Description	Path Items	Calculated Total Flow (PCU/hr)
1	1		1D/1,1Ax/1	2
1	2		1D/1,1Bx/1	1
1	3		1D/1,1Cx/1	5
1	4		1T2,1T1x	6
1	5		1A/1,1Bx/1	19
1	6		1A/1,1Cx/1	78
1	7		1A/1,1Dx/1	2
1	8		1B/1,1Ax/1	1
1	9		1B/1,1Cx/1	7
1	10		1B/1,1Dx/1	2
1	11		1T1,1T2x	7
1	12		1C/1,1Ax/1	165
1	13		1C/1,1Bx/1	5
1	14		1C/1,1Dx/1	4

Normal Path Flows

Local Matrix	Path	Permitted Flow Type	Allocation Type	Percentage (%)	Fixed Flow (PCU/hr)	Calculated Flow (PCU/hr)
1	1	✓	Normal	N/A	N/A	2
1	2	✓	Normal	N/A	N/A	1
1	3	✓	Normal	N/A	N/A	5
1	5	✓	Normal	N/A	N/A	19
1	6	✓	Normal	N/A	N/A	78
1	7	✓	Normal	N/A	N/A	2
1	8	✓	Normal	N/A	N/A	1
1	9	✓	Normal	N/A	N/A	7
1	10	✓	Normal	N/A	N/A	2
1	12	✓	Normal	N/A	N/A	165
1	13	✓	Normal	N/A	N/A	5
1	14	✓	Normal	N/A	N/A	4

Bus Path Flows

Local Matrix	Path	Permitted Flow Type	Allocation Type	Percentage (%)	Fixed Flow (PCU/hr)	Calculated Flow (PCU/hr)
1	1	✓	Disabled	N/A	N/A	0
1	2	✓	Disabled	N/A	N/A	0
1	3	✓	Disabled	N/A	N/A	0
1	5	✓	Disabled	N/A	N/A	0
1	6	✓	Disabled	N/A	N/A	0
1	7	✓	Disabled	N/A	N/A	0
1	8	✓	Disabled	N/A	N/A	0
1	9	✓	Disabled	N/A	N/A	0
1	10	✓	Disabled	N/A	N/A	0
1	12	✓	Disabled	N/A	N/A	0
1	13	✓	Disabled	N/A	N/A	0
1	14	✓	Disabled	N/A	N/A	0

Tram Path Flows

Local Matrix	Path	Permitted Flow Type	Allocation Type	Percentage (%)	Fixed Flow (PCU/hr)	Calculated Flow (PCU/hr)
1	4	✓	Normal	N/A	N/A	6
1	11	✓	Normal	N/A	N/A	7

Flow Allocation Tool Tables - Local Matrix: 4

Normal Input Flows (PCU/hr)

		To		
		4-1	4-2	4-3
From	4-1	0	0	172
	4-2	0	0	0
	4-3	101	0	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Locations

Local Matrix	Location	Name	Entries	Exits	Total Flow In (PCU/hr)	Normal Flow In (PCU/hr)	Bus Flow In (PCU/hr)	Tram Flow In (PCU/hr)	Total Flow Out (PCU/hr)	Normal Flow Out (PCU/hr)	Bus Flow Out (PCU/hr)	Tram Flow Out (PCU/hr)
4	4-1		4A/1	4Ax/1	172	172	0	0	101	101	0	0
4	4-2		4B/1	4Bx/1	0	0	0	0	0	0	0	0
4	4-3		4C/1	4Cx/1	101	101	0	0	172	172	0	0

Paths

Local Matrix	Path	Description	Path Items	Calculated Total Flow (PCU/hr)
4	1		4C/1,4Bx/1	0
4	2		4C/1,4Ax/1	101
4	3		4A/1,4Bx/1	0
4	4		4A/1,4Cx/1	172
4	5		4B/1,4Cx/1	0
4	6		4B/1,4Ax/1	0

Normal Path Flows

Local Matrix	Path	Permitted Flow Type	Allocation Type	Percentage (%)	Fixed Flow (PCU/hr)	Calculated Flow (PCU/hr)
4	1	✓	Normal	N/A	N/A	0
4	2	✓	Normal	N/A	N/A	101
4	3	✓	Normal	N/A	N/A	0
4	4	✓	Normal	N/A	N/A	172
4	5	✓	Normal	N/A	N/A	0
4	6	✓	Normal	N/A	N/A	0

Flow Allocation Tool Tables - Local Matrix: 2

Normal Input Flows (PCU/hr)

		To			
		2-1	2-2	2-3	2-4
From	2-1	0	23	66	93
	2-2	41	0	13	48
	2-3	96	9	0	70
	2-4	282	164	24	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Locations

Local Matrix	Location	Name	Entries	Exits	Total Flow In (PCU/hr)	Normal Flow In (PCU/hr)	Bus Flow In (PCU/hr)	Tram Flow In (PCU/hr)	Total Flow Out (PCU/hr)	Normal Flow Out (PCU/hr)	Bus Flow Out (PCU/hr)	Tram Flow Out (PCU/hr)
2	2-1		2A/1	2Ax/1	182	182	0	0	419	419	0	0
2	2-2		2B/1	2Bx/1	102	102	0	0	196	196	0	0
2	2-3		2C/1	2Cx/1	175	175	0	0	103	103	0	0
2	2-4		2D/1	2Dx/1	470	470	0	0	211	211	0	0

Paths

Local Matrix	Path	Description	Path Items	Calculated Total Flow (PCU/hr)
2	1		2A/1,2Bx/1	23
2	2		2A/1,2Cx/1	66
2	3		2A/1,2Dx/1	93
2	4		2B/1,2Cx/1	13
2	5		2B/1,2Dx/1	48
2	6		2B/1,2Ax/1	41
2	7		2C/1,2Bx/1	9
2	8		2C/1,2Dx/1	70
2	9		2C/1,2Ax/1	96
2	10		2D/1,2Bx/1	164
2	11		2D/1,2Cx/1	24
2	12		2D/1,2Ax/1	282

Normal Path Flows

Local Matrix	Path	Permitted Flow Type	Allocation Type	Percentage (%)	Fixed Flow (PCU/hr)	Calculated Flow (PCU/hr)
2	1	✓	Normal	N/A	N/A	23
2	2	✓	Normal	N/A	N/A	66
2	3	✓	Normal	N/A	N/A	93
2	4	✓	Normal	N/A	N/A	13
2	5	✓	Normal	N/A	N/A	48
2	6	✓	Normal	N/A	N/A	41
2	7	✓	Normal	N/A	N/A	9
2	8	✓	Normal	N/A	N/A	70
2	9	✓	Normal	N/A	N/A	96
2	10	✓	Normal	N/A	N/A	164
2	11	✓	Normal	N/A	N/A	24
2	12	✓	Normal	N/A	N/A	282

Flow Allocation Tool Tables - Local Matrix: 3

Normal Input Flows (PCU/hr)

		To		
		3-1	3-2	3-3
From	3-1	0	0	172
	3-2	0	0	0
	3-3	101	0	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Locations

Local Matrix	Location	Name	Entries	Exits	Total Flow In (PCU/hr)	Normal Flow In (PCU/hr)	Bus Flow In (PCU/hr)	Tram Flow In (PCU/hr)	Total Flow Out (PCU/hr)	Normal Flow Out (PCU/hr)	Bus Flow Out (PCU/hr)	Tram Flow Out (PCU/hr)
3	3-1		3A/1	3Ax/1	172	172	0	0	101	101	0	0
3	3-2		3B/1	3Bx/1	0	0	0	0	0	0	0	0
3	3-3		3C/1	3Cx/1	101	101	0	0	172	172	0	0

Paths

Local Matrix	Path	Description	Path Items	Calculated Total Flow (PCU/hr)
3	1		3C/1,3Bx/1	0
3	2		3C/1,3Ax/1	101
3	3		3A/1,3Bx/1	0
3	4		3A/1,3Cx/1	172
3	5		3B/1,3Cx/1	0
3	6		3B/1,3Ax/1	0

Normal Path Flows

Local Matrix	Path	Permitted Flow Type	Allocation Type	Percentage (%)	Fixed Flow (PCU/hr)	Calculated Flow (PCU/hr)
3	1	✓	Normal	N/A	N/A	0
3	2	✓	Normal	N/A	N/A	101
3	3	✓	Normal	N/A	N/A	0
3	4	✓	Normal	N/A	N/A	172
3	5	✓	Normal	N/A	N/A	0
3	6	✓	Normal	N/A	N/A	0

Signal Timings

120s cycle time; 120 steps

Controller Stream

Controller Stream	Name	Description	Gaining Delay Type	Signals Manipulation Mode	Multiple Cycling	Offset Relative To	Offset Valid	Offset Positive (s)	Offset Negative (s)	Auto Redistribute	Optimisation Level	Use Sequence
1	New Wapping St / Mayor St		Absolute	StageBased	Single	1	✓	0	0	✓	Offsets And Green Splits	1
2	East Rd / Sheriff St / New Wapping St		Absolute	StageBased	Single	1	✓	22	-98	✓	Offsets And Green Splits	1

Phases

Controller Stream	Phase	Name	Minimum Green (s)	Maximum Green (s)	Relative Start Displacement (s)	Relative End Displacement (s)	Dummy
1	A	(untitled)	6	300	0	0	
1	B	(untitled)	6	300	0	0	
1	C	(untitled)	6	300	0	0	
1	D	(untitled)	6	300	0	0	
1	E	(untitled)	6	300	0	0	
1	F	(untitled)	6	300	0	0	
1	G	(untitled)	8	300	0	0	
2	A	(untitled)	6	300	0	0	
2	B	(untitled)	6	300	0	0	
2	C	(untitled)	6	300	0	0	
2	D	(untitled)	6	300	0	0	
2	E	(untitled)	3	300	0	0	✓

Library Stages

Controller Stream	Library Stage	Phases In Stage	User Stage Minimum (s)
1	1	A,C	6
1	2	B,D,E,F	6
1	3	G	12
2	1	A,C	1
2	2	B,D	1
2	3	E	1
2	4	A	1
2	5	B	1
2	6	C	1
2	7	D	1

Stage Sequences

Controller Stream	Stage Sequence	Name	Stage IDs	Stage Ends	Multiple Cycling Stage IDs	Multiple Cycling Stage Ends
1	1	(untitled)	1,2,3	31,46,64		
1	2	(untitled)	1,3,2	0,42,82		
2	1	(untitled)	1,2,3	12,81,89		
2	2	(untitled)	1,3,2	0,37,78		

2	3	(untitled)	1,3,2,5	0,30,64,87		
2	4	(untitled)	1,3,7,5	0,28,60,86		
2	5	(untitled)	1,3,4,2	0,27,58,88		
2	6	(untitled)	2,6,3,4	0,30,57,88		
2	7	(untitled)	1,7,3,5	0,30,57,88		
2	8	(untitled)	2,4,6,3	0,31,57,85		
2	9	(untitled)	1,3,5,2	0,30,59,87		
2	10	(untitled)	1,3,2,6	0,30,64,92		

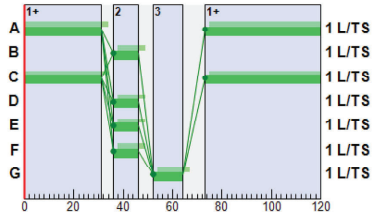
Resultant Stages

Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases In This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
1	1	✓	1	A,C	73	31	78	6	6
1	2	✓	2	B,D,E,F	36	46	10	6	6
1	3	✓	3	G	52	64	12	12	12
2	1	✓	1	A,C	95	12	37	1	6
2	2	✓	2	B,D	17	81	64	1	6
2	3	✓	3	E	86	89	3	1	3

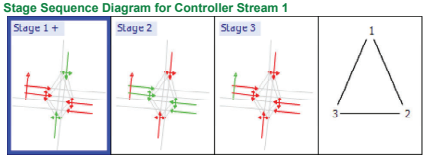
Resultant Phase Green Periods

Controller Stream	Phase	Green Period	Is Base Green Period	Start Time (s)	End Time (s)	Duration (s)
1	A	1	✓	73	31	78
1	B	1	✓	36	46	10
1	C	1	✓	73	31	78
1	D	1	✓	36	46	10
1	E	1	✓	36	46	10
1	F	1	✓	36	46	10
1	G	1	✓	52	64	12
2	A	1	✓	95	12	37
2	B	1	✓	17	81	64
2	C	1	✓	95	12	37
2	D	1	✓	17	81	64
2	E	1	✓	86	89	3

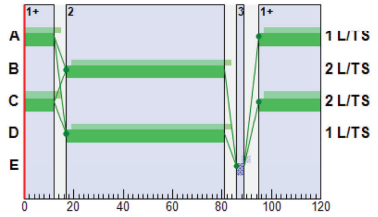
Phase Timings Diagram for Controller Stream 1



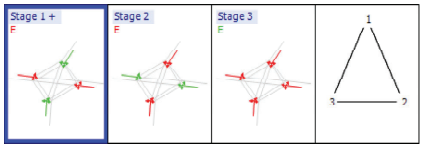
Stage Sequence Diagram for Controller Stream 1



Phase Timings Diagram for Controller Stream 2



Stage Sequence Diagram for Controller Stream 2



Final Prediction Table

Link Results

Link	Name	Major Link	Traffic Node	Controller Stream	Phase	Calculated Flow Entering LTS (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s (per cycle))	Wasted Time Total (s (per cycle))	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Journey Time Per PCU (s)	Mean Delay Per PCU (s)	Mean Stops Per PCU (%)	Mean Max Queue (PCU)	Max End Of Red Queue (PCU)	Delay Weighting (%)	Stop Weighting (%)	Cost Of Penalties (£ per hr)	P.I.
1P P	(untitled)	N/A	1	1	G	1	Unrestricted	12.00	0.00	0	Unrestricted	12.00	0.00	0.00	0.00	0.00	100	100	0.00	0.00
1T1 T	(untitled)	N/A	1	1	E	7	1800	10.00	0.00	4	2021	74.44	50.44	90.80	0.21	0.21	100	100	0.00	1.41
1T1x T	(untitled)	N/A		N/A	N/A	6	Unrestricted	120.00	63.00	0	Unrestricted	24.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
1T2 T	(untitled)	N/A	1	1	F	6	1800	10.00	0.00	4	2375	74.37	50.37	90.74	0.18	0.18	100	100	0.00	1.21
1T2x T	(untitled)	N/A		N/A	N/A	7	Unrestricted	120.00	63.00	0	Unrestricted	24.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00

Traffic Stream Results

Arm	Traffic Stream	Name	Traffic Node	Controller Stream	Phase	Phase2	Calculated Flow Entering LTS (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s (per cycle))	Wasted Time Total (s (per cycle))	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Journey Time Per PCU (s)	Mean Delay Per PCU (s)	Mean Stops Per PCU (%)	Mean Max Queue (PCU)	Max End Of Red Queue (PCU)	Delay Weighting Multiplier (%)	Stop Weighting Multiplier (%)	Cost Of Penalties (£ per hr)	P.I.
1A	1 NB		1	1	A	N/A	99	1757	78.00	0.00	9	952	13.93	6.73	30.06	1.01	0.98	100	100	0.00	3.00
1Ax	1 NB			N/A	N/A	N/A	168	Unrestricted	120.00	22.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
1B	1 NB		1	1	B	N/A	10	1626	10.00	0.00	7	1241	73.87	50.83	90.57	0.31	0.31	100	100	0.00	2.12
1Bx	1 NB			N/A	N/A	N/A	25	Unrestricted	120.00	0.00	0	Unrestricted	23.04	0.00	0.00	0.00	N/A	100	100	0.00	0.00
1C	1 NB		1	1	C	N/A	174	1744	78.00	0.00	15	494	11.70	8.10	36.71	2.19	2.00	100	100	0.00	6.36
1Cx	1 NB			N/A	N/A	N/A	90	Unrestricted	120.00	21.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
1D	1 NB		1	1	D	N/A	8	1059	10.00	0.00	8	993	58.73	51.89	92.06	0.25	0.25	100	100	0.00	1.73
1Dx	1 NB			N/A	N/A	N/A	8	Unrestricted	120.00	10.00	0	Unrestricted	6.84	0.00	0.00	0.00	N/A	100	100	0.00	0.00
2A	1		2	2	A	C	182	1055	37.00	0.00	54	65	45.88	41.68	87.97	5.43	4.47	100	100	0.00	31.93
2Ax	1			N/A	N/A	N/A	419	Unrestricted	120.00	0.00	0	Unrestricted	4.20	0.00	0.00	0.00	N/A	100	100	0.00	0.00
2B	1		2	2	B	N/A	102	1078	64.00	0.00	17	415	37.76	14.96	51.06	1.78	1.58	100	100	0.00	6.67
2Bx	1			N/A	N/A	N/A	196	Unrestricted	120.00	0.00	0	Unrestricted	22.80	0.00	0.00	0.00	N/A	100	100	0.00	0.00
2C	1		2	2	C	N/A	175	1697	37.00	0.00	33	176	30.59	25.79	49.73	3.38	2.43	100	100	0.00	18.89
2Cx	1			N/A	N/A	N/A	103	Unrestricted	120.00	7.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
2D	1		2	2	D	B	470	1707	64.00	0.00	51	77	27.25	19.45	62.94	10.05	7.44	100	100	0.00	39.76
2Dx	1			N/A	N/A	N/A	211	Unrestricted	120.00	0.00	0	Unrestricted	7.80	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3A	1		3	N/A	N/A	N/A	172	Unrestricted	120.00	8.00	0	Unrestricted	7.20	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3Ax	1			N/A	N/A	N/A	101	Unrestricted	120.00	0.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3B	1		3	N/A	N/A	N/A	0	0	120.00	120.00	0	-100	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3Bx	1			N/A	N/A	N/A	0	Unrestricted	120.00	120.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3C	1		3	N/A	N/A	N/A	101	1800	120.00	0.00	6	1504	6.66	0.08	0.00	0.00	N/A	100	100	0.00	0.02
3Cx	1			N/A	N/A	N/A	172	Unrestricted	120.00	7.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4A	1		4	N/A	N/A	N/A	172	Unrestricted	120.00	2.00	0	Unrestricted	6.60	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4Ax	1			N/A	N/A	N/A	101	Unrestricted	120.00	0.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4B	1		4	N/A	N/A	N/A	0	0	120.00	120.00	0	-100	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4Bx	1			N/A	N/A	N/A	0	Unrestricted	120.00	120.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4C	1		4	N/A	N/A	N/A	101	1800	120.00	0.00	6	1504	4.86	0.08	0.00	0.00	N/A	100	100	0.00	0.02
4Cx	1			N/A	N/A	N/A	172	Unrestricted	120.00	2.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00

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)
TOTAL	179.79	13.67	13.15	6.63	0.71	104.25	8.88	0.00	113.13
BUSES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TRAMS	2.60	0.36	7.32	0.18	0.00	2.58	0.04	0.00	2.62
OTHER (NORMAL)	177.19	13.32	13.30	6.45	0.71	101.67	8.84	0.00	110.51

- *B = at least one source for this link carries buses*
- *T = at least one source for this link carries trams*
- *P = this link is a pedestrian link*
- *< = adjusted flow warning (upstream links are over-saturated)*
- *! = DOS threshold exceeded*
- *f = average saturation flow for flared link*
- ** = 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 excess queue is greater than 0*
- ***P.I. = PERFORMANCE INDEX***

TRANSYT 14

Version: 14.1.2.315 [26-09-12]

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Last run: 25/07/2019 12:18:58
Analysis Set used for last run: A3 -

Filename: R043 TRANSYT Model 20190719.t14
Path: J:\R_JOBS\Job-R043\B_Documents\C_Civil\A_CS Reports\4.0 SHD Application for Additional Floors\Traffic\Modelling
Report generation date: 25/07/2019 12:19:15

File summary

File Description

Title	Spencer North
Location	Dublin 1
Site Number	
UTCRegion	
Driving Side	Left
Date	27/03/2018
Version	
Status	
Identifier	
Client	
Jobnumber	R043
Enumerator	GF
Description	

Units

Speed Units	Distance Units	Fuel Economy Units	Fuel Rate Units	Mass Units	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
kph	m	l/100km	l/h	kg	perHour	s	-Hour	perHour

Sorting

Show Names Instead of IDs (For Aimsun)	Sorting Direction	Sorting Type	Ignore Prefixes When Sorting	Link Grouping	Source Grouping
	Ascending	Numerical		Normal	Normal

A3 - : D3 - 2022 No Dev 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)	Cycle Time Used (s)	Total Network Delay (PCU-hr/hr)	Highest DOS (%)	LTSWith Highest DOS	Number Of Oversaturated LTS	Percentage Of Oversaturated LTS (%)	LTSWith Worst Signalised PRC	LTSWith Worst Unsignalised PRC	LTSWith Worst Overall PRC	Network Within Capacity
A3 -	25/07/2019 12:18:47	25/07/2019 12:18:58	07:45	120	22.62	95.09	2A/1	2	6	2A/1	4B/1	4B/1	

Signal Timings

120s cycle time; 120 steps

Controller Stream

Controller Stream	Name	Description	Gaining Delay Type	Signals Manipulation Mode	Multiple Cycling	Offset Relative To	Offset Valid	Offset Positive (s)	Offset Negative (s)	Auto Redistribute	Optimisation Level	Use Sequence
1	New Wapping St / Mayor St		Absolute	StageBased	Single	1	✓	0	0	✓	Offsets And Green Splits	1
2	East Rd / Sheriff St / New Wapping St		Absolute	StageBased	Single	1	✓	92	-28	✓	Offsets And Green Splits	1

Phases

Controller Stream	Phase	Name	Minimum Green (s)	Maximum Green (s)	Relative Start Displacement (s)	Relative End Displacement (s)	Dummy
1	A	(untitled)	6	300	0	0	
1	B	(untitled)	6	300	0	0	
1	C	(untitled)	6	300	0	0	
1	D	(untitled)	6	300	0	0	
1	E	(untitled)	6	300	0	0	
1	F	(untitled)	6	300	0	0	
1	G	(untitled)	8	300	0	0	
2	A	(untitled)	6	300	0	0	
2	B	(untitled)	6	300	0	0	
2	C	(untitled)	6	300	0	0	
2	D	(untitled)	6	300	0	0	
2	E	(untitled)	3	300	0	0	✓

Library Stages

Controller Stream	Library Stage	Phases In Stage	User Stage Minimum (s)
1	1	A,C	6
1	2	B,D,E,F	6
1	3	G	12
2	1	A,C	1
2	2	B,D	1
2	3	E	1
2	4	A	1
2	5	B	1
2	6	C	1
2	7	D	1

Stage Sequences

Controller Stream	Stage Sequence	Name	Stage IDs	Stage Ends	Multiple Cycling Stage IDs	Multiple Cycling Stage Ends
1	1	(untitled)	1,2,3	85,96,114		
1	2	(untitled)	1,3,2	0,42,82		
2	1	(untitled)	1,2,3	41,81,89		
2	2	(untitled)	1,3,2	0,37,78		
2	3	(untitled)	1,3,2,5	0,30,64,87		
2	4	(untitled)	1,3,7,5	0,28,60,86		
2	5	(untitled)	1,3,4,2	0,27,58,88		
2	6	(untitled)	2,6,3,4	0,30,57,88		
2	7	(untitled)	1,7,3,5	0,30,57,88		
2	8	(untitled)	2,4,6,3	0,31,57,85		
2	9	(untitled)	1,3,5,2	0,30,59,87		
2	10	(untitled)	1,3,2,6	0,30,64,92		

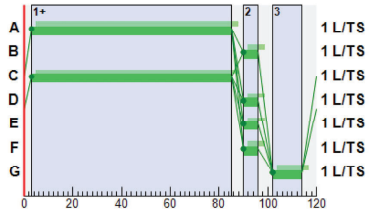
Resultant Stages

Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases In This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
1	1	✓	1	A,C	3	85	82	6	6
1	2	✓	2	B,D,E,F	90	96	6	6	6
1	3	✓	3	G	102	114	12	12	12
2	1	✓	1	A,C	95	41	66	1	6
2	2	✓	2	B,D	46	81	35	1	6
2	3	✓	3	E	86	89	3	1	3

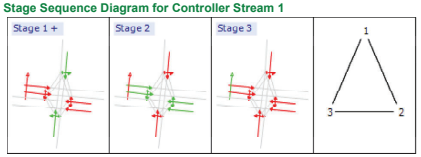
Resultant Phase Green Periods

Controller Stream	Phase	Green Period	Is Base Green Period	Start Time (s)	End Time (s)	Duration (s)
1	A	1	✓	3	85	82
1	B	1	✓	90	96	6
1	C	1	✓	3	85	82
1	D	1	✓	90	96	6
1	E	1	✓	90	96	6
1	F	1	✓	90	96	6
1	G	1	✓	102	114	12
2	A	1	✓	95	41	66
2	B	1	✓	46	81	35
2	C	1	✓	95	41	66
2	D	1	✓	46	81	35
2	E	1	✓	86	89	3

Phase Timings Diagram for Controller Stream 1

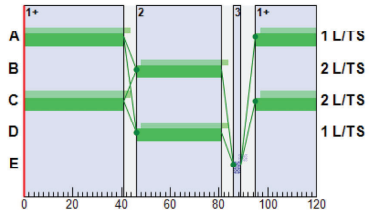


Stage Sequence Diagram for Controller Stream 1

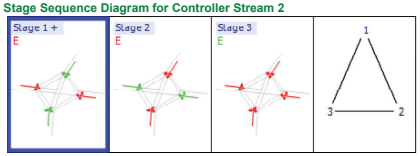


Phase Timings Diagram for Controller Stream 2

R043 TRANSYT Outputs



Stage Sequence Diagram for Controller Stream 2



Final Prediction Table

Link Results

Link	Name	Major Link	Traffic Node	Controller Stream	Phase	Calculated Flow Entering LTS (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s (per cycle))	Wasted Time Total (s (per cycle))	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Journey Time Per PCU (s)	Mean Delay Per PCU (s)	Mean Stops Per PCU (%)	Mean Max Queue (PCU)	Max End Of Red Queue (PCU)	Delay Weighting (%)	Stop Weighting (%)	Cost Of Penalties (£ per hr)	P.I.
1P P	(untitled)	N/A	1	1	G	1	Unrestricted	12.00	0.00	0	Unrestricted	12.00	0.00	0.00	0.00	0.00	100	100	0.00	0.00
1T1 T	(untitled)	N/A	1	1	E	6	1800	6.00	0.00	6	1475	78.71	54.71	94.59	0.19	0.19	100	100	0.00	1.31
1T1x T	(untitled)	N/A		N/A	N/A	5	Unrestricted	120.00	76.00	0	Unrestricted	24.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
1T2 T	(untitled)	N/A	1	1	F	5	1800	6.00	0.00	5	1790	78.53	54.53	94.44	0.16	0.16	100	100	0.00	1.09
1T2x T	(untitled)	N/A		N/A	N/A	6	Unrestricted	120.00	75.00	0	Unrestricted	24.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00

Traffic Stream Results

Arm	Traffic Stream	Name	Traffic Node	Controller Stream	Phase	Phase2	Calculated Flow Entering LTS (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s (per cycle))	Wasted Time Total (s (per cycle))	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Journey Time Per PCU (s)	Mean Delay Per PCU (s)	Mean Stops Per PCU (%)	Mean Max Queue (PCU)	Max End Of Red Queue (PCU)	Delay Weighting Multiplier (%)	Stop Weighting Multiplier (%)	Cost Of Penalties (£ per hr)	P.I.
1A	1 NB		1	1	A	N/A	437	1763	82.00	0.00	36	151	12.26	5.06	19.16	3.04	2.39	100	100	0.00	9.77
1Ax	1 NB			N/A	N/A	N/A	159	Unrestricted	120.00	22.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
1B	1 NB		1	1	B	N/A	25	1472	6.00	0.00	29	209	85.75	62.71	101.61	0.86	0.84	100	100	0.00	6.50
1Bx	1 NB			N/A	N/A	N/A	61	Unrestricted	120.00	0.00	0	Unrestricted	23.04	0.00	0.00	0.00	N/A	100	100	0.00	0.00
1C	1 NB		1	C	N/A	N/A	161	1663	82.00	0.00	14	543	10.23	6.63	33.20	1.85	1.67	100	100	0.00	4.88
1Cx	1 NB			N/A	N/A	N/A	399	Unrestricted	120.00	21.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
1D	1 NB		1	D	N/A	N/A	5	1410	6.00	0.00	6	1381	61.93	55.09	94.36	0.16	0.16	100	100	0.00	1.15
1Dx	1 NB			N/A	N/A	N/A	9	Unrestricted	120.00	9.00	0	Unrestricted	6.84	0.00	0.00	0.00	N/A	100	100	0.00	0.00
2A	1		2	2	A	C	660	1243	66.00	0.00	95 !	-5	64.78	60.58	118.03	26.96 +	16.14	100	100	0.00	167.48
2Ax	1			N/A	N/A	N/A	254	Unrestricted	120.00	0.00	0	Unrestricted	4.20	0.00	0.00	0.00	N/A	100	100	0.00	0.00
2B	1		2	2	B	N/A	95	1228	35.00	0.00	26	249	56.35	33.55	75.54	2.45	2.26	100	100	0.00	13.47
2Bx	1			N/A	N/A	N/A	253	Unrestricted	120.00	0.00	0	Unrestricted	22.80	0.00	0.00	0.00	N/A	100	100	0.00	0.00
2C	1		2	2	C	N/A	181	1658	66.00	0.00	20	360	18.33	13.53	47.26	2.92	2.63	100	100	0.00	10.73
2Cx	1			N/A	N/A	N/A	443	Unrestricted	120.00	7.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
2D	1		2	2	D	B	392	1431	35.00	0.00	91 !	-1	83.84	76.04	121.85	16.36 +	12.98	100	100	0.00	123.57
2Dx	1			N/A	N/A	N/A	378	Unrestricted	120.00	0.00	0	Unrestricted	7.80	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3A	1		3	N/A	N/A	N/A	159	Unrestricted	120.00	7.00	0	Unrestricted	7.20	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3Ax	1			N/A	N/A	N/A	441	Unrestricted	120.00	0.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3B	1		3	N/A	N/A	N/A	0	0	120.00	120.00	0	-100	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3Bx	1			N/A	N/A	N/A	0	Unrestricted	120.00	120.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3C	1		3	N/A	N/A	N/A	441	1800	120.00	0.00	25	267	6.92	0.32	0.00	0.04	N/A	100	100	0.00	0.56
3Cx	1			N/A	N/A	N/A	159	Unrestricted	120.00	6.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4A	1		4	N/A	N/A	N/A	181	Unrestricted	120.00	0.00	0	Unrestricted	6.60	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4Ax	1			N/A	N/A	N/A	440	Unrestricted	120.00	0.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4B	1		4	N/A	N/A	N/A	0	0	120.00	120.00	0	-100	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4Bx	1			N/A	N/A	N/A	0	Unrestricted	120.00	120.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4C	1		4	N/A	N/A	N/A	440	1800	120.00	0.00	24	268	5.12	0.32	0.00	0.04	N/A	100	100	0.00	0.56
4Cx	1			N/A	N/A	N/A	181	Unrestricted	120.00	0.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00

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)
TOTAL	267.41	32.23	8.30	12.04	10.58	321.23	19.86	0.00	341.08
BUSES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TRAMS	2.20	0.31	7.02	0.16	0.00	2.37	0.03	0.00	2.40
OTHER (NORMAL)	265.21	31.91	8.31	11.87	10.58	318.85	19.83	0.00	338.68

- *B = at least one source for this link carries buses*

- *T = at least one source for this link carries trams*
- *P = this link is a pedestrian link*
- *< = adjusted flow warning (upstream links are over-saturated)*
- *! = DOS threshold exceeded*
- *f = average saturation flow for flared link*
- ** = 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 excess queue is greater than 0*
- ***P.I. = PERFORMANCE INDEX***

TRANSYT 14

Version: 14.1.2.315 [26-09-12]

For sales and distribution information, program advice and maintenance, contact TRL:
Tel: +44 (0)1344 770758 E-mail: software@trl.co.uk Web: http://www.trlsoftware.co.uk

Last run: 25/07/2019 12:20:18
Analysis Set used for last run: A4 -

Filename: R043 TRANSYT Model 20190719.t14
Path: J:\R_JOBS\Job-R043\B_Documents\C_Civil\A_CS Reports\4.0 SHD Application for Additional Floors\Traffic\Modelling
Report generation date: 25/07/2019 12:20:29

File summary

File Description

Title	Spencer North
Location	Dublin 1
Site Number	
UTCRegion	
Driving Side	Left
Date	27/03/2018
Version	
Status	
Identifier	
Client	
Jobnumber	R043
Enumerator	GF
Description	

Units

Speed Units	Distance Units	Fuel Economy Units	Fuel Rate Units	Mass Units	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
kph	m	l/100km	l/h	kg	perHour	s	-Hour	perHour

Sorting

Show Names Instead of IDs (For Aimsun)	Sorting Direction	Sorting Type	Ignore Prefixes When Sorting	Link Grouping	Source Grouping
	Ascending	Numerical		Normal	Normal

A4 - : D4 - 2022 No Dev 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)	Cycle Time Used (s)	Total Network Delay (PCU-hr/hr)	Highest DOS (%)	LTSWith Highest DOS	Number Of Oversaturated LTS	Percentage Of Oversaturated LTS (%)	LTSWith Worst Signalised PRC	LTSWith Worst Unsignalised PRC	LTSWith Worst Overall PRC	Network Within Capacity
A4 -	25/07/2019 12:20:04	25/07/2019 12:20:18	17:00	120	9.81	61.32	2D/1	0	0	2D/1	4B/1	4B/1	✓

Signal Timings

120s cycle time; 120 steps

Controller Stream

Controller Stream	Name	Description	Gaining Delay Type	Signals Manipulation Mode	Multiple Cycling	Offset Relative To	Offset Valid	Offset Positive (s)	Offset Negative (s)	Auto Redistribute	Optimisation Level	Use Sequence
1	New Wapping St / Mayor St		Absolute	StageBased	Single	1	✓	0	0	✓	Offsets And Green Splits	1
2	East Rd / Sheriff St / New Wapping St		Absolute	StageBased	Single	1	✓	19	-101	✓	Offsets And Green Splits	1

Phases

Controller Stream	Phase	Name	Minimum Green (s)	Maximum Green (s)	Relative Start Displacement (s)	Relative End Displacement (s)	Dummy
1	A	(untitled)	6	300	0	0	
1	B	(untitled)	6	300	0	0	
1	C	(untitled)	6	300	0	0	
1	D	(untitled)	6	300	0	0	
1	E	(untitled)	6	300	0	0	
1	F	(untitled)	6	300	0	0	
1	G	(untitled)	8	300	0	0	
2	A	(untitled)	6	300	0	0	
2	B	(untitled)	6	300	0	0	
2	C	(untitled)	6	300	0	0	
2	D	(untitled)	6	300	0	0	
2	E	(untitled)	3	300	0	0	✓

Library Stages

Controller Stream	Library Stage	Phases In Stage	User Stage Minimum (s)
1	1	A,C	6
1	2	B,D,E,F	6
1	3	G	12
2	1	A,C	1
2	2	B,D	1
2	3	E	1
2	4	A	1
2	5	B	1
2	6	C	1
2	7	D	1

Stage Sequences

Controller Stream	Stage Sequence	Name	Stage IDs	Stage Ends	Multiple Cycling Stage IDs	Multiple Cycling Stage Ends
1	1	(untitled)	1,2,3	35,49,67		
1	2	(untitled)	1,3,2	0,42,82		
2	1	(untitled)	1,2,3	20,81,89		
2	2	(untitled)	1,3,2	0,37,78		
2	3	(untitled)	1,3,2,5	0,30,64,87		
2	4	(untitled)	1,3,7,5	0,28,60,86		
2	5	(untitled)	1,3,4,2	0,27,58,88		
2	6	(untitled)	2,6,3,4	0,30,57,88		
2	7	(untitled)	1,7,3,5	0,30,57,88		
2	8	(untitled)	2,4,6,3	0,31,57,85		
2	9	(untitled)	1,3,5,2	0,30,59,87		
2	10	(untitled)	1,3,2,6	0,30,64,92		

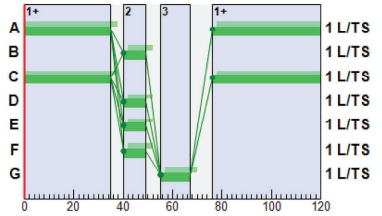
Resultant Stages

Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases In This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
1	1	✓	1	A,C	76	35	79	6	6
1	2	✓	2	B,D,E,F	40	49	9	6	6
1	3	✓	3	G	55	67	12	12	12
2	1	✓	1	A,C	95	20	45	1	6
2	2	✓	2	B,D	25	81	56	1	6
2	3	✓	3	E	86	89	3	1	3

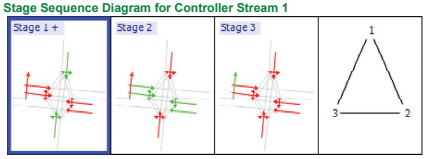
Resultant Phase Green Periods

Controller Stream	Phase	Green Period	Is Base Green Period	Start Time (s)	End Time (s)	Duration (s)
1	A	1	✓	76	35	79
1	B	1	✓	40	49	9
1	C	1	✓	76	35	79
1	D	1	✓	40	49	9
1	E	1	✓	40	49	9
1	F	1	✓	40	49	9
1	G	1	✓	55	67	12
2	A	1	✓	95	20	45
2	B	1	✓	25	81	56
2	C	1	✓	95	20	45
2	D	1	✓	25	81	56
2	E	1	✓	86	89	3

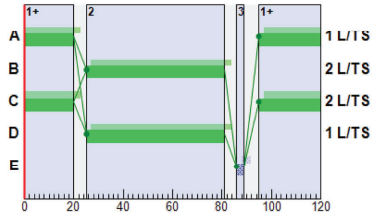
Phase Timings Diagram for Controller Stream 1



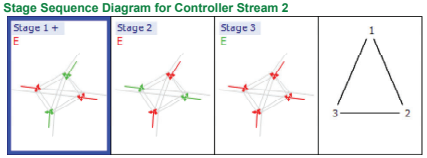
Stage Sequence Diagram for Controller Stream 1



Phase Timings Diagram for Controller Stream 2



Stage Sequence Diagram for Controller Stream 2



Final Prediction Table

Link Results

Link	Name	Major Link	Traffic Node	Controller Stream	Phase	Calculated Flow Entering LTS (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s (per cycle))	Wasted Time Total (s (per cycle))	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Journey Time Per PCU (s)	Mean Delay Per PCU (s)	Mean Stops Per PCU (%)	Mean Max Queue (PCU)	Max End Of Red Queue (PCU)	Delay Weighting (%)	Stop Weighting (%)	Cost Of Penalties (£ per hr)	P.I.
1P P	(untitled)	N/A	1	1	G	1	Unrestricted	12.00	0.00	0	Unrestricted	12.00	0.00	0.00	0.00	0.00	100	100	0.00	0.00
1T1 T	(untitled)	N/A	1	1	E	7	1800	9.00	0.00	5	1829	75.46	51.46	91.72	0.22	0.22	100	100	0.00	1.44
1T1x T	(untitled)	N/A		N/A	N/A	6	Unrestricted	120.00	64.00	0	Unrestricted	24.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
1T2 T	(untitled)	N/A	1	1	F	6	1800	9.00	0.00	4	2150	75.37	51.37	91.64	0.18	0.18	100	100	0.00	1.23
1T2x T	(untitled)	N/A		N/A	N/A	7	Unrestricted	120.00	63.00	0	Unrestricted	24.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00

Traffic Stream Results

Arm	Traffic Stream	Name	Traffic Node	Controller Stream	Phase	Phase2	Calculated Flow Entering LTS (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s (per cycle))	Wasted Time Total (s (per cycle))	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Journey Time Per PCU (s)	Mean Delay Per PCU (s)	Mean Stops Per PCU (%)	Mean Max Queue (PCU)	Max End Of Red Queue (PCU)	Delay Weighting Multiplier (%)	Stop Weighting Multiplier (%)	Cost Of Penalties (£ per hr)	P.I.
1A	1 NB		1	1	A	N/A	127	1762	79.00	0.00	11	733	13.51	6.31	31.80	1.38	1.33	100	100	0.00	3.67
1Ax	1 NB			N/A	N/A	N/A	291	Unrestricted	120.00	22.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
1B	1 NB		1	1	B	N/A	12	1652	9.00	0.00	9	932	75.16	52.12	91.72	0.37	0.37	100	100	0.00	2.61
1Bx	1 NB			N/A	N/A	N/A	29	Unrestricted	120.00	0.00	0	Unrestricted	23.04	0.00	0.00	0.00	N/A	100	100	0.00	0.00
1C	1 NB		1	1	C	N/A	303	1747	79.00	0.00	26	246	12.25	8.65	39.26	4.09	3.41	100	100	0.00	11.83
1Cx	1 NB			N/A	N/A	N/A	121	Unrestricted	120.00	21.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
1D	1 NB		1	1	D	N/A	10	999	9.00	0.00	12	649	61.17	54.33	93.95	0.32	0.31	100	100	0.00	2.26
1Dx	1 NB			N/A	N/A	N/A	11	Unrestricted	120.00	10.00	0	Unrestricted	6.84	0.00	0.00	0.00	N/A	100	100	0.00	0.00
2A	1		2	2	A	C	217	1061	45.00	0.00	53	69	39.59	35.39	82.89	6.09 +	4.76	100	100	0.00	32.54
2Ax	1			N/A	N/A	N/A	495	Unrestricted	120.00	0.00	0	Unrestricted	4.20	0.00	0.00	0.00	N/A	100	100	0.00	0.00
2B	1		2	2	B	N/A	109	1073	56.00	0.00	21	321	42.53	19.73	58.85	2.18	1.94	100	100	0.00	9.29
2Bx	1			N/A	N/A	N/A	204	Unrestricted	120.00	0.00	0	Unrestricted	22.80	0.00	0.00	0.00	N/A	100	100	0.00	0.00
2C	1		2	2	C	N/A	310	1694	45.00	0.00	48	89	27.74	22.94	44.56	5.40	3.98	100	100	0.00	29.78
2Cx	1			N/A	N/A	N/A	156	Unrestricted	120.00	7.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
2D	1		2	2	D	B	485	1665	56.00	0.00	61	47	34.81	27.01	75.10	12.47 +	8.97	100	100	0.00	56.24
2Dx	1			N/A	N/A	N/A	266	Unrestricted	120.00	0.00	0	Unrestricted	7.80	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3A	1		3	N/A	N/A	N/A	296	Unrestricted	120.00	7.00	0	Unrestricted	7.20	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3Ax	1			N/A	N/A	N/A	129	Unrestricted	120.00	0.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3B	1		3	N/A	N/A	N/A	0	0	120.00	120.00	0	-100	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3Bx	1			N/A	N/A	N/A	0	Unrestricted	120.00	120.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3C	1		3	N/A	N/A	N/A	129	1800	120.00	0.00	7	1156	6.68	0.08	0.00	0.00	N/A	100	100	0.00	0.04
3Cx	1			N/A	N/A	N/A	296	Unrestricted	120.00	6.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4A	1		4	N/A	N/A	N/A	306	Unrestricted	120.00	1.00	0	Unrestricted	6.60	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4Ax	1			N/A	N/A	N/A	153	Unrestricted	120.00	0.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4B	1		4	N/A	N/A	N/A	0	0	120.00	120.00	0	-100	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4Bx	1			N/A	N/A	N/A	0	Unrestricted	120.00	120.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4C	1		4	N/A	N/A	N/A	153	1800	120.00	0.00	9	959	4.89	0.09	0.00	0.00	N/A	100	100	0.00	0.06
4Cx	1			N/A	N/A	N/A	306	Unrestricted	120.00	1.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00

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)
TOTAL	221.89	17.70	12.54	8.71	1.10	139.33	11.65	0.00	150.98
BUSES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TRAMS	2.60	0.36	7.24	0.18	0.00	2.64	0.04	0.00	2.67
OTHER (NORMAL)	219.29	17.34	12.65	8.52	1.10	136.70	11.61	0.00	148.31

- *B = at least one source for this link carries buses*
- *T = at least one source for this link carries trams*
- *P = this link is a pedestrian link*
- *< = adjusted flow warning (upstream links are over-saturated)*
- *! = DOS threshold exceeded*
- *f = average saturation flow for flared link*
- ** = 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 excess queue is greater than 0*
- ***P.I. = PERFORMANCE INDEX***

TRANSYT 14

Version: 14.1.2.315 [26-09-12]

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Tel: +44 (0)1344 770758 E-mail: software@trl.co.uk Web: http://www.trlsoftware.co.uk

Last run: 25/07/2019 12:26:01
Analysis Set used for last run: A5 -

Filename: R043 TRANSYT Model 20190719.t14
Path: J:\R_JOBS\Job-R043\B_Documents\C_Civil\A_CS Reports\4.0 SHD Application for Additional Floors\Traffic\Modelling
Report generation date: 25/07/2019 12:28:19

File summary

File Description

Title	Spencer North
Location	Dublin 1
Site Number	
UTCRegion	
Driving Side	Left
Date	27/03/2018
Version	
Status	
Identifier	
Client	
Jobnumber	R043
Enumerator	GF
Description	

Units

Speed Units	Distance Units	Fuel Economy Units	Fuel Rate Units	Mass Units	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
kph	m	l/100km	l/h	kg	perHour	s	-Hour	perHour

Sorting

Show Names Instead of IDs (For Aimsun)	Sorting Direction	Sorting Type	Ignore Prefixes When Sorting	Link Grouping	Source Grouping
	Ascending	Numerical		Normal	Normal

A5 - : D5 - 2022 With Dev 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)	Cycle Time Used (s)	Total Network Delay (PCU-hr/hr)	Highest DOS (%)	LTSWith Highest DOS	Number Of Oversaturated LTS	Percentage Of Oversaturated LTS (%)	LTSWith Worst Signalised PRC	LTSWith Worst Unsignalised PRC	LTSWith Worst Overall PRC	Network Within Capacity
A5 -	25/07/2019 12:25:46	25/07/2019 12:26:01	07:45	120	25.38	95.58	2A/1	2	6	2A/1	4C/1	2A/1	

Signal Timings

120s cycle time; 120 steps

Controller Stream

Controller Stream	Name	Description	Gaining Delay Type	Signals Manipulation Mode	Multiple Cycling	Offset Relative To	Offset Valid	Offset Positive (s)	Offset Negative (s)	Auto Redistribute	Optimisation Level	Use Sequence
1	New Wapping St / Mayor St		Absolute	StageBased	Single	1	✓	0	0	✓	Offsets And Green Splits	1
2	East Rd / Sheriff St / New Wapping St		Absolute	StageBased	Single	1	✓	91	-29	✓	Offsets And Green Splits	1

Phases

Controller Stream	Phase	Name	Minimum Green (s)	Maximum Green (s)	Relative Start Displacement (s)	Relative End Displacement (s)	Dummy
1	A	(untitled)	6	300	0	0	
1	B	(untitled)	6	300	0	0	
1	C	(untitled)	6	300	0	0	
1	D	(untitled)	6	300	0	0	
1	E	(untitled)	6	300	0	0	
1	F	(untitled)	6	300	0	0	
1	G	(untitled)	8	300	0	0	
2	A	(untitled)	6	300	0	0	
2	B	(untitled)	6	300	0	0	
2	C	(untitled)	6	300	0	0	
2	D	(untitled)	6	300	0	0	
2	E	(untitled)	3	300	0	0	✓

Library Stages

Controller Stream	Library Stage	Phases In Stage	User Stage Minimum (s)
1	1	A,C	6
1	2	B,D,E,F	6
1	3	G	12
2	1	A,C	1
2	2	B,D	1
2	3	E	1
2	4	A	1
2	5	B	1
2	6	C	1
2	7	D	1

Stage Sequences

Controller Stream	Stage Sequence	Name	Stage IDs	Stage Ends	Multiple Cycling Stage IDs	Multiple Cycling Stage Ends
1	1	(untitled)	1,2,3	86,97,115		
1	2	(untitled)	1,3,2	0,42,82		
2	1	(untitled)	1,2,3	42,81,89		
2	2	(untitled)	1,3,2	0,37,78		
2	3	(untitled)	1,3,2,5	0,30,64,87		
2	4	(untitled)	1,3,7,5	0,28,60,86		
2	5	(untitled)	1,3,4,2	0,27,58,88		
2	6	(untitled)	2,6,3,4	0,30,57,88		
2	7	(untitled)	1,7,3,5	0,30,57,88		
2	8	(untitled)	2,4,6,3	0,31,57,85		
2	9	(untitled)	1,3,5,2	0,30,59,87		
2	10	(untitled)	1,3,2,6	0,30,64,92		

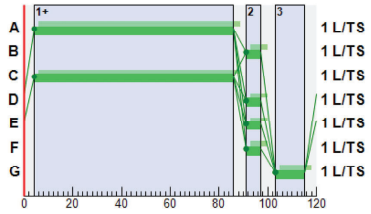
Resultant Stages

Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases In This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
1	1	✓	1	A,C	4	86	82	6	6
1	2	✓	2	B,D,E,F	91	97	6	6	6
1	3	✓	3	G	103	115	12	12	12
2	1	✓	1	A,C	95	42	67	1	6
2	2	✓	2	B,D	47	81	34	1	6
2	3	✓	3	E	86	89	3	1	3

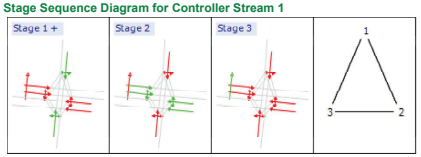
Resultant Phase Green Periods

Controller Stream	Phase	Green Period	Is Base Green Period	Start Time (s)	End Time (s)	Duration (s)
1	A	1	✓	4	86	82
1	B	1	✓	91	97	6
1	C	1	✓	4	86	82
1	D	1	✓	91	97	6
1	E	1	✓	91	97	6
1	F	1	✓	91	97	6
1	G	1	✓	103	115	12
2	A	1	✓	95	42	67
2	B	1	✓	47	81	34
2	C	1	✓	95	42	67
2	D	1	✓	47	81	34
2	E	1	✓	86	89	3

Phase Timings Diagram for Controller Stream 1

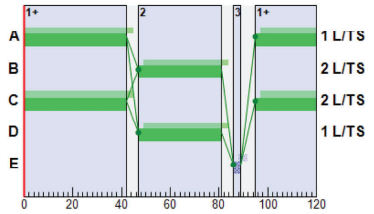


Stage Sequence Diagram for Controller Stream 1

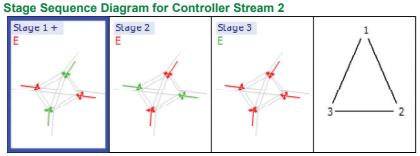


Phase Timings Diagram for Controller Stream 2

R043 TRANSYT Outputs



Stage Sequence Diagram for Controller Stream 2



Final Prediction Table

Link Results

Link	Name	Major Link	Traffic Node	Controller Stream	Phase	Calculated Flow Entering LTS (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s (per cycle))	Wasted Time Total (s (per cycle))	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Journey Time Per PCU (s)	Mean Delay Per PCU (s)	Mean Stops Per PCU (%)	Mean Max Queue (PCU)	Max End Of Red Queue (PCU)	Delay Weighting (%)	Stop Weighting (%)	Cost Of Penalties (£ per hr)	P.I.
1P P	(untitled)	N/A	1	1	G	1	Unrestricted	12.00	0.00	0	Unrestricted	12.00	0.00	0.00	0.00	0.00	100	100	0.00	0.00
1T1 T	(untitled)	N/A	1	1	E	6	1800	6.00	0.00	6	1475	78.71	54.71	94.59	0.19	0.19	100	100	0.00	1.31
1T1x T	(untitled)	N/A		N/A	N/A	5	Unrestricted	120.00	76.00	0	Unrestricted	24.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
1T2 T	(untitled)	N/A	1	1	F	5	1800	6.00	0.00	5	1790	78.53	54.53	94.44	0.16	0.16	100	100	0.00	1.09
1T2x T	(untitled)	N/A		N/A	N/A	6	Unrestricted	120.00	75.00	0	Unrestricted	24.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00

Traffic Stream Results

Arm	Traffic Stream	Name	Traffic Node	Controller Stream	Phase	Phase2	Calculated Flow Entering LTS (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s (per cycle))	Wasted Time Total (s (per cycle))	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Journey Time Per PCU (s)	Mean Delay Per PCU (s)	Mean Stops Per PCU (%)	Mean Max Queue (PCU)	Max End Of Red Queue (PCU)	Delay Weighting Multiplier (%)	Stop Weighting Multiplier (%)	Cost Of Penalties (£ per hr)	P.I.
1A	1 NB		1	1	A	N/A	451	1759	82.00	0.00	37	143	12.50	5.30	20.97	3.33	2.63	100	100	0.00	10.61
1Ax	1 NB			N/A	N/A	N/A	162	Unrestricted	120.00	22.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
1B	1 NB		1	1	B	N/A	25	1472	6.00	0.00	29	209	85.75	62.71	101.61	0.86	0.84	100	100	0.00	6.50
1Bx	1 NB			N/A	N/A	N/A	63	Unrestricted	120.00	0.00	0	Unrestricted	23.04	0.00	0.00	0.00	N/A	100	100	0.00	0.00
1C	1 NB		1	1	C	N/A	164	1663	82.00	0.00	14	531	10.25	6.65	33.25	1.88	1.70	100	100	0.00	4.98
1Cx	1 NB			N/A	N/A	N/A	410	Unrestricted	120.00	21.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
1D	1 NB		1	1	D	N/A	5	1410	6.00	0.00	6	1381	61.93	55.09	94.36	0.16	0.16	100	100	0.00	1.15
1Dx	1 NB			N/A	N/A	N/A	10	Unrestricted	120.00	9.00	0	Unrestricted	6.84	0.00	0.00	0.00	N/A	100	100	0.00	0.00
2A	1		2	2	A	C	670	1237	67.00	0.00	96 !	-6	66.40	62.20	119.82	27.90 +	16.55	100	100	0.00	174.45
2Ax	1			N/A	N/A	N/A	268	Unrestricted	120.00	0.00	0	Unrestricted	4.20	0.00	0.00	0.00	N/A	100	100	0.00	0.00
2B	1		2	2	B	N/A	96	1226	34.00	0.00	27	235	57.28	34.48	76.92	2.50	2.32	100	100	0.00	13.98
2Bx	1			N/A	N/A	N/A	255	Unrestricted	120.00	0.00	0	Unrestricted	22.80	0.00	0.00	0.00	N/A	100	100	0.00	0.00
2C	1		2	2	C	N/A	214	1655	67.00	0.00	23	294	18.25	13.45	47.64	3.47	3.07	100	100	0.00	12.63
2Cx	1			N/A	N/A	N/A	457	Unrestricted	120.00	7.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
2D	1		2	2	D	B	395	1421	34.00	0.00	95 !	-6	102.09	94.29	135.34	18.57 +	15.06	100	100	0.00	153.61
2Dx	1			N/A	N/A	N/A	395	Unrestricted	120.00	0.00	0	Unrestricted	7.80	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3A	1		3	N/A	N/A	N/A	162	Unrestricted	120.00	8.00	0	Unrestricted	7.20	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3Ax	1			N/A	N/A	N/A	455	Unrestricted	120.00	0.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3B	1		3	N/A	N/A	N/A	17	516	120.00	0.00	3	2632	4.92	0.12	0.00	0.00	N/A	100	100	0.00	0.01
3Bx	1			N/A	N/A	N/A	6	Unrestricted	120.00	0.00	0	Unrestricted	4.80	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3C	1		3	N/A	N/A	N/A	455	1758	120.00	0.00	26	248	6.96	0.36	0.00	0.05	N/A	100	100	0.00	0.64
3Cx	1			N/A	N/A	N/A	173	Unrestricted	120.00	0.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4A	1		4	N/A	N/A	N/A	195	Unrestricted	120.00	0.00	0	Unrestricted	6.60	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4Ax	1			N/A	N/A	N/A	454	Unrestricted	120.00	0.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4B	1		4	N/A	N/A	N/A	29	504	120.00	0.00	6	1465	5.02	0.22	0.00	0.00	N/A	100	100	0.00	0.02
4Bx	1			N/A	N/A	N/A	10	Unrestricted	120.00	0.00	0	Unrestricted	4.80	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4C	1		4	N/A	N/A	N/A	453	1737	120.00	0.00	26	245	5.17	0.37	0.00	0.05	N/A	100	100	0.00	0.65
4Cx	1			N/A	N/A	N/A	213	Unrestricted	120.00	0.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00

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)
TOTAL	277.53	35.35	7.85	12.42	12.96	360.39	21.25	0.00	381.64
BUSES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TRAMS	2.20	0.31	7.02	0.16	0.00	2.37	0.03	0.00	2.40
OTHER (NORMAL)	275.33	35.04	7.86	12.25	12.96	358.02	21.22	0.00	379.24

- *B = at least one source for this link carries buses*

- *T = at least one source for this link carries trams*
- *P = this link is a pedestrian link*
- *< = adjusted flow warning (upstream links are over-saturated)*
- *! = DOS threshold exceeded*
- *f = average saturation flow for flared link*
- ** = 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 excess queue is greater than 0*
- ***P.I. = PERFORMANCE INDEX***

TRANSYT 14

Version: 14.1.2.315 [26-09-12]

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Last run: 25/07/2019 12:28:57
Analysis Set used for last run: A6 -

Filename: R043 TRANSYT Model 20190719.t14
Path: J:\R_JOBS\Job-R043\B_Documents\C_Civil\A_CS Reports\4.0 SHD Application for Additional Floors\Traffic\Modelling
Report generation date: 25/07/2019 12:29:00

File summary

File Description

Title	Spencer North
Location	Dublin 1
Site Number	
UTCRegion	
Driving Side	Left
Date	27/03/2018
Version	
Status	
Identifier	
Client	
Jobnumber	R043
Enumerator	GF
Description	

Units

Speed Units	Distance Units	Fuel Economy Units	Fuel Rate Units	Mass Units	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
kph	m	l/100km	l/h	kg	perHour	s	-Hour	perHour

Sorting

Show Names Instead of IDs (For Aimsun)	Sorting Direction	Sorting Type	Ignore Prefixes When Sorting	Link Grouping	Source Grouping
	Ascending	Numerical		Normal	Normal

A6 - : D6 - 2022 With Dev 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)	Cycle Time Used (s)	Total Network Delay (PCU-hr/hr)	Highest DOS (%)	LTSWith Highest DOS	Number Of Oversaturated LTS	Percentage Of Oversaturated LTS (%)	LTSWith Worst Signalised PRC	LTSWith Worst Unsignalised PRC	LTSWith Worst Overall PRC	Network Within Capacity
A6 -	25/07/2019 12:28:39	25/07/2019 12:28:57	17:00	120	10.92	65.89	2D/1	0	0	2D/1	4C/1	2D/1	✓

Signal Timings

120s cycle time; 120 steps

Controller Stream

Controller Stream	Name	Description	Gaining Delay Type	Signals Manipulation Mode	Multiple Cycling	Offset Relative To	Offset Valid	Offset Positive (s)	Offset Negative (s)	Auto Redistribute	Optimisation Level	Use Sequence
1	New Wapping St / Mayor St		Absolute	StageBased	Single	1	✓	0	0	✓	Offsets And Green Splits	1
2	East Rd / Sheriff St / New Wapping St		Absolute	StageBased	Single	1	✓	17	-103	✓	Offsets And Green Splits	1

Phases

Controller Stream	Phase	Name	Minimum Green (s)	Maximum Green (s)	Relative Start Displacement (s)	Relative End Displacement (s)	Dummy
1	A	(untitled)	6	300	0	0	
1	B	(untitled)	6	300	0	0	
1	C	(untitled)	6	300	0	0	
1	D	(untitled)	6	300	0	0	
1	E	(untitled)	6	300	0	0	
1	F	(untitled)	6	300	0	0	
1	G	(untitled)	8	300	0	0	
2	A	(untitled)	6	300	0	0	
2	B	(untitled)	6	300	0	0	
2	C	(untitled)	6	300	0	0	
2	D	(untitled)	6	300	0	0	
2	E	(untitled)	3	300	0	0	✓

Library Stages

Controller Stream	Library Stage	Phases In Stage	User Stage Minimum (s)
1	1	A,C	6
1	2	B,D,E,F	6
1	3	G	12
2	1	A,C	1
2	2	B,D	1
2	3	E	1
2	4	A	1
2	5	B	1
2	6	C	1
2	7	D	1

Stage Sequences

Controller Stream	Stage Sequence	Name	Stage IDs	Stage Ends	Multiple Cycling Stage IDs	Multiple Cycling Stage Ends
1	1	(untitled)	1,2,3	37,51,69		
1	2	(untitled)	1,3,2	0,42,82		
2	1	(untitled)	1,2,3	22,81,89		
2	2	(untitled)	1,3,2	0,37,78		
2	3	(untitled)	1,3,2,5	0,30,64,87		
2	4	(untitled)	1,3,7,5	0,28,60,86		
2	5	(untitled)	1,3,4,2	0,27,58,88		
2	6	(untitled)	2,6,3,4	0,30,57,88		
2	7	(untitled)	1,7,3,5	0,30,57,88		
2	8	(untitled)	2,4,6,3	0,31,57,85		
2	9	(untitled)	1,3,5,2	0,30,59,87		
2	10	(untitled)	1,3,2,6	0,30,64,92		

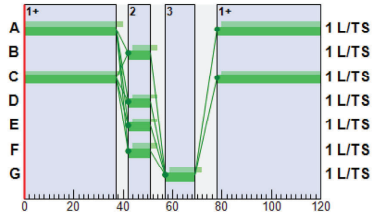
Resultant Stages

Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases In This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
1	1	✓	1	A,C	78	37	79	6	6
1	2	✓	2	B,D,E,F	42	51	9	6	6
1	3	✓	3	G	57	69	12	12	12
2	1	✓	1	A,C	95	22	47	1	6
2	2	✓	2	B,D	27	81	54	1	6
2	3	✓	3	E	86	89	3	1	3

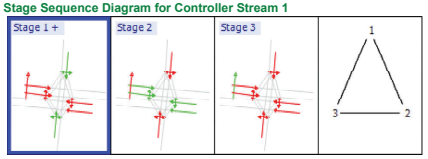
Resultant Phase Green Periods

Controller Stream	Phase	Green Period	Is Base Green Period	Start Time (s)	End Time (s)	Duration (s)
1	A	1	✓	78	37	79
1	B	1	✓	42	51	9
1	C	1	✓	78	37	79
1	D	1	✓	42	51	9
1	E	1	✓	42	51	9
1	F	1	✓	42	51	9
1	G	1	✓	57	69	12
2	A	1	✓	95	22	47
2	B	1	✓	27	81	54
2	C	1	✓	95	22	47
2	D	1	✓	27	81	54
2	E	1	✓	86	89	3

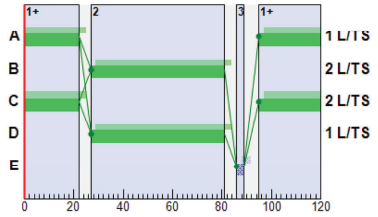
Phase Timings Diagram for Controller Stream 1



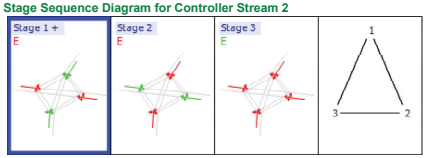
Stage Sequence Diagram for Controller Stream 1



Phase Timings Diagram for Controller Stream 2



Stage Sequence Diagram for Controller Stream 2



Final Prediction Table

Link Results

Link	Name	Major Link	Traffic Node	Controller Stream	Phase	Calculated Flow Entering LTS (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s (per cycle))	Wasted Time Total (s (per cycle))	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Journey Time Per PCU (s)	Mean Delay Per PCU (s)	Mean Stops Per PCU (%)	Mean Max Queue (PCU)	Max End Of Red Queue (PCU)	Delay Weighting (%)	Stop Weighting (%)	Cost Of Penalties (£ per hr)	P.I.
1P P	(untitled)	N/A	1	1	G	1	Unrestricted	12.00	0.00	0	Unrestricted	12.00	0.00	0.00	0.00	0.00	100	100	0.00	0.00
1T1 T	(untitled)	N/A	1	1	E	7	1800	9.00	0.00	5	1829	75.46	51.46	91.72	0.22	0.22	100	100	0.00	1.44
1T1x T	(untitled)	N/A		N/A	N/A	6	Unrestricted	120.00	64.00	0	Unrestricted	24.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
1T2 T	(untitled)	N/A	1	1	F	6	1800	9.00	0.00	4	2150	75.37	51.37	91.64	0.18	0.18	100	100	0.00	1.23
1T2x T	(untitled)	N/A		N/A	N/A	7	Unrestricted	120.00	63.00	0	Unrestricted	24.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00

Traffic Stream Results

Arm	Traffic Stream	Name	Traffic Node	Controller Stream	Phase	Phase2	Calculated Flow Entering LTS (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s (per cycle))	Wasted Time Total (s (per cycle))	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Journey Time Per PCU (s)	Mean Delay Per PCU (s)	Mean Stops Per PCU (%)	Mean Max Queue (PCU)	Max End Of Red Queue (PCU)	Delay Weighting Multiplier (%)	Stop Weighting Multiplier (%)	Cost Of Penalties (£ per hr)	P.I.
1A	1 NB		1	1	A	N/A	129	1762	79.00	0.00	11	719	13.48	6.28	31.71	1.40	1.34	100	100	0.00	3.71
1Ax	1 NB			N/A	N/A	N/A	319	Unrestricted	120.00	22.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
1B	1 NB		1	1	B	N/A	12	1651	9.00	0.00	9	932	75.16	52.12	91.72	0.37	0.37	100	100	0.00	2.61
1Bx	1 NB			N/A	N/A	N/A	29	Unrestricted	120.00	0.00	0	Unrestricted	23.04	0.00	0.00	0.00	N/A	100	100	0.00	0.00
1C	1 NB		1	1	C	N/A	330	1751	79.00	0.00	28	218	12.46	8.86	40.05	4.55	3.72	100	100	0.00	13.20
1Cx	1 NB			N/A	N/A	N/A	123	Unrestricted	120.00	21.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
1D	1 NB		1	1	D	N/A	11	1039	9.00	0.00	13	609	61.25	54.41	94.01	0.35	0.35	100	100	0.00	2.49
1Dx	1 NB			N/A	N/A	N/A	11	Unrestricted	120.00	10.00	0	Unrestricted	6.84	0.00	0.00	0.00	N/A	100	100	0.00	0.00
2A	1		2	2	A	C	240	1087	47.00	0.00	55	63	38.59	34.39	82.26	6.67 +	5.14	100	100	0.00	35.03
2Ax	1			N/A	N/A	N/A	517	Unrestricted	120.00	0.00	0	Unrestricted	4.20	0.00	0.00	0.00	N/A	100	100	0.00	0.00
2B	1		2	2	B	N/A	113	1080	54.00	0.00	23	294	43.85	21.05	60.69	2.33	2.07	100	100	0.00	10.24
2Bx	1			N/A	N/A	N/A	206	Unrestricted	120.00	0.00	0	Unrestricted	22.80	0.00	0.00	0.00	N/A	100	100	0.00	0.00
2C	1		2	2	C	N/A	350	1692	47.00	0.00	52	74	28.19	23.39	46.86	5.98	4.85	100	100	0.00	34.35
2Cx	1			N/A	N/A	N/A	192	Unrestricted	120.00	7.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
2D	1		2	2	D	B	494	1636	54.00	0.00	66	37	37.74	29.94	79.59	13.39 +	9.55	100	100	0.00	63.26
2Dx	1			N/A	N/A	N/A	282	Unrestricted	120.00	0.00	0	Unrestricted	7.80	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3A	1		3	N/A	N/A	N/A	323	Unrestricted	120.00	6.00	0	Unrestricted	7.20	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3Ax	1			N/A	N/A	N/A	132	Unrestricted	120.00	0.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3B	1		3	N/A	N/A	N/A	15	544	120.00	0.00	3	3165	4.89	0.09	0.00	0.00	N/A	100	100	0.00	0.01
3Bx	1			N/A	N/A	N/A	23	Unrestricted	120.00	0.00	0	Unrestricted	4.80	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3C	1		3	N/A	N/A	N/A	144	1474	120.00	0.00	10	821	6.73	0.13	0.00	0.01	N/A	100	100	0.00	0.08
3Cx	1			N/A	N/A	N/A	327	Unrestricted	120.00	0.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4A	1		4	N/A	N/A	N/A	337	Unrestricted	120.00	0.00	0	Unrestricted	6.60	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4Ax	1			N/A	N/A	N/A	169	Unrestricted	120.00	0.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4B	1		4	N/A	N/A	N/A	27	539	120.00	0.00	5	1695	4.98	0.18	0.00	0.00	N/A	100	100	0.00	0.02
4Bx	1			N/A	N/A	N/A	40	Unrestricted	120.00	0.00	0	Unrestricted	4.80	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4C	1		4	N/A	N/A	N/A	190	1407	120.00	0.00	13	567	5.00	0.20	0.00	0.01	N/A	100	100	0.00	0.15
4Cx	1			N/A	N/A	N/A	345	Unrestricted	120.00	0.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00

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)
TOTAL	238.65	19.40	12.30	9.55	1.37	155.01	12.80	0.00	167.81
BUSES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TRAMS	2.60	0.36	7.24	0.18	0.00	2.64	0.04	0.00	2.67
OTHER (NORMAL)	236.05	19.05	12.39	9.36	1.37	152.38	12.76	0.00	165.14

- *B = at least one source for this link carries buses*
- *T = at least one source for this link carries trams*
- *P = this link is a pedestrian link*
- *< = adjusted flow warning (upstream links are over-saturated)*
- *! = DOS threshold exceeded*
- *f = average saturation flow for flared link*
- ** = 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 excess queue is greater than 0*
- ***P.I. = PERFORMANCE INDEX***

TRANSYT 14

Version: 14.1.2.315 [26-09-12]

For sales and distribution information, program advice and maintenance, contact TRL:
Tel: +44 (0)1344 770758 E-mail: software@trl.co.uk Web: http://www.trlsoftware.co.uk

Last run: 25/07/2019 12:29:30
Analysis Set used for last run: A7 -

Filename: R043 TRANSYT Model 20190719.t14
Path: J:\R_JOBS\Job-R043\B_Documents\C_Civil\A_CS Reports\4.0 SHD Application for Additional Floors\Traffic\Modelling
Report generation date: 25/07/2019 12:29:32

File summary

File Description

Title	Spencer North
Location	Dublin 1
Site Number	
UTCRegion	
Driving Side	Left
Date	27/03/2018
Version	
Status	
Identifier	
Client	
Jobnumber	R043
Enumerator	GF
Description	

Units

Speed Units	Distance Units	Fuel Economy Units	Fuel Rate Units	Mass Units	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
kph	m	l/100km	l/h	kg	perHour	s	-Hour	perHour

Sorting

Show Names Instead of IDs (For Aimsun)	Sorting Direction	Sorting Type	Ignore Prefixes When Sorting	Link Grouping	Source Grouping
	Ascending	Numerical		Normal	Normal

A7 - : D7 - 2027 No Dev 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)	Cycle Time Used (s)	Total Network Delay (PCU-hr/hr)	Highest DOS (%)	LTSWith Highest DOS	Number Of Oversaturated LTS	Percentage Of Oversaturated LTS (%)	LTSWith Worst Signalised PRC	LTSWith Worst Unsignalised PRC	LTSWith Worst Overall PRC	Network Within Capacity
A7 -	25/07/2019 12:29:16	25/07/2019 12:29:30	07:45	120	24.26	96.18	2A/1	2	6	2A/1	4B/1	4B/1	

Signal Timings

120s cycle time; 120 steps

Controller Stream

Controller Stream	Name	Description	Gaining Delay Type	Signals Manipulation Mode	Multiple Cycling	Offset Relative To	Offset Valid	Offset Positive (s)	Offset Negative (s)	Auto Redistribute	Optimisation Level	Use Sequence
1	New Wapping St / Mayor St		Absolute	StageBased	Single	1	✓	0	0	✓	Offsets And Green Splits	1
2	East Rd / Sheriff St / New Wapping St		Absolute	StageBased	Single	1	✓	92	-28	✓	Offsets And Green Splits	1

Phases

Controller Stream	Phase	Name	Minimum Green (s)	Maximum Green (s)	Relative Start Displacement (s)	Relative End Displacement (s)	Dummy
1	A	(untitled)	6	300	0	0	
1	B	(untitled)	6	300	0	0	
1	C	(untitled)	6	300	0	0	
1	D	(untitled)	6	300	0	0	
1	E	(untitled)	6	300	0	0	
1	F	(untitled)	6	300	0	0	
1	G	(untitled)	8	300	0	0	
2	A	(untitled)	6	300	0	0	
2	B	(untitled)	6	300	0	0	
2	C	(untitled)	6	300	0	0	
2	D	(untitled)	6	300	0	0	
2	E	(untitled)	3	300	0	0	✓

Library Stages

Controller Stream	Library Stage	Phases In Stage	User Stage Minimum (s)
1	1	A,C	6
1	2	B,D,E,F	6
1	3	G	12
2	1	A,C	1
2	2	B,D	1
2	3	E	1
2	4	A	1
2	5	B	1
2	6	C	1
2	7	D	1

Stage Sequences

Controller Stream	Stage Sequence	Name	Stage IDs	Stage Ends	Multiple Cycling Stage IDs	Multiple Cycling Stage Ends
1	1	(untitled)	1,2,3	85,96,114		
1	2	(untitled)	1,3,2	0,42,82		
2	1	(untitled)	1,2,3	41,81,89		
2	2	(untitled)	1,3,2	0,37,78		
2	3	(untitled)	1,3,2,5	0,30,64,87		
2	4	(untitled)	1,3,7,5	0,28,60,86		
2	5	(untitled)	1,3,4,2	0,27,58,88		
2	6	(untitled)	2,6,3,4	0,30,57,88		
2	7	(untitled)	1,7,3,5	0,30,57,88		
2	8	(untitled)	2,4,6,3	0,31,57,85		
2	9	(untitled)	1,3,5,2	0,30,59,87		
2	10	(untitled)	1,3,2,6	0,30,64,92		

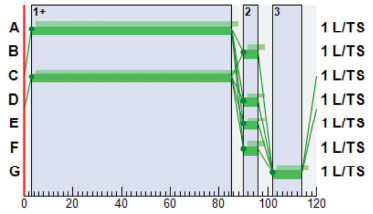
Resultant Stages

Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases In This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
1	1	✓	1	A,C	3	85	82	6	6
1	2	✓	2	B,D,E,F	90	96	6	6	6
1	3	✓	3	G	102	114	12	12	12
2	1	✓	1	A,C	95	41	66	1	6
2	2	✓	2	B,D	46	81	35	1	6
2	3	✓	3	E	86	89	3	1	3

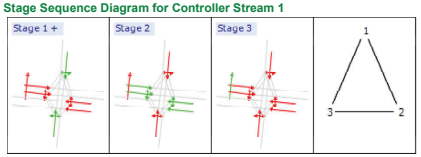
Resultant Phase Green Periods

Controller Stream	Phase	Green Period	Is Base Green Period	Start Time (s)	End Time (s)	Duration (s)
1	A	1	✓	3	85	82
1	B	1	✓	90	96	6
1	C	1	✓	3	85	82
1	D	1	✓	90	96	6
1	E	1	✓	90	96	6
1	F	1	✓	90	96	6
1	G	1	✓	102	114	12
2	A	1	✓	95	41	66
2	B	1	✓	46	81	35
2	C	1	✓	95	41	66
2	D	1	✓	46	81	35
2	E	1	✓	86	89	3

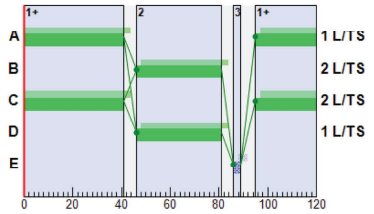
Phase Timings Diagram for Controller Stream 1



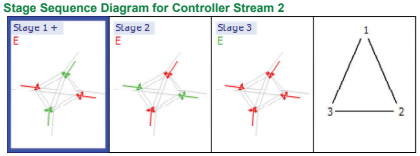
Stage Sequence Diagram for Controller Stream 1



Phase Timings Diagram for Controller Stream 2



Stage Sequence Diagram for Controller Stream 2



Final Prediction Table

Link Results

Link	Name	Major Link	Traffic Node	Controller Stream	Phase	Calculated Flow Entering LTS (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s (per cycle))	Wasted Time Total (s (per cycle))	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Journey Time Per PCU (s)	Mean Delay Per PCU (s)	Mean Stops Per PCU (%)	Mean Max Queue (PCU)	Max End Of Red Queue (PCU)	Delay Weighting (%)	Stop Weighting (%)	Cost Of Penalties (£ per hr)	P.I.
1P P	(untitled)	N/A	1	1	G	1	Unrestricted	12.00	0.00	0	Unrestricted	12.00	0.00	0.00	0.00	0.00	100	100	0.00	0.00
1T1 T	(untitled)	N/A	1	1	E	6	1800	6.00	0.00	6	1475	78.71	54.71	94.59	0.19	0.19	100	100	0.00	1.31
1T1x T	(untitled)	N/A		N/A	N/A	5	Unrestricted	120.00	76.00	0	Unrestricted	24.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
1T2 T	(untitled)	N/A	1	1	F	5	1800	6.00	0.00	5	1790	78.53	54.53	94.44	0.16	0.16	100	100	0.00	1.09
1T2x T	(untitled)	N/A		N/A	N/A	6	Unrestricted	120.00	75.00	0	Unrestricted	24.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00

Traffic Stream Results

Arm	Traffic Stream	Name	Traffic Node	Controller Stream	Phase	Phase2	Calculated Flow Entering LTS (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s (per cycle))	Wasted Time Total (s (per cycle))	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Journey Time Per PCU (s)	Mean Delay Per PCU (s)	Mean Stops Per PCU (%)	Mean Max Queue (PCU)	Max End Of Red Queue (PCU)	Delay Weighting Multiplier (%)	Stop Weighting Multiplier (%)	Cost Of Penalties (£ per hr)	P.I.
1A	1 NB		1	1	A	N/A	440	1763	82.00	0.00	36	149	12.29	5.09	19.35	3.07	2.42	100	100	0.00	9.91
1Ax	1 NB			N/A	N/A	N/A	160	Unrestricted	120.00	21.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
1B	1 NB		1	1	B	N/A	26	1483	6.00	0.00	30	199	86.13	63.09	102.04	0.89	0.88	100	100	0.00	6.80
1Bx	1 NB			N/A	N/A	N/A	62	Unrestricted	120.00	0.00	0	Unrestricted	23.04	0.00	0.00	0.00	N/A	100	100	0.00	0.00
1C	1 NB		1	1	C	N/A	162	1663	82.00	0.00	14	539	10.23	6.63	33.22	1.86	1.68	100	100	0.00	4.91
1Cx	1 NB			N/A	N/A	N/A	402	Unrestricted	120.00	21.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
1D	1 NB		1	1	D	N/A	5	1407	6.00	0.00	6	1377	61.94	55.10	94.36	0.16	0.16	100	100	0.00	1.15
1Dx	1 NB			N/A	N/A	N/A	9	Unrestricted	120.00	9.00	0	Unrestricted	6.84	0.00	0.00	0.00	N/A	100	100	0.00	0.00
2A	1		2	2	A	C	667	1242	66.00	0.00	96 !	-6	70.10	65.90	122.96	28.54 +	17.24	100	100	0.00	183.66
2Ax	1			N/A	N/A	N/A	256	Unrestricted	120.00	0.00	0	Unrestricted	4.20	0.00	0.00	0.00	N/A	100	100	0.00	0.00
2B	1		2	2	B	N/A	97	1234	35.00	0.00	26	243	56.42	33.62	75.97	2.50	2.31	100	100	0.00	13.79
2Bx	1			N/A	N/A	N/A	256	Unrestricted	120.00	0.00	0	Unrestricted	22.80	0.00	0.00	0.00	N/A	100	100	0.00	0.00
2C	1		2	2	C	N/A	182	1658	66.00	0.00	20	358	18.35	13.55	47.31	2.94	2.65	100	100	0.00	10.80
2Cx	1			N/A	N/A	N/A	448	Unrestricted	120.00	7.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
2D	1		2	2	D	B	396	1429	35.00	0.00	92 !	-3	87.43	79.63	124.80	17.01 +	13.49	100	100	0.00	130.58
2Dx	1			N/A	N/A	N/A	382	Unrestricted	120.00	0.00	0	Unrestricted	7.80	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3A	1		3	N/A	N/A	N/A	160	Unrestricted	120.00	7.00	0	Unrestricted	7.20	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3Ax	1			N/A	N/A	N/A	444	Unrestricted	120.00	0.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3B	1		3	N/A	N/A	N/A	0	0	120.00	120.00	0	-100	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3Bx	1			N/A	N/A	N/A	0	Unrestricted	120.00	120.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3C	1		3	N/A	N/A	N/A	444	1800	120.00	0.00	25	265	6.93	0.33	0.00	0.04	N/A	100	100	0.00	0.57
3Cx	1			N/A	N/A	N/A	160	Unrestricted	120.00	6.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4A	1		4	N/A	N/A	N/A	182	Unrestricted	120.00	0.00	0	Unrestricted	6.60	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4Ax	1			N/A	N/A	N/A	443	Unrestricted	120.00	0.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4B	1		4	N/A	N/A	N/A	0	0	120.00	120.00	0	-100	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4Bx	1			N/A	N/A	N/A	0	Unrestricted	120.00	120.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4C	1		4	N/A	N/A	N/A	443	1800	120.00	0.00	25	266	5.13	0.33	0.00	0.04	N/A	100	100	0.00	0.57
4Cx	1			N/A	N/A	N/A	182	Unrestricted	120.00	0.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00

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)
TOTAL	270.23	33.96	7.96	12.26	12.00	344.50	20.65	0.00	365.15
BUSES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TRAMS	2.20	0.31	7.02	0.16	0.00	2.37	0.03	0.00	2.40
OTHER (NORMAL)	268.03	33.65	7.97	12.10	12.00	342.13	20.62	0.00	362.75

- *B = at least one source for this link carries buses*

- *T = at least one source for this link carries trams*
- *P = this link is a pedestrian link*
- *< = adjusted flow warning (upstream links are over-saturated)*
- *! = DOS threshold exceeded*
- *f = average saturation flow for flared link*
- ** = 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 excess queue is greater than 0*
- ***P.I. = PERFORMANCE INDEX***

TRANSYT 14

Version: 14.1.2.315 [26-09-12]

For sales and distribution information, program advice and maintenance, contact TRL:
Tel: +44 (0)1344 770758 E-mail: software@trl.co.uk Web: http://www.trlsoftware.co.uk

Last run: 25/07/2019 12:35:16
Analysis Set used for last run: A8 -

Filename: R043 TRANSYT Model 20190719.t14
Path: J:\R_JOBS\Job-R043\B_Documents\C_Civil\A_CS Reports\4.0 SHD Application for Additional Floors\Traffic\Modelling
Report generation date: 25/07/2019 12:35:18

File summary

File Description

Title	Spencer North
Location	Dublin 1
Site Number	
UTCRegion	
Driving Side	Left
Date	27/03/2018
Version	
Status	
Identifier	
Client	
Jobnumber	R043
Enumerator	GF
Description	

Units

Speed Units	Distance Units	Fuel Economy Units	Fuel Rate Units	Mass Units	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
kph	m	l/100km	l/h	kg	perHour	s	-Hour	perHour

Sorting

Show Names Instead of IDs (For Aimsun)	Sorting Direction	Sorting Type	Ignore Prefixes When Sorting	Link Grouping	Source Grouping
	Ascending	Numerical		Normal	Normal

A8 - : D8 - 2027 No Dev 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)	Cycle Time Used (s)	Total Network Delay (PCU-hr/hr)	Highest DOS (%)	LTSWith Highest DOS	Number Of Oversaturated LTS	Percentage Of Oversaturated LTS (%)	LTSWith Worst Signalised PRC	LTSWith Worst Unsignalised PRC	LTSWith Worst Overall PRC	Network Within Capacity
A8 -	25/07/2019 12:35:03	25/07/2019 12:35:16	17:00	120	9.92	61.80	2D/1	0	0	2D/1	4B/1	4B/1	✓

Signal Timings

120s cycle time; 120 steps

Controller Stream

Controller Stream	Name	Description	Gaining Delay Type	Signals Manipulation Mode	Multiple Cycling	Offset Relative To	Offset Valid	Offset Positive (s)	Offset Negative (s)	Auto Redistribute	Optimisation Level	Use Sequence
1	New Wapping St / Mayor St		Absolute	StageBased	Single	1	✓	0	0	✓	Offsets And Green Splits	1
2	East Rd / Sheriff St / New Wapping St		Absolute	StageBased	Single	1	✓	19	-101	✓	Offsets And Green Splits	1

Phases

Controller Stream	Phase	Name	Minimum Green (s)	Maximum Green (s)	Relative Start Displacement (s)	Relative End Displacement (s)	Dummy
1	A	(untitled)	6	300	0	0	
1	B	(untitled)	6	300	0	0	
1	C	(untitled)	6	300	0	0	
1	D	(untitled)	6	300	0	0	
1	E	(untitled)	6	300	0	0	
1	F	(untitled)	6	300	0	0	
1	G	(untitled)	8	300	0	0	
2	A	(untitled)	6	300	0	0	
2	B	(untitled)	6	300	0	0	
2	C	(untitled)	6	300	0	0	
2	D	(untitled)	6	300	0	0	
2	E	(untitled)	3	300	0	0	✓

Library Stages

Controller Stream	Library Stage	Phases In Stage	User Stage Minimum (s)
1	1	A,C	6
1	2	B,D,E,F	6
1	3	G	12
2	1	A,C	1
2	2	B,D	1
2	3	E	1
2	4	A	1
2	5	B	1
2	6	C	1
2	7	D	1

Stage Sequences

Controller Stream	Stage Sequence	Name	Stage IDs	Stage Ends	Multiple Cycling Stage IDs	Multiple Cycling Stage Ends
1	1	(untitled)	1,2,3	35,49,67		
1	2	(untitled)	1,3,2	0,42,82		
2	1	(untitled)	1,2,3	20,81,89		
2	2	(untitled)	1,3,2	0,37,78		
2	3	(untitled)	1,3,2,5	0,30,64,87		
2	4	(untitled)	1,3,7,5	0,28,60,86		
2	5	(untitled)	1,3,4,2	0,27,58,88		
2	6	(untitled)	2,6,3,4	0,30,57,88		
2	7	(untitled)	1,7,3,5	0,30,57,88		
2	8	(untitled)	2,4,6,3	0,31,57,85		
2	9	(untitled)	1,3,5,2	0,30,59,87		
2	10	(untitled)	1,3,2,6	0,30,64,92		

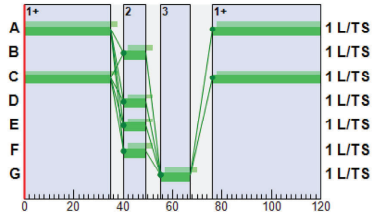
Resultant Stages

Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases In This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
1	1	✓	1	A,C	76	35	79	6	6
1	2	✓	2	B,D,E,F	40	49	9	6	6
1	3	✓	3	G	55	67	12	12	12
2	1	✓	1	A,C	95	20	45	1	6
2	2	✓	2	B,D	25	81	56	1	6
2	3	✓	3	E	86	89	3	1	3

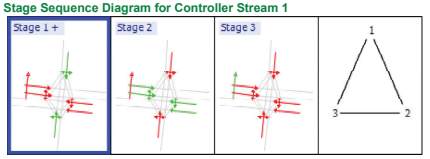
Resultant Phase Green Periods

Controller Stream	Phase	Green Period	Is Base Green Period	Start Time (s)	End Time (s)	Duration (s)
1	A	1	✓	76	35	79
1	B	1	✓	40	49	9
1	C	1	✓	76	35	79
1	D	1	✓	40	49	9
1	E	1	✓	40	49	9
1	F	1	✓	40	49	9
1	G	1	✓	55	67	12
2	A	1	✓	95	20	45
2	B	1	✓	25	81	56
2	C	1	✓	95	20	45
2	D	1	✓	25	81	56
2	E	1	✓	86	89	3

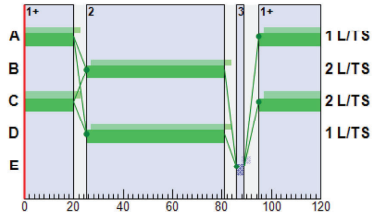
Phase Timings Diagram for Controller Stream 1



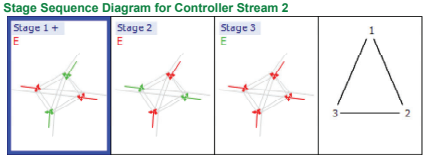
Stage Sequence Diagram for Controller Stream 1



Phase Timings Diagram for Controller Stream 2



Stage Sequence Diagram for Controller Stream 2



Final Prediction Table

Link Results

Link	Name	Major Link	Traffic Node	Controller Stream	Phase	Calculated Flow Entering LTS (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s (per cycle))	Wasted Time Total (s (per cycle))	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Journey Time Per PCU (s)	Mean Delay Per PCU (s)	Mean Stops Per PCU (%)	Mean Max Queue (PCU)	Max End Of Red Queue (PCU)	Delay Weighting (%)	Stop Weighting (%)	Cost Of Penalties (£ per hr)	P.I.
1P P	(untitled)	N/A	1	1	G	1	Unrestricted	12.00	0.00	0	Unrestricted	12.00	0.00	0.00	0.00	0.00	100	100	0.00	0.00
1T1 T	(untitled)	N/A	1	1	E	7	1800	9.00	0.00	5	1829	75.46	51.46	91.72	0.22	0.22	100	100	0.00	1.44
1T1x T	(untitled)	N/A		N/A	N/A	6	Unrestricted	120.00	64.00	0	Unrestricted	24.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
1T2 T	(untitled)	N/A	1	1	F	6	1800	9.00	0.00	4	2150	75.37	51.37	91.64	0.18	0.18	100	100	0.00	1.23
1T2x T	(untitled)	N/A		N/A	N/A	7	Unrestricted	120.00	63.00	0	Unrestricted	24.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00

Traffic Stream Results

Arm	Traffic Stream	Name	Traffic Node	Controller Stream	Phase	Phase2	Calculated Flow Entering LTS (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s (per cycle))	Wasted Time Total (s (per cycle))	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Journey Time Per PCU (s)	Mean Delay Per PCU (s)	Mean Stops Per PCU (%)	Mean Max Queue (PCU)	Max End Of Red Queue (PCU)	Delay Weighting Multiplier (%)	Stop Weighting Multiplier (%)	Cost Of Penalties (£ per hr)	P.I.
1A	1 NB		1	1	A	N/A	128	1762	79.00	0.00	11	726	13.50	6.30	31.73	1.39	1.33	100	100	0.00	3.69
1Ax	1 NB			N/A	N/A	N/A	293	Unrestricted	120.00	22.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
1B	1 NB		1	1	B	N/A	12	1652	9.00	0.00	9	932	75.16	52.12	91.72	0.37	0.37	100	100	0.00	2.61
1Bx	1 NB			N/A	N/A	N/A	29	Unrestricted	120.00	0.00	0	Unrestricted	23.04	0.00	0.00	0.00	N/A	100	100	0.00	0.00
1C	1 NB		1	1	C	N/A	305	1748	79.00	0.00	26	244	12.27	8.67	39.29	4.11	3.44	100	100	0.00	11.93
1Cx	1 NB			N/A	N/A	N/A	122	Unrestricted	120.00	21.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
1D	1 NB		1	1	D	N/A	10	999	9.00	0.00	12	649	61.17	54.33	93.95	0.32	0.31	100	100	0.00	2.26
1Dx	1 NB			N/A	N/A	N/A	11	Unrestricted	120.00	10.00	0	Unrestricted	6.84	0.00	0.00	0.00	N/A	100	100	0.00	0.00
2A	1		2	2	A	C	218	1057	45.00	0.00	54	67	39.78	35.58	83.07	6.12 +	4.79	100	100	0.00	32.86
2Ax	1			N/A	N/A	N/A	500	Unrestricted	120.00	0.00	0	Unrestricted	4.20	0.00	0.00	0.00	N/A	100	100	0.00	0.00
2B	1		2	2	B	N/A	111	1069	56.00	0.00	22	312	42.62	19.82	58.95	2.22	1.97	100	100	0.00	9.50
2Bx	1			N/A	N/A	N/A	205	Unrestricted	120.00	0.00	0	Unrestricted	22.80	0.00	0.00	0.00	N/A	100	100	0.00	0.00
2C	1		2	2	C	N/A	312	1695	45.00	0.00	48	87	27.78	22.98	44.80	5.43	4.01	100	100	0.00	30.03
2Cx	1			N/A	N/A	N/A	156	Unrestricted	120.00	7.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
2D	1		2	2	D	B	489	1666	56.00	0.00	62	46	34.96	27.16	75.54	12.59 +	9.05	100	100	0.00	57.01
2Dx	1			N/A	N/A	N/A	269	Unrestricted	120.00	0.00	0	Unrestricted	7.80	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3A	1		3	N/A	N/A	N/A	298	Unrestricted	120.00	7.00	0	Unrestricted	7.20	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3Ax	1			N/A	N/A	N/A	130	Unrestricted	120.00	0.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3B	1		3	N/A	N/A	N/A	0	0	120.00	120.00	0	-100	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3Bx	1			N/A	N/A	N/A	0	Unrestricted	120.00	120.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3C	1		3	N/A	N/A	N/A	130	1800	120.00	0.00	7	1146	6.68	0.08	0.00	0.00	N/A	100	100	0.00	0.04
3Cx	1			N/A	N/A	N/A	298	Unrestricted	120.00	6.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4A	1		4	N/A	N/A	N/A	307	Unrestricted	120.00	1.00	0	Unrestricted	6.60	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4Ax	1			N/A	N/A	N/A	155	Unrestricted	120.00	0.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4B	1		4	N/A	N/A	N/A	0	0	120.00	120.00	0	-100	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4Bx	1			N/A	N/A	N/A	0	Unrestricted	120.00	120.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4C	1		4	N/A	N/A	N/A	155	1800	120.00	0.00	9	945	4.89	0.09	0.00	0.00	N/A	100	100	0.00	0.06
4Cx	1			N/A	N/A	N/A	307	Unrestricted	120.00	1.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00

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)
TOTAL	223.63	17.87	12.52	8.79	1.13	140.88	11.78	0.00	152.66
BUSES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TRAMS	2.60	0.36	7.24	0.18	0.00	2.64	0.04	0.00	2.67
OTHER (NORMAL)	221.03	17.51	12.62	8.61	1.13	138.24	11.74	0.00	149.99

- *B = at least one source for this link carries buses*
- *T = at least one source for this link carries trams*
- *P = this link is a pedestrian link*
- *< = adjusted flow warning (upstream links are over-saturated)*
- *! = DOS threshold exceeded*
- *f = average saturation flow for flared link*
- ** = 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 excess queue is greater than 0*
- ***P.I. = PERFORMANCE INDEX***

TRANSYT 14

Version: 14.1.2.315 [26-09-12]

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Last run: 25/07/2019 12:35:51
Analysis Set used for last run: A9 -

Filename: R043 TRANSYT Model 20190719.t14
Path: J:\R_JOBS\Job-R043\B_Documents\C_Civil\A_CS Reports\4.0 SHD Application for Additional Floors\Traffic\Modelling
Report generation date: 25/07/2019 12:35:54

File summary

File Description

Title	Spencer North
Location	Dublin 1
Site Number	
UTCRegion	
Driving Side	Left
Date	27/03/2018
Version	
Status	
Identifier	
Client	
Jobnumber	R043
Enumerator	GF
Description	

Units

Speed Units	Distance Units	Fuel Economy Units	Fuel Rate Units	Mass Units	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
kph	m	l/100km	l/h	kg	perHour	s	-Hour	perHour

Sorting

Show Names Instead of IDs (For Aimsun)	Sorting Direction	Sorting Type	Ignore Prefixes When Sorting	Link Grouping	Source Grouping
	Ascending	Numerical		Normal	Normal

A9 - : D9 - 2027 With Dev 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)	Cycle Time Used (s)	Total Network Delay (PCU-hr/hr)	Highest DOS (%)	LTSWith Highest DOS	Number Of Oversaturated LTS	Percentage Of Oversaturated LTS (%)	LTSWith Worst Signalised PRC	LTSWith Worst Unsignalised PRC	LTSWith Worst Overall PRC	Network Within Capacity
A9 -	25/07/2019 12:35:37	25/07/2019 12:35:51	07:45	120	27.21	96.53	2A/1	2	6	2A/1	4C/1	2A/1	

Signal Timings

120s cycle time; 120 steps

Controller Stream

Controller Stream	Name	Description	Gaining Delay Type	Signals Manipulation Mode	Multiple Cycling	Offset Relative To	Offset Valid	Offset Positive (s)	Offset Negative (s)	Auto Redistribute	Optimisation Level	Use Sequence
1	New Wapping St / Mayor St		Absolute	StageBased	Single	1	✓	0	0	✓	Offsets And Green Splits	1
2	East Rd / Sheriff St / New Wapping St		Absolute	StageBased	Single	1	✓	92	-28	✓	Offsets And Green Splits	1

Phases

Controller Stream	Phase	Name	Minimum Green (s)	Maximum Green (s)	Relative Start Displacement (s)	Relative End Displacement (s)	Dummy
1	A	(untitled)	6	300	0	0	
1	B	(untitled)	6	300	0	0	
1	C	(untitled)	6	300	0	0	
1	D	(untitled)	6	300	0	0	
1	E	(untitled)	6	300	0	0	
1	F	(untitled)	6	300	0	0	
1	G	(untitled)	8	300	0	0	
2	A	(untitled)	6	300	0	0	
2	B	(untitled)	6	300	0	0	
2	C	(untitled)	6	300	0	0	
2	D	(untitled)	6	300	0	0	
2	E	(untitled)	3	300	0	0	✓

Library Stages

Controller Stream	Library Stage	Phases In Stage	User Stage Minimum (s)
1	1	A,C	6
1	2	B,D,E,F	6
1	3	G	12
2	1	A,C	1
2	2	B,D	1
2	3	E	1
2	4	A	1
2	5	B	1
2	6	C	1
2	7	D	1

Stage Sequences

Controller Stream	Stage Sequence	Name	Stage IDs	Stage Ends	Multiple Cycling Stage IDs	Multiple Cycling Stage Ends
1	1	(untitled)	1,2,3	85,96,114		
1	2	(untitled)	1,3,2	0,42,82		
2	1	(untitled)	1,2,3	42,81,89		
2	2	(untitled)	1,3,2	0,37,78		
2	3	(untitled)	1,3,2,5	0,30,64,87		
2	4	(untitled)	1,3,7,5	0,28,60,86		
2	5	(untitled)	1,3,4,2	0,27,58,88		
2	6	(untitled)	2,6,3,4	0,30,57,88		
2	7	(untitled)	1,7,3,5	0,30,57,88		
2	8	(untitled)	2,4,6,3	0,31,57,85		
2	9	(untitled)	1,3,5,2	0,30,59,87		
2	10	(untitled)	1,3,2,6	0,30,64,92		

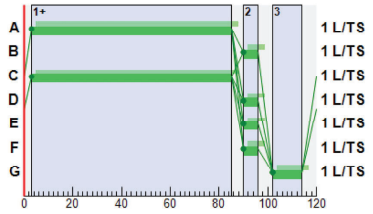
Resultant Stages

Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases In This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
1	1	✓	1	A,C	3	85	82	6	6
1	2	✓	2	B,D,E,F	90	96	6	6	6
1	3	✓	3	G	102	114	12	12	12
2	1	✓	1	A,C	95	42	67	1	6
2	2	✓	2	B,D	47	81	34	1	6
2	3	✓	3	E	86	89	3	1	3

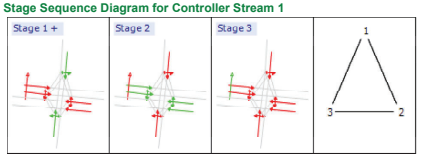
Resultant Phase Green Periods

Controller Stream	Phase	Green Period	Is Base Green Period	Start Time (s)	End Time (s)	Duration (s)
1	A	1	✓	3	85	82
1	B	1	✓	90	96	6
1	C	1	✓	3	85	82
1	D	1	✓	90	96	6
1	E	1	✓	90	96	6
1	F	1	✓	90	96	6
1	G	1	✓	102	114	12
2	A	1	✓	95	42	67
2	B	1	✓	47	81	34
2	C	1	✓	95	42	67
2	D	1	✓	47	81	34
2	E	1	✓	86	89	3

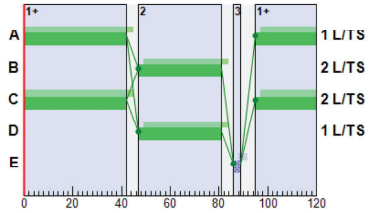
Phase Timings Diagram for Controller Stream 1



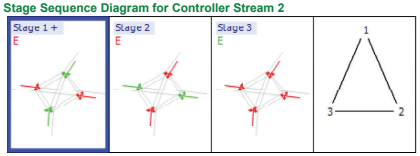
Stage Sequence Diagram for Controller Stream 1



Phase Timings Diagram for Controller Stream 2



Stage Sequence Diagram for Controller Stream 2



Final Prediction Table

Link Results

Link	Name	Major Link	Traffic Node	Controller Stream	Phase	Calculated Flow Entering LTS (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s (per cycle))	Wasted Time Total (s (per cycle))	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Journey Time Per PCU (s)	Mean Delay Per PCU (s)	Mean Stops Per PCU (%)	Mean Max Queue (PCU)	Max End Of Red Queue (PCU)	Delay Weighting (%)	Stop Weighting (%)	Cost Of Penalties (£ per hr)	P.I.
1P P	(untitled)	N/A	1	1	G	1	Unrestricted	12.00	0.00	0	Unrestricted	12.00	0.00	0.00	0.00	0.00	100	100	0.00	0.00
1T1 T	(untitled)	N/A	1	1	E	6	1800	6.00	0.00	6	1475	78.71	54.71	94.59	0.19	0.19	100	100	0.00	1.31
1T1x T	(untitled)	N/A		N/A	N/A	5	Unrestricted	120.00	76.00	0	Unrestricted	24.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
1T2 T	(untitled)	N/A	1	1	F	5	1800	6.00	0.00	5	1790	78.53	54.53	94.44	0.16	0.16	100	100	0.00	1.09
1T2x T	(untitled)	N/A		N/A	N/A	6	Unrestricted	120.00	75.00	0	Unrestricted	24.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00

Traffic Stream Results

Arm	Traffic Stream	Name	Traffic Node	Controller Stream	Phase	Phase2	Calculated Flow Entering LTS (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s (per cycle))	Wasted Time Total (s (per cycle))	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Journey Time Per PCU (s)	Mean Delay Per PCU (s)	Mean Stops Per PCU (%)	Mean Max Queue (PCU)	Max End Of Red Time Queue (PCU)	Delay Weighting Multiplier (%)	Stop Weighting Multiplier (%)	Cost Of Penalties (£ per hr)	P.I.
1A	1 NB		1	1	A	N/A	455	1759	82.00	0.00	37	141	12.63	5.43	20.98	3.34	2.70	100	100	0.00	10.94
1Ax	1 NB			N/A	N/A	N/A	163	Unrestricted	120.00	21.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
1B	1 NB		1	1	B	N/A	26	1483	6.00	0.00	30	199	86.13	63.09	102.04	0.89	0.88	100	100	0.00	6.80
1Bx	1 NB			N/A	N/A	N/A	64	Unrestricted	120.00	0.00	0	Unrestricted	23.04	0.00	0.00	0.00	N/A	100	100	0.00	0.00
1C	1 NB		1	1	C	N/A	165	1664	82.00	0.00	14	528	10.25	6.65	33.26	1.89	1.71	100	100	0.00	5.02
1Cx	1 NB			N/A	N/A	N/A	414	Unrestricted	120.00	21.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
1D	1 NB		1	1	D	N/A	5	1407	6.00	0.00	6	1377	61.94	55.10	94.36	0.16	0.16	100	100	0.00	1.15
1Dx	1 NB			N/A	N/A	N/A	10	Unrestricted	120.00	9.00	0	Unrestricted	6.84	0.00	0.00	0.00	N/A	100	100	0.00	0.00
2A	1		2	2	A	C	676	1236	67.00	0.00	97 !	-7	71.34	67.14	124.37	29.21 +	17.57	100	100	0.00	189.57
2Ax	1			N/A	N/A	N/A	269	Unrestricted	120.00	0.00	0	Unrestricted	4.20	0.00	0.00	0.00	N/A	100	100	0.00	0.00
2B	1		2	2	B	N/A	97	1228	34.00	0.00	27	232	57.32	34.52	77.01	2.53	2.34	100	100	0.00	14.14
2Bx	1			N/A	N/A	N/A	258	Unrestricted	120.00	0.00	0	Unrestricted	22.80	0.00	0.00	0.00	N/A	100	100	0.00	0.00
2C	1		2	2	C	N/A	214	1655	67.00	0.00	23	294	18.12	13.32	47.39	3.46	3.06	100	100	0.00	12.51
2Cx	1			N/A	N/A	N/A	460	Unrestricted	120.00	7.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
2D	1		2	2	D	B	399	1420	34.00	0.00	96 !	-7	107.92	100.12	139.55	19.50 +	15.84	100	100	0.00	164.55
2Dx	1			N/A	N/A	N/A	399	Unrestricted	120.00	0.00	0	Unrestricted	7.80	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3A	1		3	N/A	N/A	N/A	163	Unrestricted	120.00	7.00	0	Unrestricted	7.20	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3Ax	1			N/A	N/A	N/A	458	Unrestricted	120.00	0.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3B	1		3	N/A	N/A	N/A	17	516	120.00	0.00	3	2630	4.92	0.12	0.00	0.00	N/A	100	100	0.00	0.01
3Bx	1			N/A	N/A	N/A	6	Unrestricted	120.00	0.00	0	Unrestricted	4.80	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3C	1		3	N/A	N/A	N/A	458	1758	120.00	0.00	26	246	6.96	0.36	0.00	0.05	N/A	100	100	0.00	0.65
3Cx	1			N/A	N/A	N/A	174	Unrestricted	120.00	0.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4A	1		4	N/A	N/A	N/A	196	Unrestricted	120.00	0.00	0	Unrestricted	6.60	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4Ax	1			N/A	N/A	N/A	457	Unrestricted	120.00	0.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4B	1		4	N/A	N/A	N/A	29	504	120.00	0.00	6	1463	5.02	0.22	0.00	0.00	N/A	100	100	0.00	0.02
4Bx	1			N/A	N/A	N/A	10	Unrestricted	120.00	0.00	0	Unrestricted	4.80	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4C	1		4	N/A	N/A	N/A	456	1737	120.00	0.00	26	243	5.17	0.37	0.00	0.05	N/A	100	100	0.00	0.66
4Cx	1			N/A	N/A	N/A	214	Unrestricted	120.00	0.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00

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)
TOTAL	280.11	37.27	7.52	12.62	14.60	386.40	22.04	0.00	408.44
BUSES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TRAMS	2.20	0.31	7.02	0.16	0.00	2.37	0.03	0.00	2.40
OTHER (NORMAL)	277.91	36.96	7.52	12.45	14.59	384.03	22.01	0.00	406.04

- *B = at least one source for this link carries buses*

- *T = at least one source for this link carries trams*
- *P = this link is a pedestrian link*
- *< = adjusted flow warning (upstream links are over-saturated)*
- *! = DOS threshold exceeded*
- *f = average saturation flow for flared link*
- ** = 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 excess queue is greater than 0*
- ***P.I. = PERFORMANCE INDEX***

TRANSYT 14

Version: 14.1.2.315 [26-09-12]

For sales and distribution information, program advice and maintenance, contact TRL:
Tel: +44 (0)1344 770758 E-mail: software@trl.co.uk Web: http://www.trlsoftware.co.uk

Last run: 25/07/2019 12:46:29
Analysis Set used for last run: A10 -

Filename: R043 TRANSYT Model 20190719.t14
Path: J:\R_JOBS\Job-R043\B_Documents\C_Civil\A_CS Reports\4.0 SHD Application for Additional Floors\Traffic\Modelling
Report generation date: 25/07/2019 12:46:34

File summary

File Description

Title	Spencer North
Location	Dublin 1
Site Number	
UTCRegion	
Driving Side	Left
Date	27/03/2018
Version	
Status	
Identifier	
Client	
Jobnumber	R043
Enumerator	GF
Description	

Units

Speed Units	Distance Units	Fuel Economy Units	Fuel Rate Units	Mass Units	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
kph	m	l/100km	l/h	kg	perHour	s	-Hour	perHour

Sorting

Show Names Instead of IDs (For Aimsun)	Sorting Direction	Sorting Type	Ignore Prefixes When Sorting	Link Grouping	Source Grouping
	Ascending	Numerical		Normal	Normal

A10 - : D10 - 2027 With Dev 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)	Cycle Time Used (s)	Total Network Delay (PCU-hr/hr)	Highest DOS (%)	LTSWith Highest DOS	Number Of Oversaturated LTS	Percentage Of Oversaturated LTS (%)	LTSWith Worst Signalised PRC	LTSWith Worst Unsignalised PRC	LTSWith Worst Overall PRC	Network Within Capacity
A10 -	25/07/2019 12:46:14	25/07/2019 12:46:29	17:00	120	11.01	66.38	2D/1	0	0	2D/1	4C/1	2D/1	✓

Signal Timings

120s cycle time; 120 steps

Controller Stream

Controller Stream	Name	Description	Gaining Delay Type	Signals Manipulation Mode	Multiple Cycling	Offset Relative To	Offset Valid	Offset Positive (s)	Offset Negative (s)	Auto Redistribute	Optimisation Level	Use Sequence
1	New Wapping St / Mayor St		Absolute	StageBased	Single	1	✓	0	0	✓	Offsets And Green Splits	1
2	East Rd / Sheriff St / New Wapping St		Absolute	StageBased	Single	1	✓	17	-103	✓	Offsets And Green Splits	1

Phases

Controller Stream	Phase	Name	Minimum Green (s)	Maximum Green (s)	Relative Start Displacement (s)	Relative End Displacement (s)	Dummy
1	A	(untitled)	6	300	0	0	
1	B	(untitled)	6	300	0	0	
1	C	(untitled)	6	300	0	0	
1	D	(untitled)	6	300	0	0	
1	E	(untitled)	6	300	0	0	
1	F	(untitled)	6	300	0	0	
1	G	(untitled)	8	300	0	0	
2	A	(untitled)	6	300	0	0	
2	B	(untitled)	6	300	0	0	
2	C	(untitled)	6	300	0	0	
2	D	(untitled)	6	300	0	0	
2	E	(untitled)	3	300	0	0	✓

Library Stages

Controller Stream	Library Stage	Phases In Stage	User Stage Minimum (s)
1	1	A,C	6
1	2	B,D,E,F	6
1	3	G	12
2	1	A,C	1
2	2	B,D	1
2	3	E	1
2	4	A	1
2	5	B	1
2	6	C	1
2	7	D	1

Stage Sequences

Controller Stream	Stage Sequence	Name	Stage IDs	Stage Ends	Multiple Cycling Stage IDs	Multiple Cycling Stage Ends
1	1	(untitled)	1,2,3	39,51,69		
1	2	(untitled)	1,3,2	0,42,82		
2	1	(untitled)	1,2,3	22,81,89		
2	2	(untitled)	1,3,2	0,37,78		
2	3	(untitled)	1,3,2,5	0,30,64,87		
2	4	(untitled)	1,3,7,5	0,28,60,86		
2	5	(untitled)	1,3,4,2	0,27,58,88		
2	6	(untitled)	2,6,3,4	0,30,57,88		
2	7	(untitled)	1,7,3,5	0,30,57,88		
2	8	(untitled)	2,4,6,3	0,31,57,85		
2	9	(untitled)	1,3,5,2	0,30,59,87		
2	10	(untitled)	1,3,2,6	0,30,64,92		

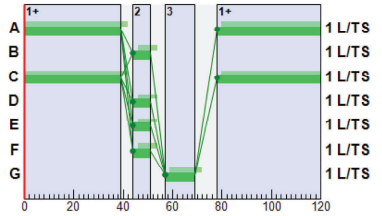
Resultant Stages

Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases In This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
1	1	✓	1	A,C	78	39	81	6	6
1	2	✓	2	B,D,E,F	44	51	7	6	6
1	3	✓	3	G	57	69	12	12	12
2	1	✓	1	A,C	95	22	47	1	6
2	2	✓	2	B,D	27	81	54	1	6
2	3	✓	3	E	86	89	3	1	3

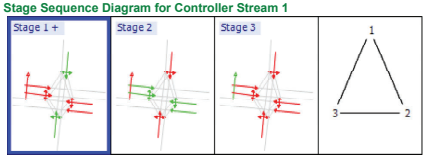
Resultant Phase Green Periods

Controller Stream	Phase	Green Period	Is Base Green Period	Start Time (s)	End Time (s)	Duration (s)
1	A	1	✓	78	39	81
1	B	1	✓	44	51	7
1	C	1	✓	78	39	81
1	D	1	✓	44	51	7
1	E	1	✓	44	51	7
1	F	1	✓	44	51	7
1	G	1	✓	57	69	12
2	A	1	✓	95	22	47
2	B	1	✓	27	81	54
2	C	1	✓	95	22	47
2	D	1	✓	27	81	54
2	E	1	✓	86	89	3

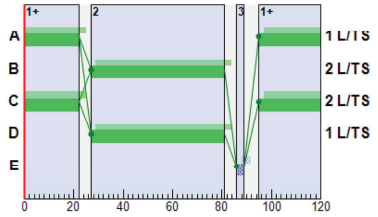
Phase Timings Diagram for Controller Stream 1



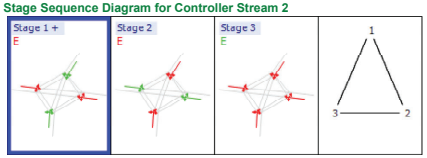
Stage Sequence Diagram for Controller Stream 1



Phase Timings Diagram for Controller Stream 2



Stage Sequence Diagram for Controller Stream 2



Final Prediction Table

Link Results

Link	Name	Major Link	Traffic Node	Controller Stream	Phase	Calculated Flow Entering LTS (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s (per cycle))	Wasted Time Total (s (per cycle))	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Journey Time Per PCU (s)	Mean Delay Per PCU (s)	Mean Stops Per PCU (%)	Mean Max Queue (PCU)	Max End Of Red Queue (PCU)	Delay Weighting (%)	Stop Weighting (%)	Cost Of Penalties (£ per hr)	P.I.
1P P	(untitled)	N/A	1	1	G	1	Unrestricted	12.00	0.00	0	Unrestricted	12.00	0.00	0.00	0.00	0.00	100	100	0.00	0.00
1T1 T	(untitled)	N/A	1	1	E	7	1800	7.00	0.00	6	1443	77.66	53.66	93.67	0.22	0.22	100	100	0.00	1.50
1T1x T	(untitled)	N/A		N/A	N/A	6	Unrestricted	120.00	64.00	0	Unrestricted	24.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
1T2 T	(untitled)	N/A	1	1	F	6	1800	7.00	0.00	5	1700	77.52	53.52	93.55	0.19	0.19	100	100	0.00	1.28
1T2x T	(untitled)	N/A		N/A	N/A	7	Unrestricted	120.00	63.00	0	Unrestricted	24.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00

Traffic Stream Results

Arm	Traffic Stream	Name	Traffic Node	Controller Stream	Phase	Phase2	Calculated Flow Entering LTS (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s (per cycle))	Wasted Time Total (s (per cycle))	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Journey Time Per PCU (s)	Mean Delay Per PCU (s)	Mean Stops Per PCU (%)	Mean Max Queue (PCU)	Max End Of Red Queue (PCU)	Delay Weighting Multiplier (%)	Stop Weighting Multiplier (%)	Cost Of Penalties (£ per hr)	P.I.
1A	1 NB		1	1	A	N/A	131	1763	81.00	0.00	11	728	12.99	5.79	30.50	1.37	1.31	100	100	0.00	3.49
1Ax	1 NB			N/A	N/A	N/A	320	Unrestricted	120.00	22.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
1B	1 NB		1	1	B	N/A	12	1648	7.00	0.00	11	724	77.78	54.74	94.01	0.38	0.38	100	100	0.00	2.73
1Bx	1 NB			N/A	N/A	N/A	30	Unrestricted	120.00	0.00	0	Unrestricted	23.04	0.00	0.00	0.00	N/A	100	100	0.00	0.00
1C	1 NB		1	1	C	N/A	331	1752	81.00	0.00	28	225	11.63	8.03	37.73	4.28	3.55	100	100	0.00	12.05
1Cx	1 NB			N/A	N/A	N/A	124	Unrestricted	120.00	21.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
1D	1 NB		1	1	D	N/A	11	1024	7.00	0.00	16	458	65.16	58.32	97.33	0.36	0.36	100	100	0.00	2.66
1Dx	1 NB			N/A	N/A	N/A	11	Unrestricted	120.00	9.00	0	Unrestricted	6.84	0.00	0.00	0.00	N/A	100	100	0.00	0.00
2A	1		2	2	A	C	241	1084	47.00	0.00	56	62	38.80	34.60	82.78	6.77 +	5.16	100	100	0.00	35.39
2Ax	1			N/A	N/A	N/A	521	Unrestricted	120.00	0.00	0	Unrestricted	4.20	0.00	0.00	0.00	N/A	100	100	0.00	0.00
2B	1		2	2	B	N/A	115	1075	54.00	0.00	23	286	43.94	21.14	60.75	2.37	2.11	100	100	0.00	10.46
2Bx	1			N/A	N/A	N/A	207	Unrestricted	120.00	0.00	0	Unrestricted	22.80	0.00	0.00	0.00	N/A	100	100	0.00	0.00
2C	1		2	2	C	N/A	350	1692	47.00	0.00	52	74	28.77	23.97	49.89	6.47	5.01	100	100	0.00	35.28
2Cx	1			N/A	N/A	N/A	192	Unrestricted	120.00	7.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
2D	1		2	2	D	B	498	1637	54.00	0.00	66	36	37.92	30.12	79.91	13.51 +	9.64	100	100	0.00	64.15
2Dx	1			N/A	N/A	N/A	284	Unrestricted	120.00	0.00	0	Unrestricted	7.80	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3A	1		3	N/A	N/A	N/A	325	Unrestricted	120.00	5.00	0	Unrestricted	7.20	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3Ax	1			N/A	N/A	N/A	133	Unrestricted	120.00	0.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3B	1		3	N/A	N/A	N/A	15	544	120.00	0.00	3	3162	4.89	0.09	0.00	0.00	N/A	100	100	0.00	0.01
3Bx	1			N/A	N/A	N/A	23	Unrestricted	120.00	0.00	0	Unrestricted	4.80	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3C	1		3	N/A	N/A	N/A	145	1476	120.00	0.00	10	816	6.73	0.13	0.00	0.01	N/A	100	100	0.00	0.08
3Cx	1			N/A	N/A	N/A	329	Unrestricted	120.00	0.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4A	1		4	N/A	N/A	N/A	339	Unrestricted	120.00	0.00	0	Unrestricted	6.60	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4Ax	1			N/A	N/A	N/A	170	Unrestricted	120.00	0.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4B	1		4	N/A	N/A	N/A	27	538	120.00	0.00	5	1694	4.98	0.18	0.00	0.00	N/A	100	100	0.00	0.02
4Bx	1			N/A	N/A	N/A	40	Unrestricted	120.00	0.00	0	Unrestricted	4.80	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4C	1		4	N/A	N/A	N/A	191	1409	120.00	0.00	14	564	5.00	0.20	0.00	0.01	N/A	100	100	0.00	0.15
4Cx	1			N/A	N/A	N/A	347	Unrestricted	120.00	0.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00

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)
TOTAL	240.45	19.56	12.29	9.60	1.41	156.33	12.94	0.00	169.26
BUSES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TRAMS	2.60	0.37	7.09	0.19	0.00	2.75	0.04	0.00	2.79
OTHER (NORMAL)	237.85	19.19	12.39	9.41	1.40	153.58	12.90	0.00	166.48

- *B = at least one source for this link carries buses*
- *T = at least one source for this link carries trams*
- *P = this link is a pedestrian link*
- *< = adjusted flow warning (upstream links are over-saturated)*
- *! = DOS threshold exceeded*
- *f = average saturation flow for flared link*
- ** = 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 excess queue is greater than 0*
- ***P.I. = PERFORMANCE INDEX***

TRANSYT 14

Version: 14.1.2.315 [26-09-12]

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Tel: +44 (0)1344 770758 E-mail: software@trl.co.uk Web: http://www.trlsoftware.co.uk

Last run: 25/07/2019 12:47:03
Analysis Set used for last run: A11 -

Filename: R043 TRANSYT Model 20190719.t14
Path: J:\R_JOBS\Job-R043\B_Documents\C_Civil\A_CS Reports\4.0 SHD Application for Additional Floors\Traffic\Modelling
Report generation date: 25/07/2019 12:47:07

File summary

File Description

Title	Spencer North
Location	Dublin 1
Site Number	
UTCRegion	
Driving Side	Left
Date	27/03/2018
Version	
Status	
Identifier	
Client	
Jobnumber	R043
Enumerator	GF
Description	

Units

Speed Units	Distance Units	Fuel Economy Units	Fuel Rate Units	Mass Units	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
kph	m	l/100km	l/h	kg	perHour	s	-Hour	perHour

Sorting

Show Names Instead of IDs (For Aimsun)	Sorting Direction	Sorting Type	Ignore Prefixes When Sorting	Link Grouping	Source Grouping
	Ascending	Numerical		Normal	Normal

A11 - : D11 - 2032 No Dev 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)	Cycle Time Used (s)	Total Network Delay (PCU-hr/hr)	Highest DOS (%)	LTSWith Highest DOS	Number Of Oversaturated LTS	Percentage Of Oversaturated LTS (%)	LTSWith Worst Signalised PRC	LTSWith Worst Unsignalised PRC	LTSWith Worst Overall PRC	Network Within Capacity
A11 -	25/07/2019 12:46:52	25/07/2019 12:47:03	07:45	120	25.80	96.95	2A/1	2	6	2A/1	4B/1	4B/1	

Signal Timings

120s cycle time; 120 steps

Controller Stream

Controller Stream	Name	Description	Gaining Delay Type	Signals Manipulation Mode	Multiple Cycling	Offset Relative To	Offset Valid	Offset Positive (s)	Offset Negative (s)	Auto Redistribute	Optimisation Level	Use Sequence
1	New Wapping St / Mayor St		Absolute	StageBased	Single	1	✓	0	0	✓	Offsets And Green Splits	1
2	East Rd / Sheriff St / New Wapping St		Absolute	StageBased	Single	1	✓	92	-28	✓	Offsets And Green Splits	1

Phases

Controller Stream	Phase	Name	Minimum Green (s)	Maximum Green (s)	Relative Start Displacement (s)	Relative End Displacement (s)	Dummy
1	A	(untitled)	6	300	0	0	
1	B	(untitled)	6	300	0	0	
1	C	(untitled)	6	300	0	0	
1	D	(untitled)	6	300	0	0	
1	E	(untitled)	6	300	0	0	
1	F	(untitled)	6	300	0	0	
1	G	(untitled)	8	300	0	0	
2	A	(untitled)	6	300	0	0	
2	B	(untitled)	6	300	0	0	
2	C	(untitled)	6	300	0	0	
2	D	(untitled)	6	300	0	0	
2	E	(untitled)	3	300	0	0	✓

Library Stages

Controller Stream	Library Stage	Phases In Stage	User Stage Minimum (s)
1	1	A,C	6
1	2	B,D,E,F	6
1	3	G	12
2	1	A,C	1
2	2	B,D	1
2	3	E	1
2	4	A	1
2	5	B	1
2	6	C	1
2	7	D	1

Stage Sequences

Controller Stream	Stage Sequence	Name	Stage IDs	Stage Ends	Multiple Cycling Stage IDs	Multiple Cycling Stage Ends
1	1	(untitled)	1,2,3	85,96,114		
1	2	(untitled)	1,3,2	0,42,82		
2	1	(untitled)	1,2,3	41,81,89		
2	2	(untitled)	1,3,2	0,37,78		
2	3	(untitled)	1,3,2,5	0,30,64,87		
2	4	(untitled)	1,3,7,5	0,28,60,86		
2	5	(untitled)	1,3,4,2	0,27,58,88		
2	6	(untitled)	2,6,3,4	0,30,57,88		
2	7	(untitled)	1,7,3,5	0,30,57,88		
2	8	(untitled)	2,4,6,3	0,31,57,85		
2	9	(untitled)	1,3,5,2	0,30,59,87		
2	10	(untitled)	1,3,2,6	0,30,64,92		

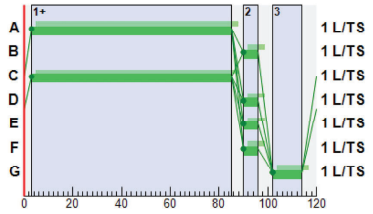
Resultant Stages

Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases In This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
1	1	✓	1	A,C	3	85	82	6	6
1	2	✓	2	B,D,E,F	90	96	6	6	6
1	3	✓	3	G	102	114	12	12	12
2	1	✓	1	A,C	95	41	66	1	6
2	2	✓	2	B,D	46	81	35	1	6
2	3	✓	3	E	86	89	3	1	3

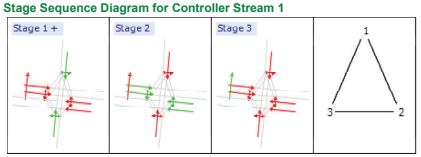
Resultant Phase Green Periods

Controller Stream	Phase	Green Period	Is Base Green Period	Start Time (s)	End Time (s)	Duration (s)
1	A	1	✓	3	85	82
1	B	1	✓	90	96	6
1	C	1	✓	3	85	82
1	D	1	✓	90	96	6
1	E	1	✓	90	96	6
1	F	1	✓	90	96	6
1	G	1	✓	102	114	12
2	A	1	✓	95	41	66
2	B	1	✓	46	81	35
2	C	1	✓	95	41	66
2	D	1	✓	46	81	35
2	E	1	✓	86	89	3

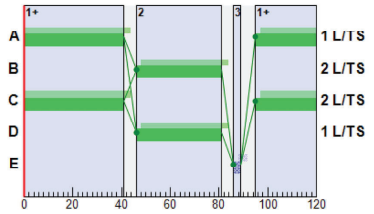
Phase Timings Diagram for Controller Stream 1



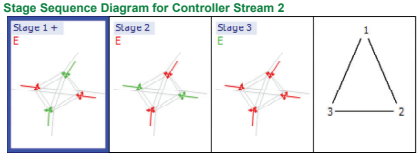
Stage Sequence Diagram for Controller Stream 1



Phase Timings Diagram for Controller Stream 2



Stage Sequence Diagram for Controller Stream 2



Final Prediction Table

Link Results

Link	Name	Major Link	Traffic Node	Controller Stream	Phase	Calculated Flow Entering LTS (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s (per cycle))	Wasted Time Total (s (per cycle))	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Journey Time Per PCU (s)	Mean Delay Per PCU (s)	Mean Stops Per PCU (%)	Mean Max Queue (PCU)	Max End Of Red Queue (PCU)	Delay Weighting (%)	Stop Weighting (%)	Cost Of Penalties (£ per hr)	P.I.
1P P	(untitled)	N/A	1	1	G	1	Unrestricted	12.00	0.00	0	Unrestricted	12.00	0.00	0.00	0.00	0.00	100	100	0.00	0.00
1T1 T	(untitled)	N/A	1	1	E	6	1800	6.00	0.00	6	1475	78.71	54.71	94.59	0.19	0.19	100	100	0.00	1.31
1T1x T	(untitled)	N/A		N/A	N/A	5	Unrestricted	120.00	76.00	0	Unrestricted	24.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
1T2 T	(untitled)	N/A	1	1	F	5	1800	6.00	0.00	5	1790	78.53	54.53	94.44	0.16	0.16	100	100	0.00	1.09
1T2x T	(untitled)	N/A		N/A	N/A	6	Unrestricted	120.00	75.00	0	Unrestricted	24.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00

Traffic Stream Results

Arm	Traffic Stream	Name	Traffic Node	Controller Stream	Phase	Phase2	Calculated Flow Entering LTS (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s (per cycle))	Wasted Time Total (s (per cycle))	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Journey Time Per PCU (s)	Mean Delay Per PCU (s)	Mean Stops Per PCU (%)	Mean Max Queue (PCU)	Max End Of Red Queue (PCU)	Delay Weighting Multiplier (%)	Stop Weighting Multiplier (%)	Cost Of Penalties (£ per hr)	P.I.
1A	1 NB		1	1	A	N/A	444	1759	82.00	0.00	37	147	12.34	5.14	19.67	3.11	2.46	100	100	0.00	10.10
1Ax	1 NB			N/A	N/A	N/A	161	Unrestricted	120.00	21.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
1B	1 NB		1	1	B	N/A	26	1483	6.00	0.00	30	199	86.13	63.09	102.04	0.89	0.88	100	100	0.00	6.80
1Bx	1 NB			N/A	N/A	N/A	62	Unrestricted	120.00	0.00	0	Unrestricted	23.04	0.00	0.00	0.00	N/A	100	100	0.00	0.00
1C	1 NB		1	1	C	N/A	163	1664	82.00	0.00	14	535	10.24	6.84	33.23	1.87	1.69	100	100	0.00	4.95
1Cx	1 NB			N/A	N/A	N/A	405	Unrestricted	120.00	21.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
1D	1 NB		1	1	D	N/A	5	1407	6.00	0.00	6	1377	61.94	55.10	94.36	0.16	0.16	100	100	0.00	1.15
1Dx	1 NB			N/A	N/A	N/A	10	Unrestricted	120.00	9.00	0	Unrestricted	6.84	0.00	0.00	0.00	N/A	100	100	0.00	0.00
2A	1		2	2	A	C	672	1241	66.00	0.00	97 !	-7	74.45	70.25	126.77	29.71 +	18.14	100	100	0.00	196.90
2Ax	1			N/A	N/A	N/A	259	Unrestricted	120.00	0.00	0	Unrestricted	4.20	0.00	0.00	0.00	N/A	100	100	0.00	0.00
2B	1		2	2	B	N/A	98	1219	35.00	0.00	27	236	56.56	33.76	76.20	2.53	2.34	100	100	0.00	13.99
2Bx	1			N/A	N/A	N/A	259	Unrestricted	120.00	0.00	0	Unrestricted	22.80	0.00	0.00	0.00	N/A	100	100	0.00	0.00
2C	1		2	2	C	N/A	183	1658	66.00	0.00	20	355	18.36	13.56	47.35	2.96	2.66	100	100	0.00	10.88
2Cx	1			N/A	N/A	N/A	451	Unrestricted	120.00	7.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
2D	1		2	2	D	B	401	1430	35.00	0.00	93 !	-4	91.83	84.03	128.07	17.69 +	14.13	100	100	0.00	139.35
2Dx	1			N/A	N/A	N/A	385	Unrestricted	120.00	0.00	0	Unrestricted	7.80	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3A	1		3	N/A	N/A	N/A	161	Unrestricted	120.00	7.00	0	Unrestricted	7.20	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3Ax	1			N/A	N/A	N/A	448	Unrestricted	120.00	0.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3B	1		3	N/A	N/A	N/A	0	0	120.00	120.00	0	-100	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3Bx	1			N/A	N/A	N/A	0	Unrestricted	120.00	120.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3C	1		3	N/A	N/A	N/A	448	1800	120.00	0.00	25	262	6.93	0.33	0.00	0.04	N/A	100	100	0.00	0.59
3Cx	1			N/A	N/A	N/A	161	Unrestricted	120.00	6.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4A	1		4	N/A	N/A	N/A	184	Unrestricted	120.00	0.00	0	Unrestricted	6.60	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4Ax	1			N/A	N/A	N/A	446	Unrestricted	120.00	0.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4B	1		4	N/A	N/A	N/A	0	0	120.00	120.00	0	-100	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4Bx	1			N/A	N/A	N/A	0	Unrestricted	120.00	120.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4C	1		4	N/A	N/A	N/A	446	1800	120.00	0.00	25	263	5.13	0.33	0.00	0.04	N/A	100	100	0.00	0.58
4Cx	1			N/A	N/A	N/A	184	Unrestricted	120.00	0.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00

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)
TOTAL	272.67	35.59	7.66	12.44	13.35	366.33	21.34	0.00	387.68
BUSES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TRAMS	2.20	0.31	7.02	0.16	0.00	2.37	0.03	0.00	2.40
OTHER (NORMAL)	270.47	35.27	7.67	12.28	13.35	363.96	21.31	0.00	385.27

- *B = at least one source for this link carries buses*

- *T = at least one source for this link carries trams*
- *P = this link is a pedestrian link*
- *< = adjusted flow warning (upstream links are over-saturated)*
- *! = DOS threshold exceeded*
- *f = average saturation flow for flared link*
- ** = 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 excess queue is greater than 0*
- ***P.I. = PERFORMANCE INDEX***

TRANSYT 14

Version: 14.1.2.315 [26-09-12]

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Last run: 25/07/2019 12:47:42
Analysis Set used for last run: A12 -

Filename: R043 TRANSYT Model 20190719.t14
Path: J:\R_JOBS\Job-R043\B_Documents\C_Civil\A_CS Reports\4.0 SHD Application for Additional Floors\Traffic\Modelling
Report generation date: 25/07/2019 12:47:44

File summary

File Description

Title	Spencer North
Location	Dublin 1
Site Number	
UTCRegion	
Driving Side	Left
Date	27/03/2018
Version	
Status	
Identifier	
Client	
Jobnumber	R043
Enumerator	GF
Description	

Units

Speed Units	Distance Units	Fuel Economy Units	Fuel Rate Units	Mass Units	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
kph	m	l/100km	l/h	kg	perHour	s	-Hour	perHour

Sorting

Show Names Instead of IDs (For Aimsun)	Sorting Direction	Sorting Type	Ignore Prefixes When Sorting	Link Grouping	Source Grouping
	Ascending	Numerical		Normal	Normal

A12 - : D12 - 2032 No Dev 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)	Cycle Time Used (s)	Total Network Delay (PCU-hr/hr)	Highest DOS (%)	LTSWith Highest DOS	Number Of Oversaturated LTS	Percentage Of Oversaturated LTS (%)	LTSWith Worst Signalised PRC	LTSWith Worst Unsignalised PRC	LTSWith Worst Overall PRC	Network Within Capacity
A12 -	25/07/2019 12:47:29	25/07/2019 12:47:42	17:00	120	10.06	62.63	2D/1	0	0	2D/1	4B/1	4B/1	✓

Signal Timings

120s cycle time; 120 steps

Controller Stream

Controller Stream	Name	Description	Gaining Delay Type	Signals Manipulation Mode	Multiple Cycling	Offset Relative To	Offset Valid	Offset Positive (s)	Offset Negative (s)	Auto Redistribute	Optimisation Level	Use Sequence
1	New Wapping St / Mayor St		Absolute	StageBased	Single	1	✓	0	0	✓	Offsets And Green Splits	1
2	East Rd / Sheriff St / New Wapping St		Absolute	StageBased	Single	1	✓	19	-101	✓	Offsets And Green Splits	1

Phases

Controller Stream	Phase	Name	Minimum Green (s)	Maximum Green (s)	Relative Start Displacement (s)	Relative End Displacement (s)	Dummy
1	A	(untitled)	6	300	0	0	
1	B	(untitled)	6	300	0	0	
1	C	(untitled)	6	300	0	0	
1	D	(untitled)	6	300	0	0	
1	E	(untitled)	6	300	0	0	
1	F	(untitled)	6	300	0	0	
1	G	(untitled)	8	300	0	0	
2	A	(untitled)	6	300	0	0	
2	B	(untitled)	6	300	0	0	
2	C	(untitled)	6	300	0	0	
2	D	(untitled)	6	300	0	0	
2	E	(untitled)	3	300	0	0	✓

Library Stages

Controller Stream	Library Stage	Phases In Stage	User Stage Minimum (s)
1	1	A,C	6
1	2	B,D,E,F	6
1	3	G	12
2	1	A,C	1
2	2	B,D	1
2	3	E	1
2	4	A	1
2	5	B	1
2	6	C	1
2	7	D	1

Stage Sequences

Controller Stream	Stage Sequence	Name	Stage IDs	Stage Ends	Multiple Cycling Stage IDs	Multiple Cycling Stage Ends
1	1	(untitled)	1,2,3	35,49,67		
1	2	(untitled)	1,3,2	0,42,82		
2	1	(untitled)	1,2,3	20,81,89		
2	2	(untitled)	1,3,2	0,37,78		
2	3	(untitled)	1,3,2,5	0,30,64,87		
2	4	(untitled)	1,3,7,5	0,28,60,86		
2	5	(untitled)	1,3,4,2	0,27,58,88		
2	6	(untitled)	2,6,3,4	0,30,57,88		
2	7	(untitled)	1,7,3,5	0,30,57,88		
2	8	(untitled)	2,4,6,3	0,31,57,85		
2	9	(untitled)	1,3,5,2	0,30,59,87		
2	10	(untitled)	1,3,2,6	0,30,64,92		

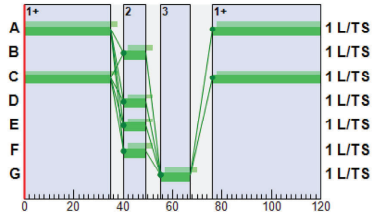
Resultant Stages

Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases In This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
1	1	✓	1	A,C	76	35	79	6	6
1	2	✓	2	B,D,E,F	40	49	9	6	6
1	3	✓	3	G	55	67	12	12	12
2	1	✓	1	A,C	95	20	45	1	6
2	2	✓	2	B,D	25	81	56	1	6
2	3	✓	3	E	86	89	3	1	3

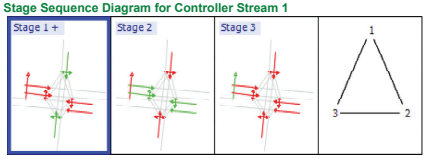
Resultant Phase Green Periods

Controller Stream	Phase	Green Period	Is Base Green Period	Start Time (s)	End Time (s)	Duration (s)
1	A	1	✓	76	35	79
1	B	1	✓	40	49	9
1	C	1	✓	76	35	79
1	D	1	✓	40	49	9
1	E	1	✓	40	49	9
1	F	1	✓	40	49	9
1	G	1	✓	55	67	12
2	A	1	✓	95	20	45
2	B	1	✓	25	81	56
2	C	1	✓	95	20	45
2	D	1	✓	25	81	56
2	E	1	✓	86	89	3

Phase Timings Diagram for Controller Stream 1

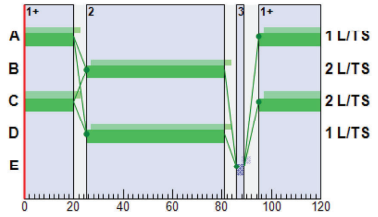


Stage Sequence Diagram for Controller Stream 1

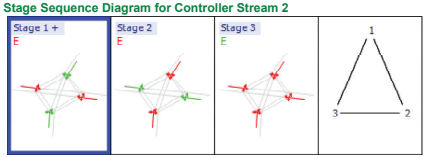


Phase Timings Diagram for Controller Stream 2

R043 TRANSYT Outputs



Stage Sequence Diagram for Controller Stream 2



Final Prediction Table

Link Results

Link	Name	Major Link	Traffic Node	Controller Stream	Phase	Calculated Flow Entering LTS (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s (per cycle))	Wasted Time Total (s (per cycle))	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Journey Time Per PCU (s)	Mean Delay Per PCU (s)	Mean Stops Per PCU (%)	Mean Max Queue (PCU)	Max End Of Red Queue (PCU)	Delay Weighting (%)	Stop Weighting (%)	Cost Of Penalties (£ per hr)	P.I.
1P P	(untitled)	N/A	1	1	G	1	Unrestricted	12.00	0.00	0	Unrestricted	12.00	0.00	0.00	0.00	0.00	100	100	0.00	0.00
1T1 T	(untitled)	N/A	1	1	E	7	1800	9.00	0.00	5	1829	75.46	51.46	91.72	0.22	0.22	100	100	0.00	1.44
1T1x T	(untitled)	N/A		N/A	N/A	6	Unrestricted	120.00	64.00	0	Unrestricted	24.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
1T2 T	(untitled)	N/A	1	1	F	6	1800	9.00	0.00	4	2150	75.37	51.37	91.64	0.18	0.18	100	100	0.00	1.23
1T2x T	(untitled)	N/A		N/A	N/A	7	Unrestricted	120.00	63.00	0	Unrestricted	24.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00

Traffic Stream Results

Arm	Traffic Stream	Name	Traffic Node	Controller Stream	Phase	Phase2	Calculated Flow Entering LTS (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s (per cycle))	Wasted Time Total (s (per cycle))	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Journey Time Per PCU (s)	Mean Delay Per PCU (s)	Mean Stops Per PCU (%)	Mean Max Queue (PCU)	Max End Of Red Queue (PCU)	Delay Weighting Multiplier (%)	Stop Weighting Multiplier (%)	Cost Of Penalties (£ per hr)	P.I.
1A	1 NB		1	1	A	N/A	128	1762	79.00	0.00	11	726	13.48	6.28	31.70	1.39	1.33	100	100	0.00	3.68
1Ax	1 NB			N/A	N/A	N/A	295	Unrestricted	120.00	22.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
1B	1 NB		1	1	B	N/A	12	1652	9.00	0.00	9	932	75.16	52.12	91.72	0.37	0.37	100	100	0.00	2.61
1Bx	1 NB			N/A	N/A	N/A	29	Unrestricted	120.00	0.00	0	Unrestricted	23.04	0.00	0.00	0.00	N/A	100	100	0.00	0.00
1C	1 NB		1	1	C	N/A	307	1748	79.00	0.00	26	242	12.28	8.68	39.32	4.14	3.46	100	100	0.00	12.03
1Cx	1 NB			N/A	N/A	N/A	122	Unrestricted	120.00	21.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
1D	1 NB		1	1	D	N/A	10	999	9.00	0.00	12	649	61.17	54.33	93.95	0.32	0.31	100	100	0.00	2.26
1Dx	1 NB			N/A	N/A	N/A	11	Unrestricted	120.00	10.00	0	Unrestricted	6.84	0.00	0.00	0.00	N/A	100	100	0.00	0.00
2A	1		2	2	A	C	221	1058	45.00	0.00	55	65	40.03	35.83	83.29	6.22 +	4.87	100	100	0.00	33.54
2Ax	1			N/A	N/A	N/A	504	Unrestricted	120.00	0.00	0	Unrestricted	4.20	0.00	0.00	0.00	N/A	100	100	0.00	0.00
2B	1		2	2	B	N/A	111	1066	56.00	0.00	22	310	42.62	19.82	58.95	2.22	1.97	100	100	0.00	9.50
2Bx	1			N/A	N/A	N/A	208	Unrestricted	120.00	0.00	0	Unrestricted	22.80	0.00	0.00	0.00	N/A	100	100	0.00	0.00
2C	1		2	2	C	N/A	313	1695	45.00	0.00	48	87	27.80	23.00	44.87	5.44	4.02	100	100	0.00	30.15
2Cx	1			N/A	N/A	N/A	158	Unrestricted	120.00	7.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
2D	1		2	2	D	B	495	1664	56.00	0.00	63	44	35.22	27.42	75.96	12.76 +	9.18	100	100	0.00	58.26
2Dx	1			N/A	N/A	N/A	270	Unrestricted	120.00	0.00	0	Unrestricted	7.80	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3A	1		3	N/A	N/A	N/A	299	Unrestricted	120.00	7.00	0	Unrestricted	7.20	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3Ax	1			N/A	N/A	N/A	131	Unrestricted	120.00	0.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3B	1		3	N/A	N/A	N/A	0	0	120.00	120.00	0	-100	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3Bx	1			N/A	N/A	N/A	0	Unrestricted	120.00	120.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3C	1		3	N/A	N/A	N/A	131	1800	120.00	0.00	7	1137	6.68	0.08	0.00	0.00	N/A	100	100	0.00	0.04
3Cx	1			N/A	N/A	N/A	299	Unrestricted	120.00	6.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4A	1		4	N/A	N/A	N/A	309	Unrestricted	120.00	1.00	0	Unrestricted	6.60	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4Ax	1			N/A	N/A	N/A	156	Unrestricted	120.00	0.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4B	1		4	N/A	N/A	N/A	0	0	120.00	120.00	0	-100	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4Bx	1			N/A	N/A	N/A	0	Unrestricted	120.00	120.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4C	1		4	N/A	N/A	N/A	156	1800	120.00	0.00	9	938	4.89	0.09	0.00	0.00	N/A	100	100	0.00	0.06
4Cx	1			N/A	N/A	N/A	309	Unrestricted	120.00	1.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00

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)
TOTAL	225.27	18.07	12.47	8.89	1.17	142.88	11.92	0.00	154.80
BUSES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TRAMS	2.60	0.36	7.24	0.18	0.00	2.64	0.04	0.00	2.67
OTHER (NORMAL)	222.67	17.71	12.58	8.71	1.17	140.24	11.88	0.00	152.12

- *B = at least one source for this link carries buses*
- *T = at least one source for this link carries trams*
- *P = this link is a pedestrian link*
- *< = adjusted flow warning (upstream links are over-saturated)*
- *! = DOS threshold exceeded*
- *f = average saturation flow for flared link*
- ** = 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 excess queue is greater than 0*
- ***P.I. = PERFORMANCE INDEX***

TRANSYT 14

Version: 14.1.2.315 [26-09-12]

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Last run: 25/07/2019 12:48:15
Analysis Set used for last run: A13 -

Filename: R043 TRANSYT Model 20190719.t14
Path: J:\R_JOBS\Job-R043\B_Documents\C_Civil\A_CS Reports\4.0 SHD Application for Additional Floors\Traffic\Modelling
Report generation date: 25/07/2019 12:48:22

File summary

File Description

Title	Spencer North
Location	Dublin 1
Site Number	
UTCRegion	
Driving Side	Left
Date	27/03/2018
Version	
Status	
Identifier	
Client	
Jobnumber	R043
Enumerator	GF
Description	

Units

Speed Units	Distance Units	Fuel Economy Units	Fuel Rate Units	Mass Units	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
kph	m	l/100km	l/h	kg	perHour	s	-Hour	perHour

Sorting

Show Names Instead of IDs (For Aimsun)	Sorting Direction	Sorting Type	Ignore Prefixes When Sorting	Link Grouping	Source Grouping
	Ascending	Numerical		Normal	Normal

A13 - : D13 - 2032 With Dev 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)	Cycle Time Used (s)	Total Network Delay (PCU-hr/hr)	Highest DOS (%)	LTSWith Highest DOS	Number Of Oversaturated LTS	Percentage Of Oversaturated LTS (%)	LTSWith Worst Signalised PRC	LTSWith Worst Unsignalised PRC	LTSWith Worst Overall PRC	Network Within Capacity
A13 -	25/07/2019 12:48:01	25/07/2019 12:48:15	07:45	120	28.91	97.34	2A/1	2	6	2A/1	4C/1	2A/1	

Signal Timings

120s cycle time; 120 steps

Controller Stream

Controller Stream	Name	Description	Gaining Delay Type	Signals Manipulation Mode	Multiple Cycling	Offset Relative To	Offset Valid	Offset Positive (s)	Offset Negative (s)	Auto Redistribute	Optimisation Level	Use Sequence
1	New Wapping St / Mayor St		Absolute	StageBased	Single	1	✓	0	0	✓	Offsets And Green Splits	1
2	East Rd / Sheriff St / New Wapping St		Absolute	StageBased	Single	1	✓	92	-28	✓	Offsets And Green Splits	1

Phases

Controller Stream	Phase	Name	Minimum Green (s)	Maximum Green (s)	Relative Start Displacement (s)	Relative End Displacement (s)	Dummy
1	A	(untitled)	6	300	0	0	
1	B	(untitled)	6	300	0	0	
1	C	(untitled)	6	300	0	0	
1	D	(untitled)	6	300	0	0	
1	E	(untitled)	6	300	0	0	
1	F	(untitled)	6	300	0	0	
1	G	(untitled)	8	300	0	0	
2	A	(untitled)	6	300	0	0	
2	B	(untitled)	6	300	0	0	
2	C	(untitled)	6	300	0	0	
2	D	(untitled)	6	300	0	0	
2	E	(untitled)	3	300	0	0	✓

Library Stages

Controller Stream	Library Stage	Phases In Stage	User Stage Minimum (s)
1	1	A,C	6
1	2	B,D,E,F	6
1	3	G	12
2	1	A,C	1
2	2	B,D	1
2	3	E	1
2	4	A	1
2	5	B	1
2	6	C	1
2	7	D	1

Stage Sequences

Controller Stream	Stage Sequence	Name	Stage IDs	Stage Ends	Multiple Cycling Stage IDs	Multiple Cycling Stage Ends
1	1	(untitled)	1,2,3	85,96,114		
1	2	(untitled)	1,3,2	0,42,82		
2	1	(untitled)	1,2,3	42,81,89		
2	2	(untitled)	1,3,2	0,37,78		
2	3	(untitled)	1,3,2,5	0,30,64,87		
2	4	(untitled)	1,3,7,5	0,28,60,86		
2	5	(untitled)	1,3,4,2	0,27,58,88		
2	6	(untitled)	2,6,3,4	0,30,57,88		
2	7	(untitled)	1,7,3,5	0,30,57,88		
2	8	(untitled)	2,4,6,3	0,31,57,85		
2	9	(untitled)	1,3,5,2	0,30,59,87		
2	10	(untitled)	1,3,2,6	0,30,64,92		

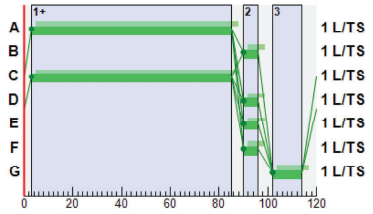
Resultant Stages

Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases In This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
1	1	✓	1	A,C	3	85	82	6	6
1	2	✓	2	B,D,E,F	90	96	6	6	6
1	3	✓	3	G	102	114	12	12	12
2	1	✓	1	A,C	95	42	67	1	6
2	2	✓	2	B,D	47	81	34	1	6
2	3	✓	3	E	86	89	3	1	3

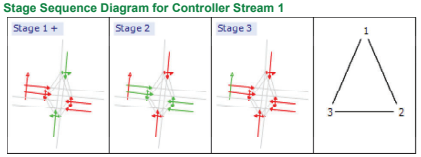
Resultant Phase Green Periods

Controller Stream	Phase	Green Period	Is Base Green Period	Start Time (s)	End Time (s)	Duration (s)
1	A	1	✓	3	85	82
1	B	1	✓	90	96	6
1	C	1	✓	3	85	82
1	D	1	✓	90	96	6
1	E	1	✓	90	96	6
1	F	1	✓	90	96	6
1	G	1	✓	102	114	12
2	A	1	✓	95	42	67
2	B	1	✓	47	81	34
2	C	1	✓	95	42	67
2	D	1	✓	47	81	34
2	E	1	✓	86	89	3

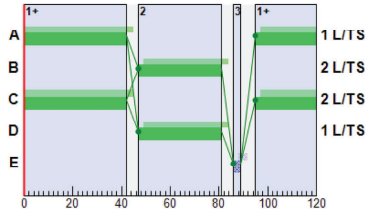
Phase Timings Diagram for Controller Stream 1



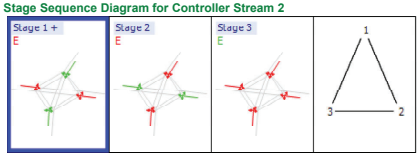
Stage Sequence Diagram for Controller Stream 1



Phase Timings Diagram for Controller Stream 2



Stage Sequence Diagram for Controller Stream 2



Final Prediction Table

Link Results

Link	Name	Major Link	Traffic Node	Controller Stream	Phase	Calculated Flow Entering LTS (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s (per cycle))	Wasted Time Total (s (per cycle))	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Journey Time Per PCU (s)	Mean Delay Per PCU (s)	Mean Stops Per PCU (%)	Mean Max Queue (PCU)	Max End Of Red Queue (PCU)	Delay Weighting (%)	Stop Weighting (%)	Cost Of Penalties (£ per hr)	P.I.
1P P	(untitled)	N/A	1	1	G	1	Unrestricted	12.00	0.00	0	Unrestricted	12.00	0.00	0.00	0.00	0.00	100	100	0.00	0.00
1T1 T	(untitled)	N/A	1	1	E	6	1800	6.00	0.00	6	1475	78.71	54.71	94.59	0.19	0.19	100	100	0.00	1.31
1T1x T	(untitled)	N/A		N/A	N/A	5	Unrestricted	120.00	76.00	0	Unrestricted	24.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
1T2 T	(untitled)	N/A	1	1	F	5	1800	6.00	0.00	5	1790	78.53	54.53	94.44	0.16	0.16	100	100	0.00	1.09
1T2x T	(untitled)	N/A		N/A	N/A	6	Unrestricted	120.00	75.00	0	Unrestricted	24.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00

Traffic Stream Results

Arm	Traffic Stream	Name	Traffic Node	Controller Stream	Phase	Phase2	Calculated Flow Entering LTS (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s (per cycle))	Wasted Time Total (s (per cycle))	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Journey Time Per PCU (s)	Mean Delay Per PCU (s)	Mean Stops Per PCU (%)	Mean Max Queue (PCU)	Max End Of Red Time Queue (PCU)	Delay Weighting Multiplier (%)	Stop Weighting Multiplier (%)	Cost Of Penalties (£ per hr)	P.I.
1A	1 NB		1	1	A	N/A	457	1760	82.00	0.00	38	140	12.63	5.43	20.98	3.49	2.71	100	100	0.00	10.99
1Ax	1 NB			N/A	N/A	N/A	164	Unrestricted	120.00	21.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
1B	1 NB		1	1	B	N/A	26	1483	6.00	0.00	30	199	86.13	63.09	102.04	0.89	0.88	100	100	0.00	6.80
1Bx	1 NB			N/A	N/A	N/A	64	Unrestricted	120.00	0.00	0	Unrestricted	23.04	0.00	0.00	0.00	N/A	100	100	0.00	0.00
1C	1 NB		1	1	C	N/A	166	1664	82.00	0.00	14	524	10.26	6.86	33.27	1.90	1.72	100	100	0.00	5.05
1Cx	1 NB			N/A	N/A	N/A	416	Unrestricted	120.00	21.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
1D	1 NB		1	1	D	N/A	5	1407	6.00	0.00	6	1377	61.94	55.10	94.36	0.16	0.16	100	100	0.00	1.15
1Dx	1 NB			N/A	N/A	N/A	10	Unrestricted	120.00	9.00	0	Unrestricted	6.84	0.00	0.00	0.00	N/A	100	100	0.00	0.00
2A	1		2	2	A	C	681	1235	67.00	0.00	97 !	-8	76.15	71.95	128.54	30.48 +	18.56	100	100	0.00	204.23
2Ax	1			N/A	N/A	N/A	273	Unrestricted	120.00	0.00	0	Unrestricted	4.20	0.00	0.00	0.00	N/A	100	100	0.00	0.00
2B	1		2	2	B	N/A	99	1217	34.00	0.00	28	223	57.50	34.70	77.24	2.58	2.39	100	100	0.00	14.51
2Bx	1			N/A	N/A	N/A	261	Unrestricted	120.00	0.00	0	Unrestricted	22.80	0.00	0.00	0.00	N/A	100	100	0.00	0.00
2C	1		2	2	C	N/A	216	1656	67.00	0.00	23	291	18.15	13.35	47.44	3.49	3.09	100	100	0.00	12.65
2Cx	1			N/A	N/A	N/A	463	Unrestricted	120.00	6.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
2D	1		2	2	D	B	403	1423	34.00	0.00	97 !	-7	112.84	105.04	142.94	20.23 +	16.53	100	100	0.00	174.19
2Dx	1			N/A	N/A	N/A	402	Unrestricted	120.00	0.00	0	Unrestricted	7.80	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3A	1		3	N/A	N/A	N/A	164	Unrestricted	120.00	7.00	0	Unrestricted	7.20	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3Ax	1			N/A	N/A	N/A	461	Unrestricted	120.00	0.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3B	1		3	N/A	N/A	N/A	17	515	120.00	0.00	3	2628	4.92	0.12	0.00	0.00	N/A	100	100	0.00	0.01
3Bx	1			N/A	N/A	N/A	6	Unrestricted	120.00	0.00	0	Unrestricted	4.80	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3C	1		3	N/A	N/A	N/A	461	1759	120.00	0.00	26	243	6.96	0.36	0.00	0.05	N/A	100	100	0.00	0.66
3Cx	1			N/A	N/A	N/A	175	Unrestricted	120.00	0.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4A	1		4	N/A	N/A	N/A	198	Unrestricted	120.00	0.00	0	Unrestricted	6.60	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4Ax	1			N/A	N/A	N/A	461	Unrestricted	120.00	0.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4B	1		4	N/A	N/A	N/A	29	503	120.00	0.00	6	1461	5.02	0.22	0.00	0.00	N/A	100	100	0.00	0.03
4Bx	1			N/A	N/A	N/A	10	Unrestricted	120.00	0.00	0	Unrestricted	4.80	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4C	1		4	N/A	N/A	N/A	460	1737	120.00	0.00	26	240	5.17	0.37	0.00	0.05	N/A	100	100	0.00	0.68
4Cx	1			N/A	N/A	N/A	216	Unrestricted	120.00	0.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00

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)
TOTAL	282.56	39.06	7.23	12.79	16.12	410.59	22.76	0.00	433.35
BUSES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TRAMS	2.20	0.31	7.02	0.16	0.00	2.37	0.03	0.00	2.40
OTHER (NORMAL)	280.36	38.75	7.24	12.63	16.12	408.22	22.73	0.00	430.95

- *B = at least one source for this link carries buses*

- *T = at least one source for this link carries trams*
- *P = this link is a pedestrian link*
- *< = adjusted flow warning (upstream links are over-saturated)*
- *! = DOS threshold exceeded*
- *f = average saturation flow for flared link*
- ** = 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 excess queue is greater than 0*
- ***P.I. = PERFORMANCE INDEX***

TRANSYT 14

Version: 14.1.2.315 [26-09-12]

For sales and distribution information, program advice and maintenance, contact TRL:
Tel: +44 (0)1344 770758 E-mail: software@trl.co.uk Web: http://www.trlsoftware.co.uk

Last run: 25/07/2019 12:48:57
Analysis Set used for last run: A14 -

Filename: R043 TRANSYT Model 20190719.t14
Path: J:\R_JOBS\Job-R043\B_Documents\C_Civil\A_CS Reports\4.0 SHD Application for Additional Floors\Traffic\Modelling
Report generation date: 25/07/2019 12:49:02

File summary

File Description

Title	Spencer North
Location	Dublin 1
Site Number	
UTCRegion	
Driving Side	Left
Date	27/03/2018
Version	
Status	
Identifier	
Client	
Jobnumber	R043
Enumerator	GF
Description	

Units

Speed Units	Distance Units	Fuel Economy Units	Fuel Rate Units	Mass Units	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
kph	m	l/100km	l/h	kg	perHour	s	-Hour	perHour

Sorting

Show Names Instead of IDs (For Aimsun)	Sorting Direction	Sorting Type	Ignore Prefixes When Sorting	Link Grouping	Source Grouping
	Ascending	Numerical		Normal	Normal

A14 - : D14 - 2032 With Dev 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)	Cycle Time Used (s)	Total Network Delay (PCU-hr/hr)	Highest DOS (%)	LTSWith Highest DOS	Number Of Oversaturated LTS	Percentage Of Oversaturated LTS (%)	LTSWith Worst Signalised PRC	LTSWith Worst Unsignalised PRC	LTSWith Worst Overall PRC	Network Within Capacity
A14 -	25/07/2019 12:48:42	25/07/2019 12:48:57	17:00	120	11.15	66.99	2D/1	0	0	2D/1	4C/1	2D/1	✓

Signal Timings

120s cycle time; 120 steps

Controller Stream

Controller Stream	Name	Description	Gaining Delay Type	Signals Manipulation Mode	Multiple Cycling	Offset Relative To	Offset Valid	Offset Positive (s)	Offset Negative (s)	Auto Redistribute	Optimisation Level	Use Sequence
1	New Wapping St / Mayor St		Absolute	StageBased	Single	1	✓	0	0	✓	Offsets And Green Splits	1
2	East Rd / Sheriff St / New Wapping St		Absolute	StageBased	Single	1	✓	17	-103	✓	Offsets And Green Splits	1

Phases

Controller Stream	Phase	Name	Minimum Green (s)	Maximum Green (s)	Relative Start Displacement (s)	Relative End Displacement (s)	Dummy
1	A	(untitled)	6	300	0	0	
1	B	(untitled)	6	300	0	0	
1	C	(untitled)	6	300	0	0	
1	D	(untitled)	6	300	0	0	
1	E	(untitled)	6	300	0	0	
1	F	(untitled)	6	300	0	0	
1	G	(untitled)	8	300	0	0	
2	A	(untitled)	6	300	0	0	
2	B	(untitled)	6	300	0	0	
2	C	(untitled)	6	300	0	0	
2	D	(untitled)	6	300	0	0	
2	E	(untitled)	3	300	0	0	✓

Library Stages

Controller Stream	Library Stage	Phases In Stage	User Stage Minimum (s)
1	1	A,C	6
1	2	B,D,E,F	6
1	3	G	12
2	1	A,C	1
2	2	B,D	1
2	3	E	1
2	4	A	1
2	5	B	1
2	6	C	1
2	7	D	1

Stage Sequences

Controller Stream	Stage Sequence	Name	Stage IDs	Stage Ends	Multiple Cycling Stage IDs	Multiple Cycling Stage Ends
1	1	(untitled)	1,2,3	39,51,69		
1	2	(untitled)	1,3,2	0,42,82		
2	1	(untitled)	1,2,3	22,81,89		
2	2	(untitled)	1,3,2	0,37,78		
2	3	(untitled)	1,3,2,5	0,30,64,87		
2	4	(untitled)	1,3,7,5	0,28,60,86		
2	5	(untitled)	1,3,4,2	0,27,58,88		
2	6	(untitled)	2,6,3,4	0,30,57,88		
2	7	(untitled)	1,7,3,5	0,30,57,88		
2	8	(untitled)	2,4,6,3	0,31,57,85		
2	9	(untitled)	1,3,5,2	0,30,59,87		
2	10	(untitled)	1,3,2,6	0,30,64,92		

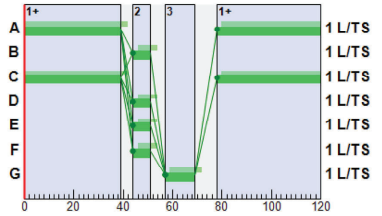
Resultant Stages

Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases In This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
1	1	✓	1	A,C	78	39	81	6	6
1	2	✓	2	B,D,E,F	44	51	7	6	6
1	3	✓	3	G	57	69	12	12	12
2	1	✓	1	A,C	95	22	47	1	6
2	2	✓	2	B,D	27	81	54	1	6
2	3	✓	3	E	86	89	3	1	3

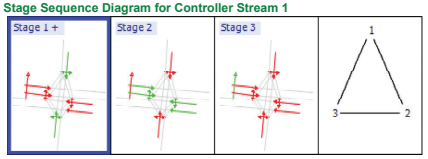
Resultant Phase Green Periods

Controller Stream	Phase	Green Period	Is Base Green Period	Start Time (s)	End Time (s)	Duration (s)
1	A	1	✓	78	39	81
1	B	1	✓	44	51	7
1	C	1	✓	78	39	81
1	D	1	✓	44	51	7
1	E	1	✓	44	51	7
1	F	1	✓	44	51	7
1	G	1	✓	57	69	12
2	A	1	✓	95	22	47
2	B	1	✓	27	81	54
2	C	1	✓	95	22	47
2	D	1	✓	27	81	54
2	E	1	✓	86	89	3

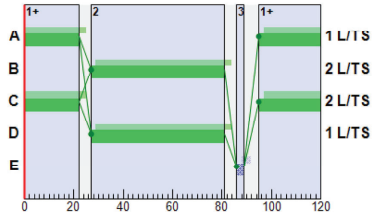
Phase Timings Diagram for Controller Stream 1



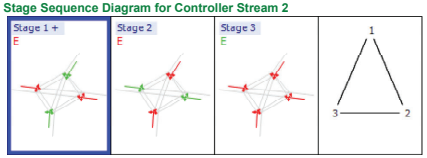
Stage Sequence Diagram for Controller Stream 1



Phase Timings Diagram for Controller Stream 2



Stage Sequence Diagram for Controller Stream 2



Final Prediction Table

Link Results

Link	Name	Major Link	Traffic Node	Controller Stream	Phase	Calculated Flow Entering LTS (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s (per cycle))	Wasted Time Total (s (per cycle))	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Journey Time Per PCU (s)	Mean Delay Per PCU (s)	Mean Stops Per PCU (%)	Mean Max Queue (PCU)	Max End Of Red Queue (PCU)	Delay Weighting (%)	Stop Weighting (%)	Cost Of Penalties (£ per hr)	P.I.
1P P	(untitled)	N/A	1	1	G	1	Unrestricted	12.00	0.00	0	Unrestricted	12.00	0.00	0.00	0.00	0.00	100	100	0.00	0.00
1T1 T	(untitled)	N/A	1	1	E	7	1800	7.00	0.00	6	1443	77.66	53.66	93.67	0.22	0.22	100	100	0.00	1.50
1T1x T	(untitled)	N/A		N/A	N/A	6	Unrestricted	120.00	64.00	0	Unrestricted	24.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
1T2 T	(untitled)	N/A	1	1	F	6	1800	7.00	0.00	5	1700	77.52	53.52	93.55	0.19	0.19	100	100	0.00	1.28
1T2x T	(untitled)	N/A		N/A	N/A	7	Unrestricted	120.00	63.00	0	Unrestricted	24.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00

Traffic Stream Results

Arm	Traffic Stream	Name	Traffic Node	Controller Stream	Phase	Phase2	Calculated Flow Entering LTS (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s (per cycle))	Wasted Time Total (s (per cycle))	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Journey Time Per PCU (s)	Mean Delay Per PCU (s)	Mean Stops Per PCU (%)	Mean Max Queue (PCU)	Max End Of Red Queue (PCU)	Delay Weighting Multiplier (%)	Stop Weighting Multiplier (%)	Cost Of Penalties (£ per hr)	P.I.
1A	1 NB		1	1	A	N/A	132	1763	81.00	0.00	11	721	12.97	5.77	30.28	1.37	1.31	100	100	0.00	3.50
1Ax	1 NB			N/A	N/A	N/A	322	Unrestricted	120.00	22.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
1B	1 NB		1	1	B	N/A	12	1648	7.00	0.00	11	724	77.78	54.74	94.01	0.38	0.38	100	100	0.00	2.73
1Bx	1 NB			N/A	N/A	N/A	30	Unrestricted	120.00	0.00	0	Unrestricted	23.04	0.00	0.00	0.00	N/A	100	100	0.00	0.00
1C	1 NB		1	1	C	N/A	333	1752	81.00	0.00	28	224	11.64	8.04	37.83	4.40	3.57	100	100	0.00	12.15
1Cx	1 NB			N/A	N/A	N/A	125	Unrestricted	120.00	21.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
1D	1 NB		1	1	D	N/A	11	1024	7.00	0.00	16	458	65.16	58.32	97.33	0.36	0.36	100	100	0.00	2.66
1Dx	1 NB			N/A	N/A	N/A	11	Unrestricted	120.00	9.00	0	Unrestricted	6.84	0.00	0.00	0.00	N/A	100	100	0.00	0.00
2A	1		2	2	A	C	244	1083	47.00	0.00	56	60	39.08	34.88	83.13	6.87 +	5.24	100	100	0.00	36.11
2Ax	1			N/A	N/A	N/A	525	Unrestricted	120.00	0.00	0	Unrestricted	4.20	0.00	0.00	0.00	N/A	100	100	0.00	0.00
2B	1		2	2	B	N/A	115	1072	54.00	0.00	23	285	43.95	21.15	60.76	2.37	2.11	100	100	0.00	10.47
2Bx	1			N/A	N/A	N/A	210	Unrestricted	120.00	0.00	0	Unrestricted	22.80	0.00	0.00	0.00	N/A	100	100	0.00	0.00
2C	1		2	2	C	N/A	352	1692	47.00	0.00	52	73	28.82	24.02	50.24	6.85	5.05	100	100	0.00	35.56
2Cx	1			N/A	N/A	N/A	193	Unrestricted	120.00	7.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
2D	1		2	2	D	B	503	1638	54.00	0.00	67	34	38.14	30.34	80.17	13.67 +	9.75	100	100	0.00	65.25
2Dx	1			N/A	N/A	N/A	286	Unrestricted	120.00	0.00	0	Unrestricted	7.80	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3A	1		3	N/A	N/A	N/A	326	Unrestricted	120.00	5.00	0	Unrestricted	7.20	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3Ax	1			N/A	N/A	N/A	134	Unrestricted	120.00	0.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3B	1		3	N/A	N/A	N/A	15	543	120.00	0.00	3	3160	4.89	0.09	0.00	0.00	N/A	100	100	0.00	0.01
3Bx	1			N/A	N/A	N/A	23	Unrestricted	120.00	0.00	0	Unrestricted	4.80	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3C	1		3	N/A	N/A	N/A	146	1478	120.00	0.00	10	811	6.73	0.13	0.00	0.01	N/A	100	100	0.00	0.08
3Cx	1			N/A	N/A	N/A	330	Unrestricted	120.00	0.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4A	1		4	N/A	N/A	N/A	340	Unrestricted	120.00	0.00	0	Unrestricted	6.60	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4Ax	1			N/A	N/A	N/A	171	Unrestricted	120.00	0.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4B	1		4	N/A	N/A	N/A	27	538	120.00	0.00	5	1693	4.98	0.18	0.00	0.00	N/A	100	100	0.00	0.02
4Bx	1			N/A	N/A	N/A	40	Unrestricted	120.00	0.00	0	Unrestricted	4.80	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4C	1		4	N/A	N/A	N/A	192	1411	120.00	0.00	14	561	5.00	0.20	0.00	0.01	N/A	100	100	0.00	0.15
4Cx	1			N/A	N/A	N/A	348	Unrestricted	120.00	0.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00

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)
TOTAL	242.13	19.76	12.25	9.70	1.45	158.39	13.09	0.00	171.48
BUSES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TRAMS	2.60	0.37	7.09	0.19	0.00	2.75	0.04	0.00	2.79
OTHER (NORMAL)	239.53	19.40	12.35	9.51	1.45	155.64	13.05	0.00	168.69

- *B = at least one source for this link carries buses*
- *T = at least one source for this link carries trams*
- *P = this link is a pedestrian link*
- *< = adjusted flow warning (upstream links are over-saturated)*
- *! = DOS threshold exceeded*
- *f = average saturation flow for flared link*
- ** = 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 excess queue is greater than 0*
- ***P.I. = PERFORMANCE INDEX***

TRANSYT 14

Version: 14.1.2.315 [26-09-12]

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Tel: +44 (0)1344 770758 E-mail: software@trl.co.uk Web: http://www.trlsoftware.co.uk

Last run: 25/07/2019 12:49:33
Analysis Set used for last run: A15 -

Filename: R043 TRANSYT Model 20190719.t14
Path: J:\R_JOBS\Job-R043\B_Documents\C_Civil\A_CS Reports\4.0 SHD Application for Additional Floors\Traffic\Modelling
Report generation date: 25/07/2019 12:49:37

File summary

File Description

Title	Spencer North
Location	Dublin 1
Site Number	
UTCRegion	
Driving Side	Left
Date	27/03/2018
Version	
Status	
Identifier	
Client	
Jobnumber	R043
Enumerator	GF
Description	

Units

Speed Units	Distance Units	Fuel Economy Units	Fuel Rate Units	Mass Units	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
kph	m	l/100km	l/h	kg	perHour	s	-Hour	perHour

Sorting

Show Names Instead of IDs (For Aimsun)	Sorting Direction	Sorting Type	Ignore Prefixes When Sorting	Link Grouping	Source Grouping
	Ascending	Numerical		Normal	Normal

A15 - : D15 - 2037 No Dev 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)	Cycle Time Used (s)	Total Network Delay (PCU-hr/hr)	Highest DOS (%)	LTSWith Highest DOS	Number Of Oversaturated LTS	Percentage Of Oversaturated LTS (%)	LTSWith Worst Signalised PRC	LTSWith Worst Unsignalised PRC	LTSWith Worst Overall PRC	Network Within Capacity
A15 -	25/07/2019 12:49:20	25/07/2019 12:49:33	07:45	120	27.41	96.68	2D/1	2	6	2D/1	4B/1	4B/1	

Signal Timings

120s cycle time; 120 steps

Controller Stream

Controller Stream	Name	Description	Gaining Delay Type	Signals Manipulation Mode	Multiple Cycling	Offset Relative To	Offset Valid	Offset Positive (s)	Offset Negative (s)	Auto Redistribute	Optimisation Level	Use Sequence
1	New Wapping St / Mayor St		Absolute	StageBased	Single	1	✓	0	0	✓	Offsets And Green Splits	1
2	East Rd / Sheriff St / New Wapping St		Absolute	StageBased	Single	1	✓	91	-29	✓	Offsets And Green Splits	1

Phases

Controller Stream	Phase	Name	Minimum Green (s)	Maximum Green (s)	Relative Start Displacement (s)	Relative End Displacement (s)	Dummy
1	A	(untitled)	6	300	0	0	
1	B	(untitled)	6	300	0	0	
1	C	(untitled)	6	300	0	0	
1	D	(untitled)	6	300	0	0	
1	E	(untitled)	6	300	0	0	
1	F	(untitled)	6	300	0	0	
1	G	(untitled)	8	300	0	0	
2	A	(untitled)	6	300	0	0	
2	B	(untitled)	6	300	0	0	
2	C	(untitled)	6	300	0	0	
2	D	(untitled)	6	300	0	0	
2	E	(untitled)	3	300	0	0	✓

Library Stages

Controller Stream	Library Stage	Phases In Stage	User Stage Minimum (s)
1	1	A,C	6
1	2	B,D,E,F	6
1	3	G	12
2	1	A,C	1
2	2	B,D	1
2	3	E	1
2	4	A	1
2	5	B	1
2	6	C	1
2	7	D	1

Stage Sequences

Controller Stream	Stage Sequence	Name	Stage IDs	Stage Ends	Multiple Cycling Stage IDs	Multiple Cycling Stage Ends
1	1	(untitled)	1,2,3	86,97,115		
1	2	(untitled)	1,3,2	0,42,82		
2	1	(untitled)	1,2,3	42,81,89		
2	2	(untitled)	1,3,2	0,37,78		
2	3	(untitled)	1,3,2,5	0,30,64,87		
2	4	(untitled)	1,3,7,5	0,28,60,86		
2	5	(untitled)	1,3,4,2	0,27,58,88		
2	6	(untitled)	2,6,3,4	0,30,57,88		
2	7	(untitled)	1,7,3,5	0,30,57,88		
2	8	(untitled)	2,4,6,3	0,31,57,85		
2	9	(untitled)	1,3,5,2	0,30,59,87		
2	10	(untitled)	1,3,2,6	0,30,64,92		

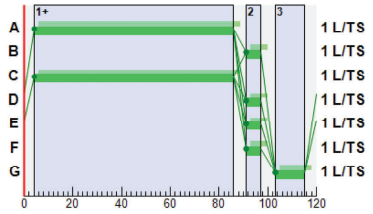
Resultant Stages

Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases In This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
1	1	✓	1	A,C	4	86	82	6	6
1	2	✓	2	B,D,E,F	91	97	6	6	6
1	3	✓	3	G	103	115	12	12	12
2	1	✓	1	A,C	95	42	67	1	6
2	2	✓	2	B,D	47	81	34	1	6
2	3	✓	3	E	86	89	3	1	3

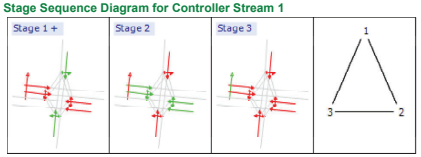
Resultant Phase Green Periods

Controller Stream	Phase	Green Period	Is Base Green Period	Start Time (s)	End Time (s)	Duration (s)
1	A	1	✓	4	86	82
1	B	1	✓	91	97	6
1	C	1	✓	4	86	82
1	D	1	✓	91	97	6
1	E	1	✓	91	97	6
1	F	1	✓	91	97	6
1	G	1	✓	103	115	12
2	A	1	✓	95	42	67
2	B	1	✓	47	81	34
2	C	1	✓	95	42	67
2	D	1	✓	47	81	34
2	E	1	✓	86	89	3

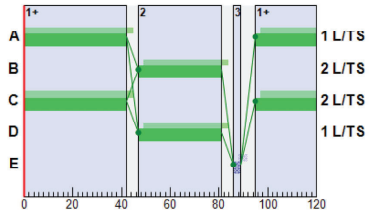
Phase Timings Diagram for Controller Stream 1



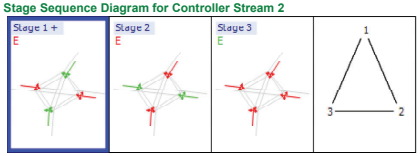
Stage Sequence Diagram for Controller Stream 1



Phase Timings Diagram for Controller Stream 2



Stage Sequence Diagram for Controller Stream 2



Final Prediction Table

Link Results

Link	Name	Major Link	Traffic Node	Controller Stream	Phase	Calculated Flow Entering LTS (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s (per cycle))	Wasted Time Total (s (per cycle))	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Journey Time Per PCU (s)	Mean Delay Per PCU (s)	Mean Stops Per PCU (%)	Mean Max Queue (PCU)	Max End Of Red Queue (PCU)	Delay Weighting (%)	Stop Weighting (%)	Cost Of Penalties (£ per hr)	P.I.
1P P	(untitled)	N/A	1	1	G	1	Unrestricted	12.00	0.00	0	Unrestricted	12.00	0.00	0.00	0.00	0.00	100	100	0.00	0.00
1T1 T	(untitled)	N/A	1	1	E	6	1800	6.00	0.00	6	1475	78.71	54.71	94.59	0.19	0.19	100	100	0.00	1.31
1T1x T	(untitled)	N/A		N/A	N/A	5	Unrestricted	120.00	76.00	0	Unrestricted	24.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
1T2 T	(untitled)	N/A	1	1	F	5	1800	6.00	0.00	5	1790	78.53	54.53	94.44	0.16	0.16	100	100	0.00	1.09
1T2x T	(untitled)	N/A		N/A	N/A	6	Unrestricted	120.00	75.00	0	Unrestricted	24.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00

Traffic Stream Results

Arm	Traffic Stream	Name	Traffic Node	Controller Stream	Phase	Phase2	Calculated Flow Entering LTS (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s (per cycle))	Wasted Time Total (s (per cycle))	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Journey Time Per PCU (s)	Mean Delay Per PCU (s)	Mean Stops Per PCU (%)	Mean Max Queue (PCU)	Max End Of Red Time Queue (PCU)	Delay Weighting Multiplier (%)	Stop Weighting Multiplier (%)	Cost Of Penalties (£ per hr)	P.I.
1A	1 NB		1	1	A	N/A	448	1759	82.00	0.00	37	144	12.39	5.19	20.57	3.26	2.55	100	100	0.00	10.33
1Ax	1 NB			N/A	N/A	N/A	162	Unrestricted	120.00	21.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
1B	1 NB		1	1	B	N/A	26	1483	6.00	0.00	30	199	86.13	63.09	102.04	0.89	0.88	100	100	0.00	6.80
1Bx	1 NB			N/A	N/A	N/A	63	Unrestricted	120.00	0.00	0	Unrestricted	23.04	0.00	0.00	0.00	N/A	100	100	0.00	0.00
1C	1 NB		1	C	N/A	N/A	164	1664	82.00	0.00	14	532	10.25	6.65	33.25	1.88	1.70	100	100	0.00	4.98
1Cx	1 NB			N/A	N/A	N/A	408	Unrestricted	120.00	21.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
1D	1 NB		1	D	N/A	N/A	5	1407	6.00	0.00	6	1377	61.94	55.10	94.36	0.16	0.16	100	100	0.00	1.15
1Dx	1 NB			N/A	N/A	N/A	10	Unrestricted	120.00	9.00	0	Unrestricted	6.84	0.00	0.00	0.00	N/A	100	100	0.00	0.00
2A	1		2	2	A	C	679	1241	67.00	0.00	97 !	-7	71.18	66.98	124.18	29.33 +	17.64	100	100	0.00	189.95
2Ax	1			N/A	N/A	N/A	261	Unrestricted	120.00	0.00	0	Unrestricted	4.20	0.00	0.00	0.00	N/A	100	100	0.00	0.00
2B	1		2	2	B	N/A	99	1215	34.00	0.00	28	222	57.51	34.71	77.25	2.58	2.39	100	100	0.00	14.51
2Bx	1			N/A	N/A	N/A	261	Unrestricted	120.00	0.00	0	Unrestricted	22.80	0.00	0.00	0.00	N/A	100	100	0.00	0.00
2C	1		2	2	C	N/A	185	1660	67.00	0.00	20	358	17.90	13.10	46.53	2.94	2.64	100	100	0.00	10.64
2Cx	1			N/A	N/A	N/A	454	Unrestricted	120.00	6.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
2D	1		2	2	D	B	403	1429	34.00	0.00	97 !	-7	109.81	102.01	140.92	19.90 +	16.20	100	100	0.00	169.27
2Dx	1			N/A	N/A	N/A	390	Unrestricted	120.00	0.00	0	Unrestricted	7.80	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3A	1		3	N/A	N/A	N/A	163	Unrestricted	120.00	8.00	0	Unrestricted	7.20	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3Ax	1			N/A	N/A	N/A	451	Unrestricted	120.00	0.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3B	1		3	N/A	N/A	N/A	0	0	120.00	120.00	0	-100	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3Bx	1			N/A	N/A	N/A	0	Unrestricted	120.00	120.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3C	1		3	N/A	N/A	N/A	451	1800	120.00	0.00	25	259	6.93	0.33	0.00	0.04	N/A	100	100	0.00	0.59
3Cx	1			N/A	N/A	N/A	163	Unrestricted	120.00	6.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4A	1		4	N/A	N/A	N/A	185	Unrestricted	120.00	0.00	0	Unrestricted	6.60	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4Ax	1			N/A	N/A	N/A	450	Unrestricted	120.00	0.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4B	1		4	N/A	N/A	N/A	0	0	120.00	120.00	0	-100	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4Bx	1			N/A	N/A	N/A	0	Unrestricted	120.00	120.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4C	1		4	N/A	N/A	N/A	450	1800	120.00	0.00	25	260	5.13	0.33	0.00	0.04	N/A	100	100	0.00	0.59
4Cx	1			N/A	N/A	N/A	185	Unrestricted	120.00	0.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00

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)
TOTAL	275.05	37.28	7.38	12.54	14.87	389.22	22.00	0.00	411.22
BUSES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TRAMS	2.20	0.31	7.02	0.16	0.00	2.37	0.03	0.00	2.40
OTHER (NORMAL)	272.85	36.97	7.38	12.38	14.87	386.85	21.96	0.00	408.81

- *B = at least one source for this link carries buses*

- *T = at least one source for this link carries trams*
- *P = this link is a pedestrian link*
- *< = adjusted flow warning (upstream links are over-saturated)*
- *! = DOS threshold exceeded*
- *f = average saturation flow for flared link*
- ** = 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 excess queue is greater than 0*
- ***P.I. = PERFORMANCE INDEX***

TRANSYT 14

Version: 14.1.2.315 [26-09-12]

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Tel: +44 (0)1344 770758 E-mail: software@trl.co.uk Web: http://www.trlsoftware.co.uk

Last run: 25/07/2019 12:50:07
Analysis Set used for last run: A16 -

Filename: R043 TRANSYT Model 20190719.t14
Path: J:\R_JOBS\Job-R043\B_Documents\C_Civil\A_CS Reports\4.0 SHD Application for Additional Floors\Traffic\Modelling
Report generation date: 25/07/2019 12:50:09

File summary

File Description

Title	Spencer North
Location	Dublin 1
Site Number	
UTCRegion	
Driving Side	Left
Date	27/03/2018
Version	
Status	
Identifier	
Client	
Jobnumber	R043
Enumerator	GF
Description	

Units

Speed Units	Distance Units	Fuel Economy Units	Fuel Rate Units	Mass Units	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
kph	m	l/100km	l/h	kg	perHour	s	-Hour	perHour

Sorting

Show Names Instead of IDs (For Aimsun)	Sorting Direction	Sorting Type	Ignore Prefixes When Sorting	Link Grouping	Source Grouping
	Ascending	Numerical		Normal	Normal

A16 - : D16 - 2037 No Dev 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)	Cycle Time Used (s)	Total Network Delay (PCU-hr/hr)	Highest DOS (%)	LTSWith Highest DOS	Number Of Oversaturated LTS	Percentage Of Oversaturated LTS (%)	LTSWith Worst Signalised PRC	LTSWith Worst Unsignalised PRC	LTSWith Worst Overall PRC	Network Within Capacity
A16 -	25/07/2019 12:49:54	25/07/2019 12:50:07	17:00	120	10.18	63.10	2D/1	0	0	2D/1	4B/1	4B/1	✓

Signal Timings

120s cycle time; 120 steps

Controller Stream

Controller Stream	Name	Description	Gaining Delay Type	Signals Manipulation Mode	Multiple Cycling	Offset Relative To	Offset Valid	Offset Positive (s)	Offset Negative (s)	Auto Redistribute	Optimisation Level	Use Sequence
1	New Wapping St / Mayor St		Absolute	StageBased	Single	1	✓	0	0	✓	Offsets And Green Splits	1
2	East Rd / Sheriff St / New Wapping St		Absolute	StageBased	Single	1	✓	19	-101	✓	Offsets And Green Splits	1

Phases

Controller Stream	Phase	Name	Minimum Green (s)	Maximum Green (s)	Relative Start Displacement (s)	Relative End Displacement (s)	Dummy
1	A	(untitled)	6	300	0	0	
1	B	(untitled)	6	300	0	0	
1	C	(untitled)	6	300	0	0	
1	D	(untitled)	6	300	0	0	
1	E	(untitled)	6	300	0	0	
1	F	(untitled)	6	300	0	0	
1	G	(untitled)	8	300	0	0	
2	A	(untitled)	6	300	0	0	
2	B	(untitled)	6	300	0	0	
2	C	(untitled)	6	300	0	0	
2	D	(untitled)	6	300	0	0	
2	E	(untitled)	3	300	0	0	✓

Library Stages

Controller Stream	Library Stage	Phases In Stage	User Stage Minimum (s)
1	1	A,C	6
1	2	B,D,E,F	6
1	3	G	12
2	1	A,C	1
2	2	B,D	1
2	3	E	1
2	4	A	1
2	5	B	1
2	6	C	1
2	7	D	1

Stage Sequences

Controller Stream	Stage Sequence	Name	Stage IDs	Stage Ends	Multiple Cycling Stage IDs	Multiple Cycling Stage Ends
1	1	(untitled)	1,2,3	35,49,67		
1	2	(untitled)	1,3,2	0,42,82		
2	1	(untitled)	1,2,3	20,81,89		
2	2	(untitled)	1,3,2	0,37,78		
2	3	(untitled)	1,3,2,5	0,30,64,87		
2	4	(untitled)	1,3,7,5	0,28,60,86		
2	5	(untitled)	1,3,4,2	0,27,58,88		
2	6	(untitled)	2,6,3,4	0,30,57,88		
2	7	(untitled)	1,7,3,5	0,30,57,88		
2	8	(untitled)	2,4,6,3	0,31,57,85		
2	9	(untitled)	1,3,5,2	0,30,59,87		
2	10	(untitled)	1,3,2,6	0,30,64,92		

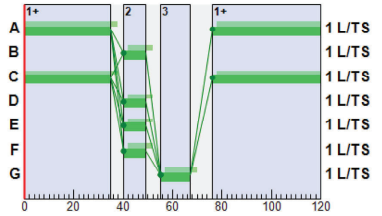
Resultant Stages

Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases In This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
1	1	✓	1	A,C	76	35	79	6	6
1	2	✓	2	B,D,E,F	40	49	9	6	6
1	3	✓	3	G	55	67	12	12	12
2	1	✓	1	A,C	95	20	45	1	6
2	2	✓	2	B,D	25	81	56	1	6
2	3	✓	3	E	86	89	3	1	3

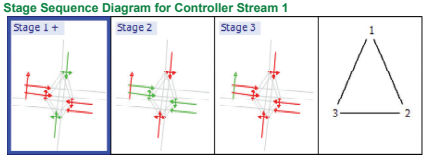
Resultant Phase Green Periods

Controller Stream	Phase	Green Period	Is Base Green Period	Start Time (s)	End Time (s)	Duration (s)
1	A	1	✓	76	35	79
1	B	1	✓	40	49	9
1	C	1	✓	76	35	79
1	D	1	✓	40	49	9
1	E	1	✓	40	49	9
1	F	1	✓	40	49	9
1	G	1	✓	55	67	12
2	A	1	✓	95	20	45
2	B	1	✓	25	81	56
2	C	1	✓	95	20	45
2	D	1	✓	25	81	56
2	E	1	✓	86	89	3

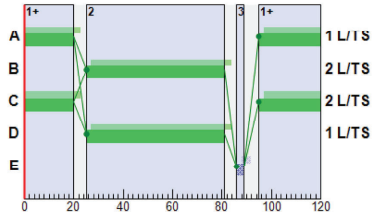
Phase Timings Diagram for Controller Stream 1



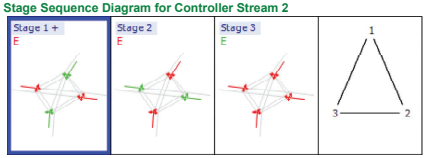
Stage Sequence Diagram for Controller Stream 1



Phase Timings Diagram for Controller Stream 2



Stage Sequence Diagram for Controller Stream 2



Final Prediction Table

Link Results

Link	Name	Major Link	Traffic Node	Controller Stream	Phase	Calculated Flow Entering LTS (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s (per cycle))	Wasted Time Total (s (per cycle))	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Journey Time Per PCU (s)	Mean Delay Per PCU (s)	Mean Stops Per PCU (%)	Mean Max Queue (PCU)	Max End Of Red Queue (PCU)	Delay Weighting (%)	Stop Weighting (%)	Cost Of Penalties (£ per hr)	P.I.
1P P	(untitled)	N/A	1	1	G	1	Unrestricted	12.00	0.00	0	Unrestricted	12.00	0.00	0.00	0.00	0.00	100	100	0.00	0.00
1T1 T	(untitled)	N/A	1	1	E	7	1800	9.00	0.00	5	1829	75.46	51.46	91.72	0.22	0.22	100	100	0.00	1.44
1T1x T	(untitled)	N/A		N/A	N/A	6	Unrestricted	120.00	64.00	0	Unrestricted	24.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
1T2 T	(untitled)	N/A	1	1	F	6	1800	9.00	0.00	4	2150	75.37	51.37	91.64	0.18	0.18	100	100	0.00	1.23
1T2x T	(untitled)	N/A		N/A	N/A	7	Unrestricted	120.00	63.00	0	Unrestricted	24.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00

Traffic Stream Results

Arm	Traffic Stream	Name	Traffic Node	Controller Stream	Phase	Phase2	Calculated Flow Entering LTS (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s (per cycle))	Wasted Time Total (s (per cycle))	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Journey Time Per PCU (s)	Mean Delay Per PCU (s)	Mean Stops Per PCU (%)	Mean Max Queue (PCU)	Max End Of Red Queue (PCU)	Delay Weighting Multiplier (%)	Stop Weighting Multiplier (%)	Cost Of Penalties (£ per hr)	P.I.
1A	1 NB		1	1	A	N/A	129	1763	79.00	0.00	11	720	13.45	6.25	31.51	1.39	1.33	100	100	0.00	3.69
1Ax	1 NB			N/A	N/A	N/A	296	Unrestricted	120.00	22.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
1B	1 NB		1	1	B	N/A	12	1652	9.00	0.00	9	932	75.16	52.12	91.72	0.37	0.37	100	100	0.00	2.61
1Bx	1 NB			N/A	N/A	N/A	29	Unrestricted	120.00	0.00	0	Unrestricted	23.04	0.00	0.00	0.00	N/A	100	100	0.00	0.00
1C	1 NB		1	1	C	N/A	308	1748	79.00	0.00	26	241	12.29	8.69	39.33	4.15	3.47	100	100	0.00	12.08
1Cx	1 NB			N/A	N/A	N/A	123	Unrestricted	120.00	21.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
1D	1 NB		1	1	D	N/A	10	999	9.00	0.00	12	649	61.17	54.33	93.95	0.32	0.31	100	100	0.00	2.26
1Dx	1 NB			N/A	N/A	N/A	11	Unrestricted	120.00	10.00	0	Unrestricted	6.84	0.00	0.00	0.00	N/A	100	100	0.00	0.00
2A	1		2	2	A	C	223	1056	45.00	0.00	55	63	40.28	36.08	83.91	6.34 +	4.92	100	100	0.00	34.08
2Ax	1			N/A	N/A	N/A	508	Unrestricted	120.00	0.00	0	Unrestricted	4.20	0.00	0.00	0.00	N/A	100	100	0.00	0.00
2B	1		2	2	B	N/A	113	1061	56.00	0.00	22	301	42.70	19.90	59.01	2.26	2.01	100	100	0.00	9.71
2Bx	1			N/A	N/A	N/A	210	Unrestricted	120.00	0.00	0	Unrestricted	22.80	0.00	0.00	0.00	N/A	100	100	0.00	0.00
2C	1		2	2	C	N/A	315	1695	45.00	0.00	48	86	27.84	23.04	45.17	5.47	4.05	100	100	0.00	30.42
2Cx	1			N/A	N/A	N/A	159	Unrestricted	120.00	7.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
2D	1		2	2	D	B	499	1665	56.00	0.00	63	43	35.37	27.57	76.24	13.01 +	9.27	100	100	0.00	59.04
2Dx	1			N/A	N/A	N/A	273	Unrestricted	120.00	0.00	0	Unrestricted	7.80	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3A	1		3	N/A	N/A	N/A	301	Unrestricted	120.00	7.00	0	Unrestricted	7.20	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3Ax	1			N/A	N/A	N/A	132	Unrestricted	120.00	0.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3B	1		3	N/A	N/A	N/A	0	0	120.00	120.00	0	-100	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3Bx	1			N/A	N/A	N/A	0	Unrestricted	120.00	120.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3C	1		3	N/A	N/A	N/A	132	1800	120.00	0.00	7	1127	6.68	0.08	0.00	0.00	N/A	100	100	0.00	0.04
3Cx	1			N/A	N/A	N/A	301	Unrestricted	120.00	6.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4A	1		4	N/A	N/A	N/A	311	Unrestricted	120.00	1.00	0	Unrestricted	6.60	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4Ax	1			N/A	N/A	N/A	157	Unrestricted	120.00	0.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4B	1		4	N/A	N/A	N/A	0	0	120.00	120.00	0	-100	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4Bx	1			N/A	N/A	N/A	0	Unrestricted	120.00	120.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4C	1		4	N/A	N/A	N/A	157	1800	120.00	0.00	9	932	4.90	0.10	0.00	0.00	N/A	100	100	0.00	0.06
4Cx	1			N/A	N/A	N/A	311	Unrestricted	120.00	1.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00

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)
TOTAL	227.19	18.25	12.45	8.98	1.21	144.60	12.06	0.00	156.65
BUSES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TRAMS	2.60	0.36	7.24	0.18	0.00	2.64	0.04	0.00	2.67
OTHER (NORMAL)	224.59	17.89	12.55	8.79	1.20	141.96	12.02	0.00	153.98

- *B = at least one source for this link carries buses*
- *T = at least one source for this link carries trams*
- *P = this link is a pedestrian link*
- *< = adjusted flow warning (upstream links are over-saturated)*
- *! = DOS threshold exceeded*
- *f = average saturation flow for flared link*
- ** = 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 excess queue is greater than 0*
- ***P.I. = PERFORMANCE INDEX***

TRANSYT 14

Version: 14.1.2.315 [26-09-12]

For sales and distribution information, program advice and maintenance, contact TRL:
Tel: +44 (0)1344 770758 E-mail: software@trl.co.uk Web: http://www.trlsoftware.co.uk

Last run: 25/07/2019 12:50:39
Analysis Set used for last run: A17 -

Filename: R043 TRANSYT Model 20190719.t14
Path: J:\R_JOBS\Job-R043\B_Documents\C_Civil\A_CS Reports\4.0 SHD Application for Additional Floors\Traffic\Modelling
Report generation date: 25/07/2019 12:50:41

File summary

File Description

Title	Spencer North
Location	Dublin 1
Site Number	
UTCRegion	
Driving Side	Left
Date	27/03/2018
Version	
Status	
Identifier	
Client	
Jobnumber	R043
Enumerator	GF
Description	

Units

Speed Units	Distance Units	Fuel Economy Units	Fuel Rate Units	Mass Units	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
kph	m	l/100km	l/h	kg	perHour	s	-Hour	perHour

Sorting

Show Names Instead of IDs (For Aimsun)	Sorting Direction	Sorting Type	Ignore Prefixes When Sorting	Link Grouping	Source Grouping
	Ascending	Numerical		Normal	Normal

A17 - : D17 - 2037 With Dev 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)	Cycle Time Used (s)	Total Network Delay (PCU-hr/hr)	Highest DOS (%)	LTSWith Highest DOS	Number Of Oversaturated LTS	Percentage Of Oversaturated LTS (%)	LTSWith Worst Signalised PRC	LTSWith Worst Unsignalised PRC	LTSWith Worst Overall PRC	Network Within Capacity
A17 -	25/07/2019 12:50:25	25/07/2019 12:50:39	07:45	120	31.26	98.43	2A/1	2	6	2A/1	4C/1	2A/1	

Signal Timings

120s cycle time; 120 steps

Controller Stream

Controller Stream	Name	Description	Gaining Delay Type	Signals Manipulation Mode	Multiple Cycling	Offset Relative To	Offset Valid	Offset Positive (s)	Offset Negative (s)	Auto Redistribute	Optimisation Level	Use Sequence
1	New Wapping St / Mayor St		Absolute	StageBased	Single	1	✓	0	0	✓	Offsets And Green Splits	1
2	East Rd / Sheriff St / New Wapping St		Absolute	StageBased	Single	1	✓	92	-28	✓	Offsets And Green Splits	1

Phases

Controller Stream	Phase	Name	Minimum Green (s)	Maximum Green (s)	Relative Start Displacement (s)	Relative End Displacement (s)	Dummy
1	A	(untitled)	6	300	0	0	
1	B	(untitled)	6	300	0	0	
1	C	(untitled)	6	300	0	0	
1	D	(untitled)	6	300	0	0	
1	E	(untitled)	6	300	0	0	
1	F	(untitled)	6	300	0	0	
1	G	(untitled)	8	300	0	0	
2	A	(untitled)	6	300	0	0	
2	B	(untitled)	6	300	0	0	
2	C	(untitled)	6	300	0	0	
2	D	(untitled)	6	300	0	0	
2	E	(untitled)	3	300	0	0	✓

Library Stages

Controller Stream	Library Stage	Phases In Stage	User Stage Minimum (s)
1	1	A,C	6
1	2	B,D,E,F	6
1	3	G	12
2	1	A,C	1
2	2	B,D	1
2	3	E	1
2	4	A	1
2	5	B	1
2	6	C	1
2	7	D	1

Stage Sequences

Controller Stream	Stage Sequence	Name	Stage IDs	Stage Ends	Multiple Cycling Stage IDs	Multiple Cycling Stage Ends
1	1	(untitled)	1,2,3	85,96,114		
1	2	(untitled)	1,3,2	0,42,82		
2	1	(untitled)	1,2,3	42,81,89		
2	2	(untitled)	1,3,2	0,37,78		
2	3	(untitled)	1,3,2,5	0,30,64,87		
2	4	(untitled)	1,3,7,5	0,28,60,86		
2	5	(untitled)	1,3,4,2	0,27,58,88		
2	6	(untitled)	2,6,3,4	0,30,57,88		
2	7	(untitled)	1,7,3,5	0,30,57,88		
2	8	(untitled)	2,4,6,3	0,31,57,85		
2	9	(untitled)	1,3,5,2	0,30,59,87		
2	10	(untitled)	1,3,2,6	0,30,64,92		

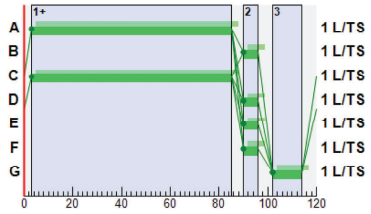
Resultant Stages

Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases In This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
1	1	✓	1	A,C	3	85	82	6	6
1	2	✓	2	B,D,E,F	90	96	6	6	6
1	3	✓	3	G	102	114	12	12	12
2	1	✓	1	A,C	95	42	67	1	6
2	2	✓	2	B,D	47	81	34	1	6
2	3	✓	3	E	86	89	3	1	3

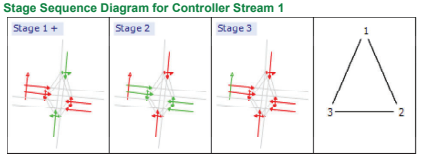
Resultant Phase Green Periods

Controller Stream	Phase	Green Period	Is Base Green Period	Start Time (s)	End Time (s)	Duration (s)
1	A	1	✓	3	85	82
1	B	1	✓	90	96	6
1	C	1	✓	3	85	82
1	D	1	✓	90	96	6
1	E	1	✓	90	96	6
1	F	1	✓	90	96	6
1	G	1	✓	102	114	12
2	A	1	✓	95	42	67
2	B	1	✓	47	81	34
2	C	1	✓	95	42	67
2	D	1	✓	47	81	34
2	E	1	✓	86	89	3

Phase Timings Diagram for Controller Stream 1

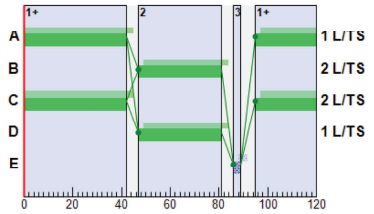


Stage Sequence Diagram for Controller Stream 1

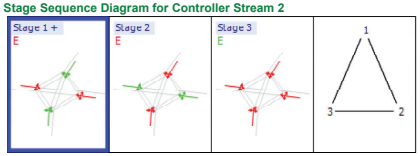


Phase Timings Diagram for Controller Stream 2

R043 TRANSYT Outputs



Stage Sequence Diagram for Controller Stream 2



Final Prediction Table

Link Results

Link	Name	Major Link	Traffic Node	Controller Stream	Phase	Calculated Flow Entering LTS (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s (per cycle))	Wasted Time Total (s (per cycle))	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Journey Time Per PCU (s)	Mean Delay Per PCU (s)	Mean Stops Per PCU (%)	Mean Max Queue (PCU)	Max End Of Red Queue (PCU)	Delay Weighting (%)	Stop Weighting (%)	Cost Of Penalties (£ per hr)	P.I.
1P P	(untitled)	N/A	1	1	G	1	Unrestricted	12.00	0.00	0	Unrestricted	12.00	0.00	0.00	0.00	0.00	100	100	0.00	0.00
1T1 T	(untitled)	N/A	1	1	E	6	1800	6.00	0.00	6	1475	78.71	54.71	94.59	0.19	0.19	100	100	0.00	1.31
1T1x T	(untitled)	N/A		N/A	N/A	5	Unrestricted	120.00	76.00	0	Unrestricted	24.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
1T2 T	(untitled)	N/A	1	1	F	5	1800	6.00	0.00	5	1790	78.53	54.53	94.44	0.16	0.16	100	100	0.00	1.09
1T2x T	(untitled)	N/A		N/A	N/A	6	Unrestricted	120.00	75.00	0	Unrestricted	24.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00

Traffic Stream Results

Arm	Traffic Stream	Name	Traffic Node	Controller Stream	Phase	Phase2	Calculated Flow Entering LTS (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s (per cycle))	Wasted Time Total (s (per cycle))	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Journey Time Per PCU (s)	Mean Delay Per PCU (s)	Mean Stops Per PCU (%)	Mean Max Queue (PCU)	Max End Of Red Time Queue (PCU)	Delay Weighting Multiplier (%)	Stop Weighting Multiplier (%)	Cost Of Penalties (£ per hr)	P.I.
1A	1 NB		1	1	A	N/A	461	1760	82.00	0.00	38	138	12.65	5.45	21.13	3.52	2.75	100	100	0.00	11.13
1Ax	1 NB			N/A	N/A	N/A	166	Unrestricted	120.00	21.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
1B	1 NB		1	1	B	N/A	26	1483	6.00	0.00	30	199	86.13	63.09	102.04	0.89	0.88	100	100	0.00	6.80
1Bx	1 NB			N/A	N/A	N/A	65	Unrestricted	120.00	0.00	0	Unrestricted	23.04	0.00	0.00	0.00	N/A	100	100	0.00	0.00
1C	1 NB		1	1	C	N/A	168	1668	82.00	0.00	15	517	10.27	6.87	33.30	1.93	1.74	100	100	0.00	5.12
1Cx	1 NB			N/A	N/A	N/A	419	Unrestricted	120.00	21.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
1D	1 NB		1	1	D	N/A	5	1407	6.00	0.00	6	1377	61.94	55.10	94.36	0.16	0.16	100	100	0.00	1.15
1Dx	1 NB			N/A	N/A	N/A	10	Unrestricted	120.00	9.00	0	Unrestricted	6.84	0.00	0.00	0.00	N/A	100	100	0.00	0.00
2A	1		2	2	A	C	688	1233	67.00	0.00	98 !	-9	83.63	79.43	134.70	32.54 +	20.12	100	100	0.00	227.17
2Ax	1			N/A	N/A	N/A	274	Unrestricted	120.00	0.00	0	Unrestricted	4.20	0.00	0.00	0.00	N/A	100	100	0.00	0.00
2B	1		2	2	B	N/A	100	1219	34.00	0.00	28	220	57.54	34.74	77.27	2.61	2.42	100	100	0.00	14.67
2Bx	1			N/A	N/A	N/A	263	Unrestricted	120.00	0.00	0	Unrestricted	22.80	0.00	0.00	0.00	N/A	100	100	0.00	0.00
2C	1		2	2	C	N/A	217	1656	67.00	0.00	23	289	18.17	13.37	47.48	3.51	3.10	100	100	0.00	12.73
2Cx	1			N/A	N/A	N/A	467	Unrestricted	120.00	6.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
2D	1		2	2	D	B	406	1421	34.00	0.00	98 !	-8	118.67	110.87	146.73	21.02 +	17.30	100	100	0.00	185.02
2Dx	1			N/A	N/A	N/A	407	Unrestricted	120.00	0.00	0	Unrestricted	7.80	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3A	1		3	N/A	N/A	N/A	166	Unrestricted	120.00	7.00	0	Unrestricted	7.20	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3Ax	1			N/A	N/A	N/A	465	Unrestricted	120.00	0.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3B	1		3	N/A	N/A	N/A	17	514	120.00	0.00	3	2623	4.92	0.12	0.00	0.00	N/A	100	100	0.00	0.01
3Bx	1			N/A	N/A	N/A	6	Unrestricted	120.00	0.00	0	Unrestricted	4.80	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3C	1		3	N/A	N/A	N/A	465	1759	120.00	0.00	26	240	6.97	0.37	0.00	0.05	N/A	100	100	0.00	0.67
3Cx	1			N/A	N/A	N/A	177	Unrestricted	120.00	0.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4A	1		4	N/A	N/A	N/A	199	Unrestricted	120.00	0.00	0	Unrestricted	6.60	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4Ax	1			N/A	N/A	N/A	464	Unrestricted	120.00	0.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4B	1		4	N/A	N/A	N/A	29	502	120.00	0.00	6	1459	5.02	0.22	0.00	0.00	N/A	100	100	0.00	0.03
4Bx	1			N/A	N/A	N/A	10	Unrestricted	120.00	0.00	0	Unrestricted	4.80	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4C	1		4	N/A	N/A	N/A	463	1738	120.00	0.00	27	238	5.18	0.38	0.00	0.05	N/A	100	100	0.00	0.69
4Cx	1			N/A	N/A	N/A	217	Unrestricted	120.00	0.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00

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)
TOTAL	284.97	41.49	6.87	12.99	18.27	443.90	23.70	0.00	467.60
BUSES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TRAMS	2.20	0.31	7.02	0.16	0.00	2.37	0.03	0.00	2.40
OTHER (NORMAL)	282.77	41.18	6.87	12.82	18.27	441.53	23.67	0.00	465.20

- *B = at least one source for this link carries buses*

- *T = at least one source for this link carries trams*
- *P = this link is a pedestrian link*
- *< = adjusted flow warning (upstream links are over-saturated)*
- *! = DOS threshold exceeded*
- *f = average saturation flow for flared link*
- ** = 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 excess queue is greater than 0*
- ***P.I. = PERFORMANCE INDEX***

TRANSYT 14

Version: 14.1.2.315 [26-09-12]

For sales and distribution information, program advice and maintenance, contact TRL:
Tel: +44 (0)1344 770758 E-mail: software@trl.co.uk Web: http://www.trlsoftware.co.uk

Last run: 25/07/2019 12:51:16
Analysis Set used for last run: A18 -

Filename: R043 TRANSYT Model 20190719.t14
Path: J:\R_JOBS\Job-R043\B_Documents\C_Civil\A_CS Reports\4.0 SHD Application for Additional Floors\Traffic\Modelling
Report generation date: 25/07/2019 12:51:18

File summary

File Description

Title	Spencer North
Location	Dublin 1
Site Number	
UTCRegion	
Driving Side	Left
Date	27/03/2018
Version	
Status	
Identifier	
Client	
Jobnumber	R043
Enumerator	GF
Description	

Units

Speed Units	Distance Units	Fuel Economy Units	Fuel Rate Units	Mass Units	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
kph	m	l/100km	l/h	kg	perHour	s	-Hour	perHour

Sorting

Show Names Instead of IDs (For Aimsun)	Sorting Direction	Sorting Type	Ignore Prefixes When Sorting	Link Grouping	Source Grouping
	Ascending	Numerical		Normal	Normal

A18 - : D18 - 2037 With Dev 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)	Cycle Time Used (s)	Total Network Delay (PCU-hr/hr)	Highest DOS (%)	LTSWith Highest DOS	Number Of Oversaturated LTS	Percentage Of Oversaturated LTS (%)	LTSWith Worst Signalised PRC	LTSWith Worst Unsignalised PRC	LTSWith Worst Overall PRC	Network Within Capacity
A18 -	25/07/2019 12:51:00	25/07/2019 12:51:16	17:00	120	11.30	67.49	2D/1	0	0	2D/1	4C/1	2D/1	✓

Signal Timings

120s cycle time; 120 steps

Controller Stream

Controller Stream	Name	Description	Gaining Delay Type	Signals Manipulation Mode	Multiple Cycling	Offset Relative To	Offset Valid	Offset Positive (s)	Offset Negative (s)	Auto Redistribute	Optimisation Level	Use Sequence
1	New Wapping St / Mayor St		Absolute	StageBased	Single	1	✓	0	0	✓	Offsets And Green Splits	1
2	East Rd / Sheriff St / New Wapping St		Absolute	StageBased	Single	1	✓	17	-103	✓	Offsets And Green Splits	1

Phases

Controller Stream	Phase	Name	Minimum Green (s)	Maximum Green (s)	Relative Start Displacement (s)	Relative End Displacement (s)	Dummy
1	A	(untitled)	6	300	0	0	
1	B	(untitled)	6	300	0	0	
1	C	(untitled)	6	300	0	0	
1	D	(untitled)	6	300	0	0	
1	E	(untitled)	6	300	0	0	
1	F	(untitled)	6	300	0	0	
1	G	(untitled)	8	300	0	0	
2	A	(untitled)	6	300	0	0	
2	B	(untitled)	6	300	0	0	
2	C	(untitled)	6	300	0	0	
2	D	(untitled)	6	300	0	0	
2	E	(untitled)	3	300	0	0	✓

Library Stages

Controller Stream	Library Stage	Phases In Stage	User Stage Minimum (s)
1	1	A,C	6
1	2	B,D,E,F	6
1	3	G	12
2	1	A,C	1
2	2	B,D	1
2	3	E	1
2	4	A	1
2	5	B	1
2	6	C	1
2	7	D	1

Stage Sequences

Controller Stream	Stage Sequence	Name	Stage IDs	Stage Ends	Multiple Cycling Stage IDs	Multiple Cycling Stage Ends
1	1	(untitled)	1,2,3	38,51,69		
1	2	(untitled)	1,3,2	0,42,82		
2	1	(untitled)	1,2,3	22,81,89		
2	2	(untitled)	1,3,2	0,37,78		
2	3	(untitled)	1,3,2,5	0,30,64,87		
2	4	(untitled)	1,3,7,5	0,28,60,86		
2	5	(untitled)	1,3,4,2	0,27,58,88		
2	6	(untitled)	2,6,3,4	0,30,57,88		
2	7	(untitled)	1,7,3,5	0,30,57,88		
2	8	(untitled)	2,4,6,3	0,31,57,85		
2	9	(untitled)	1,3,5,2	0,30,59,87		
2	10	(untitled)	1,3,2,6	0,30,64,92		

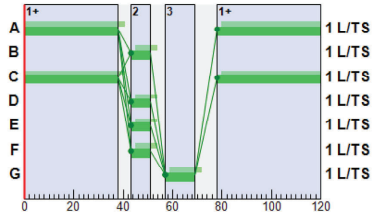
Resultant Stages

Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases In This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
1	1	✓	1	A,C	78	38	80	6	6
1	2	✓	2	B,D,E,F	43	51	8	6	6
1	3	✓	3	G	57	69	12	12	12
2	1	✓	1	A,C	95	22	47	1	6
2	2	✓	2	B,D	27	81	54	1	6
2	3	✓	3	E	86	89	3	1	3

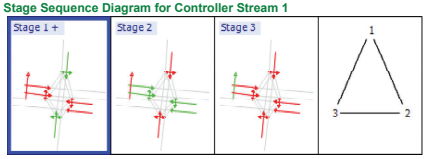
Resultant Phase Green Periods

Controller Stream	Phase	Green Period	Is Base Green Period	Start Time (s)	End Time (s)	Duration (s)
1	A	1	✓	78	38	80
1	B	1	✓	43	51	8
1	C	1	✓	78	38	80
1	D	1	✓	43	51	8
1	E	1	✓	43	51	8
1	F	1	✓	43	51	8
1	G	1	✓	57	69	12
2	A	1	✓	95	22	47
2	B	1	✓	27	81	54
2	C	1	✓	95	22	47
2	D	1	✓	27	81	54
2	E	1	✓	86	89	3

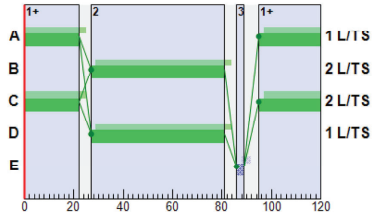
Phase Timings Diagram for Controller Stream 1



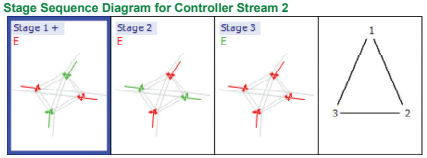
Stage Sequence Diagram for Controller Stream 1



Phase Timings Diagram for Controller Stream 2



Stage Sequence Diagram for Controller Stream 2



Final Prediction Table

Link Results

Link	Name	Major Link	Traffic Node	Controller Stream	Phase	Calculated Flow Entering LTS (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s (per cycle))	Wasted Time Total (s (per cycle))	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Journey Time Per PCU (s)	Mean Delay Per PCU (s)	Mean Stops Per PCU (%)	Mean Max Queue (PCU)	Max End Of Red Queue (PCU)	Delay Weighting (%)	Stop Weighting (%)	Cost Of Penalties (£ per hr)	P.I.
1P P	(untitled)	N/A	1	1	G	1	Unrestricted	12.00	0.00	0	Unrestricted	12.00	0.00	0.00	0.00	0.00	100	100	0.00	0.00
1T1 T	(untitled)	N/A	1	1	E	7	1800	8.00	0.00	5	1636	76.53	52.53	92.67	0.22	0.22	100	100	0.00	1.47
1T1x T	(untitled)	N/A		N/A	N/A	6	Unrestricted	120.00	64.00	0	Unrestricted	24.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
1T2 T	(untitled)	N/A	1	1	F	6	1800	8.00	0.00	4	1925	76.42	52.42	92.58	0.19	0.19	100	100	0.00	1.26
1T2x T	(untitled)	N/A		N/A	N/A	7	Unrestricted	120.00	63.00	0	Unrestricted	24.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00

Traffic Stream Results

Arm	Traffic Stream	Name	Traffic Node	Controller Stream	Phase	Phase2	Calculated Flow Entering LTS (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s (per cycle))	Wasted Time Total (s (per cycle))	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Journey Time Per PCU (s)	Mean Delay Per PCU (s)	Mean Stops Per PCU (%)	Mean Max Queue (PCU)	Max End Of Red Queue (PCU)	Delay Weighting Multiplier (%)	Stop Weighting Multiplier (%)	Cost Of Penalties (£ per hr)	P.I.
1A	1 NB		1	1	A	N/A	133	1763	80.00	0.00	11	705	13.21	6.01	30.87	1.41	1.34	100	100	0.00	3.67
1Ax	1 NB			N/A	N/A	N/A	324	Unrestricted	120.00	22.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
1B	1 NB		1	1	B	N/A	12	1650	8.00	0.00	10	828	76.40	53.36	92.81	0.38	0.38	100	100	0.00	2.67
1Bx	1 NB			N/A	N/A	N/A	30	Unrestricted	120.00	0.00	0	Unrestricted	23.04	0.00	0.00	0.00	N/A	100	100	0.00	0.00
1C	1 NB		1	1	C	N/A	335	1752	80.00	0.00	28	218	12.08	8.48	39.16	4.52	3.69	100	100	0.00	12.85
1Cx	1 NB			N/A	N/A	N/A	126	Unrestricted	120.00	21.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
1D	1 NB		1	1	D	N/A	11	1032	8.00	0.00	14	534	63.00	56.16	95.52	0.35	0.35	100	100	0.00	2.57
1Dx	1 NB			N/A	N/A	N/A	11	Unrestricted	120.00	9.00	0	Unrestricted	6.84	0.00	0.00	0.00	N/A	100	100	0.00	0.00
2A	1		2	2	A	C	246	1081	47.00	0.00	57	58	39.29	35.09	83.33	6.93 +	5.29	100	100	0.00	36.62
2Ax	1			N/A	N/A	N/A	529	Unrestricted	120.00	0.00	0	Unrestricted	4.20	0.00	0.00	0.00	N/A	100	100	0.00	0.00
2B	1		2	2	B	N/A	118	1071	54.00	0.00	24	274	44.06	21.26	61.33	2.46	2.17	100	100	0.00	10.80
2Bx	1			N/A	N/A	N/A	212	Unrestricted	120.00	0.00	0	Unrestricted	22.80	0.00	0.00	0.00	N/A	100	100	0.00	0.00
2C	1		2	2	C	N/A	354	1692	47.00	0.00	52	72	28.57	23.77	48.67	6.44	4.99	100	100	0.00	35.35
2Cx	1			N/A	N/A	N/A	195	Unrestricted	120.00	7.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
2D	1		2	2	D	B	507	1639	54.00	0.00	67	33	38.33	30.53	80.65	13.93 +	9.85	100	100	0.00	66.19
2Dx	1			N/A	N/A	N/A	289	Unrestricted	120.00	0.00	0	Unrestricted	7.80	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3A	1		3	N/A	N/A	N/A	328	Unrestricted	120.00	5.00	0	Unrestricted	7.20	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3Ax	1			N/A	N/A	N/A	135	Unrestricted	120.00	0.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3B	1		3	N/A	N/A	N/A	15	543	120.00	0.00	3	3157	4.89	0.09	0.00	0.00	N/A	100	100	0.00	0.01
3Bx	1			N/A	N/A	N/A	23	Unrestricted	120.00	0.00	0	Unrestricted	4.80	0.00	0.00	0.00	N/A	100	100	0.00	0.00
3C	1		3	N/A	N/A	N/A	147	1479	120.00	0.00	10	805	6.73	0.13	0.00	0.01	N/A	100	100	0.00	0.08
3Cx	1			N/A	N/A	N/A	332	Unrestricted	120.00	0.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4A	1		4	N/A	N/A	N/A	342	Unrestricted	120.00	0.00	0	Unrestricted	6.60	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4Ax	1			N/A	N/A	N/A	172	Unrestricted	120.00	0.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4B	1		4	N/A	N/A	N/A	27	537	120.00	0.00	5	1691	4.98	0.18	0.00	0.00	N/A	100	100	0.00	0.02
4Bx	1			N/A	N/A	N/A	40	Unrestricted	120.00	0.00	0	Unrestricted	4.80	0.00	0.00	0.00	N/A	100	100	0.00	0.00
4C	1		4	N/A	N/A	N/A	193	1411	120.00	0.00	14	558	5.00	0.20	0.00	0.01	N/A	100	100	0.00	0.15
4Cx	1			N/A	N/A	N/A	350	Unrestricted	120.00	0.00	0	Unrestricted	0.00	0.00	0.00	0.00	N/A	100	100	0.00	0.00

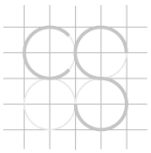
Network Results

	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)
TOTAL	244.27	19.98	12.22	9.81	1.49	160.46	13.23	0.00	173.69
BUSES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TRAMS	2.60	0.36	7.17	0.19	0.00	2.69	0.04	0.00	2.73
OTHER (NORMAL)	241.67	19.62	12.32	9.63	1.48	157.77	13.20	0.00	170.97

- *B = at least one source for this link carries buses*
- *T = at least one source for this link carries trams*
- *P = this link is a pedestrian link*
- *< = adjusted flow warning (upstream links are over-saturated)*
- *! = DOS threshold exceeded*
- *f = average saturation flow for flared link*
- ** = 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 excess queue is greater than 0*
- ***P.I. = PERFORMANCE INDEX***

Appendix E

DMURS Statement of Consistency



CS CONSULTING
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CRONIN & SUTTON CONSULTING (part of the CS Consulting Group)
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Planning & Property Development Department
Dublin City Council, Block 4, Floor 3
Wood Quay
Dublin 8

Sent By: Email
Job Ref: R043
A - GF
Date: 2-Aug-19

RE: Residential Apartment & Shared Accommodation Development, Spencer Dock, Dublin 1

Pre-Planning Application DMURS Statement of Consistency to An Bord Pleanála

Cronin & Sutton Consulting Engineers (CS Consulting), as part of a multi-disciplinary design team, have been commissioned by Spencer Place Development Company Limited to develop a DMURS Statement of Consistency to accompany a planning application for a proposed strategic housing development of 464no. apartment units and 84no. shared accommodation units with 78no. basement car parking spaces, 26no. surface-level public car parking spaces, an internal access road, and ancillary works at Block 2, Spencer Dock, Dublin 1.

Traffic & Transportation

The proposed scheme is designed in compliance with the following:

- Design Manual for Urban Roads and Streets (2013)
- Dublin City Development Plan 2016–2022
- National Cycle Manual (2011)
- Greater Dublin Area Cycle Network Plan

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Development Access

The proposed development incorporates 2no. basement car parks, separated due to the presence of the North Lotts Pumping Station. It is proposed to provide a vehicular access to each of these basements directly from New Wapping Street, at the eastern boundary of the site. The design of the accesses ensures that sightlines of 49m are achievable in both directions along New Wapping Street for vehicles exiting the development, in accordance with the requirements of the *Design Manual for Urban Roads and Streets*.

Internal Road Layout

At surface level, the development incorporates the north-south access road between Sheriff Street Upper and Mayor Street Upper, as planned under the *North Lotts and Grand Canal Dock Planning Scheme 2014*. The southern part of this access road shall be restricted to one-way operation in the northbound direction.

The north-south access road shall have general carriageway widths of 3.8m along its southern section (one-way traffic) and 6.0m along its northern section (two-way traffic). Car parking and loading facilities are provided along either side of the access road, positioned so as to minimise conflicts between vehicle and pedestrian movements.

A service access to the development and to the North Lotts Pumping Station is provided via an internal spur to the east from the north-south access road. This is accessible by way of removable bollards and a dropped kerb. With these bollards in place, the service spur entry provides a turning head for larger vehicles.

The internal road layout of the proposed development is designed in accordance with the guidance provided in the *Design Manual for Urban Roads and Streets* (DMURS). As stated in the introduction to the DMURS:

> *"Better street design in urban areas will facilitate the implementation of policy on sustainable living by achieving a better balance between all modes of transport and road users. It will encourage more people to choose to walk,*

cycle or use public transport by making the experience safer and more pleasant."

Given the development site location, shape and constraints, as well as the requirements of the *North Lotts and Grand Canal Dock Planning Scheme 2014*, we submit that the proposed site layout is well suited to this strategic development site.

Public Realm and Pedestrian Facilities

The development layout design put forward improves the existing roads environs with plantings and with enhanced pedestrian facilities. The development design ensures pedestrian permeability through the development site along both the north-south and east-west axes. The development shall significantly extend and improve the public realm along its eastern boundary, providing a minimum footpath width of 3.4m along New Wapping Street.

The existing pedestrian crossing facilities at the site boundaries on Sheriff Street Upper, New Wapping Street, and Mayor Street Upper shall be retained; pedestrian crossings shall also be provided on the new north-south access road at the north-western and south-western corners of the site, with dropped kerbs and tactile paving. Dropped kerbs and tactile paving shall also be provided at the development's vehicular accesses on New Wapping Street.

Raised footpaths shall flank the new north-south access road to either side, separated from the carriageway by car parking spaces and planting.

Traffic Calming Measures

The final development layout shall incorporate features that benefit vulnerable road users by encouraging low vehicle speeds (such as reduced road corner radii, kerb buildouts, plantings, etc.), following the principle that roads should serve a community and not dominate it. The provision of good permeability for pedestrians, cyclists & public transport are all key objectives of the proposed site layout.

Dated design elements that reflect poor design standards (such as wide roads, long straights or sweeping curves, unnecessarily large junction corner radii, and

large junction visibility splays) are omitted to the extent possible within the site layout, to reduce vehicle speeds within the development.

The objectives of the site layout design are:

- to keep vehicle speeds low;
- to minimise the intrusion of vehicle traffic;
- to ensure ease of access for emergency services;
- to encourage walking and cycling;
- to create short walking routes to shops, public transport, etc.;
- to create a safe, secure, and pleasant environment for people, particularly vulnerable road users (VRUs) such as children.

Traffic calming and VRU protection measures to be implemented in the design include:

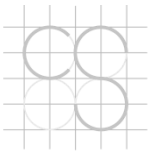
- designated and marked pedestrian crossing points;
- smaller corner radii;
- horizontal alignment constraints to restrict vehicle speeds;
- landscaping to frame vehicle sightlines internally;
- a road design for a maximum vehicle speed of 20km/h.

The internal layout of the proposed development shall incorporate numerous design features such as distinctive surface materials and colours, strong landscaping proposals and modern furniture structures, in order to establish a sense of place within an urban neighbourhood environment. The low quantum of car parking provision within the scheme will also improve safety.

Gordon Finn
Roads & Traffic Engineer
B.A., B.A.I. (Hons), M.A.I. (St.), M.I.E.I.
for Cronin & Sutton Consulting

Appendix F

Independent Quality Audit



CS CONSULTING
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DUBLIN - LONDON - LIMERICK

19117-01-001

Proposed Residential Development at Spencer North, Dublin Docklands

QUALITY AUDIT
(incorporating a walking and road safety audit)

for

CS Consulting

July 2019

ROADPLAN CONSULTING

7, Ormonde Road
Kilkenny.
R95 N4FE

Tel: 056 7795800
info@roadplan.ie

1. INTRODUCTION

1.1 Roadplan Consulting in association with Kevin Donovan, Architect, has been commissioned by CS Consulting Engineers to carry out a Quality Audit of Spencer North, Dublin Docklands

1.2 The scheme consists of 464 no. apartments and 84 no. shared accommodation, with 78 no. car parking spaces at Lower GF level, accessed from New Wapping Street.

1.3 The scheme includes a new street bounding the development on its west side and running south to north between Mayor Street and Sheriff Street. It is referred to in this report as New Street.

2. QUALITY AUDIT

2.1 Quality Audit is a defined process, independent of, but involving, the design team that, through planning, design, construction and management stages of a project provides a check that high quality places are delivered and maintained by all relevant parties, for the benefit of all end users. Quality Audit is a process, applied to urban roads, traffic management or development schemes, which systematically reviews projects using a series of discrete but linked evaluations and ensures that the broad objectives of place, functionality, and safety in respect of the movement of both users of the facility and the public are achieved.

2.2 Quality Audit was introduced in the publication *Design Manual for Urban Roads and Streets* following concerns that in the design of new streets provisions made for motor vehicles frequently led to a poorly-designed public realm. In an urban area there is a high level of competing demand from different classes of road users. A well-balanced street will have minimal clutter and obstacles; it will use durable materials and most importantly, will encourage a degree of negotiation between road users as they make their way through it.

2.3 Quality Audit involves various assessments of the impacts of a street scheme in terms of road safety and the use of streets by the community. Access for disabled people, pedestrians, cyclists and drivers of motor vehicles is considered.

2.4 In the context of a Quality Audit, road safety assessment is considered to be an appropriate method of examining road safety issues as it incorporates both the hazard identification techniques used in road safety audit and formal risk assessment techniques. This allows the opportunity at an early stage for road safety issues to be considered in a more dynamic way within the design process, and to ensure that safety issues are considered as part of the design rather than after design work is completed.

2.5 The Quality Audit Team reports findings with suggestions for future action. It should be noted that, in a Quality Audit, it is not the intention that suggestions would be binding on the design team; they are offered for consideration in the design process.

3. METHODOLOGY

3.1 The Audit Team was as follows:

- Dermot Donovan Chartered Engineer FIEI
- Kevin Donovan Architect B.A., B.Arch., M.Phil / DEA

3.2 The brief stipulated that the audit was to take the form of:

- Stage 1/2 Road Safety Audit
- Access Audit
- Walking Audit
- Non-Motorised User Audit
- Cycle Audit

The Audit therefore focused on issues such as:

- the design rationale as it related to vehicle, cycle and pedestrian movements;
- pedestrian movement both to and through the site;
- access requirements for all modes of transport;
- access requirements for disabled people and other vulnerable users;
- any road safety concerns associated with the scheme;
- the scheme as it is experienced by those entering it and moving around within the streets, including how this affects road user behaviour; and
- any other issues considered relevant to each constituent element of the Quality Audit process.

The Audit was of the external spaces within and around the proposed development. The internal layout of the buildings was not audited.

3.3 The documents provided for the audit were:

Drawing No.	**Drawing Title**
P4-0003	Site Plan Proposed
P4-1009	Lower Ground Floor Plan
P4-1010	Ground Floor Plan

Copies of these audited drawings are contained in appendix A.

3.4 In carrying out the Audit reference was made to the following guidance documents and standards:

3.5 The Design Manual for Urban Roads and Streets – DoE

3.6 GE-STY-01024 - Road Safety Audit – TII

3.7 HD 42/17: Walking, cycling & horse-riding assessment and review DMRB – Highways England
3.8 Building for Everyone: External environment and approach – NDA
3.9 How Walkable is your Town – Age Friendly Ireland
3.10 National Cycle manual – NTA

4. KEY FINDINGS, SUGGESTED ACTIONS AND COMMENTS

4.1 Issue:
There are repeated changes in geometry in the pattern of the proposed paving within footpaths. This has the potential to result in areas of fragmented paving that could lose integrity over time.

Suggestion:
Make use of a more durable paving pattern.

4.2 Issue:
Bike parking spaces for visitors to the café and shared accommodation are remote from those locations and may not be easily found by users.

Suggestion:
Provide bike parking that is more conveniently located for uses of these facilities.

4.3 Issue:
The pedestrian street that bisects the development is wide and is an area in which people may choose to congregate. Facilities are not shown to be provided to support such use in safety and comfort.

Suggestion:
Provide seating and public lighting sufficient to cater for such use in safety and comfort.

4.4 Issue:
Inter-visibility between pedestrians on the public footpath and drivers emerging from the underground car parking would be restricted if pedestrians walk close to the building frontage.

Suggestion:

- Provide measures to deflect pedestrians out from the building frontages (e.g. a low wall, railing, bollard, item of street furniture).
- Provide signs on exit from the car parking warning drivers of pedestrians crossing ahead.

4.5 Issue:
New Street, on the west side of the development, forms a crossroads junction with Abercorn Road. This may increase the number of pedestrians crossing Sheriff Street at this location. The street is wide and straight so speeds may be relatively high at times. Crossing may be difficult for less able pedestrians.

Suggestion:
Provide crossing facilities appropriate to the predicted pedestrian demand.

4.6 Issue:
Details are not shown on the drawings in relation to the operation of New Street; however, the Client has confirmed that the southern section is one-way (given its relatively narrow width) and, on that section, the direction of travel is to be northbound (this provides a route for residents to egress from the parking bays at the housing terrace on Mayor Street). The north section is to be two-way (given its 6m width) providing access to the pedestrian street for maintenance and delivery vehicles. A system for regulating the intended traffic flow is not shown to be provided.

Suggestion:
Provide the signage necessary to regulate traffic flow. The following signage strategy could be considered:

- cul-de-sac sign and restricted access signage (access only) at Sheriff Street.
- No Entry sign for southbound traffic on New Street immediately south of the pedestrian street (to prohibit entry onto the one-way section);
- two-way traffic sign facing northbound drivers where New Street changes from one-way to two-way operation and centreline marking and lane indicating arrows on the two-way section, all for the purposes of ensuring that northbound drivers are aware that the street changes to two-way operation;
- Stop sign on New Street at the Sheriff Street junction;
- consideration could be given to prohibiting the right turn from New Street onto Sheriff Street for two reasons: first, to improve road safety

given the crest on Sheriff Street west of the junction; secondly, to deter rat-running via New Street.

4.7 Issue:
The one-way section of New Street has indented roadside parking on each side. Given the 3m lane width available between parking bays there is limited scope for evasive action should a car door open into a driver's path.

Suggestion:
Provide traffic calming measures to ensure that drivers travel slowly on this section. Vertical deflections and rough-textured pavements may be appropriate.

4.8 Issue:
Given that the southern section of New Street is intended to be one-way, the mouth of the junction with Mayor Street is too wide. Pedestrian safety would be enhanced by reducing the crossing distance and slowing the speed of turning traffic.

Suggestion:
Reduce the width of New Street at its junction with Mayor Street and re-shape the bell-mouth of the junction so that it facilitates entry from the east and south only (it is understood that there is to be a low-volume road as fourth arm of the junction on its south side) .

4.9 Issue:
Roadside parking on New Wapping Street would, if retained, reduce visibility of drivers exiting the proposed underground carparks.

Suggestion:
Ensure that adequate visibility splays are available to drivers exiting the car parks in accordance with DMURS.

4.10 Issue:
Block 1 ground floor has two floor levels: 4.7m and 5.225m. There are 3 lifts, two of which serve the 4.7m level only. If mobility impaired users require access to the 5.225m level areas they must use the lift at quadrant E5. Those unfamiliar with the building may be unaware of that requirement and might one the incorrect lift.

Suggestion:
Provide directional signage within the underground car park and at the entry to the courtyard area of Block 1 directing users to the appropriate lift serving the reception area.

4.11 Issue:
There will be routine pedestrian trips though the underground car parks, some of which will not be associated with car parking: the Block 1 refuse stores is remote from the northern lift and residents will traverse the car park when depositing waste; the Block 2 bicycle stores are remote from the lift shafts (the lift shaft beside the eastern bicycle store does not appear to serve the store). Users will therefore wheel their bikes and carry their refuse through the car parks. There are no specific provisions for separation of vulnerable users from vehicular traffic.

Suggestion:
Provide a delineated route for pedestrians (including those wheeling bikes) around the outside of the circulating road of each car park.

4.12 Issue:
There are two columns within the area traversed by cars in the car park of Block 1. They are located within the road to the front of parking spaces numbered 22 and 23. They could be struck by vehicles. In addition, drivers may be unaware which side of the column to travel on for the best approach to the western parking spaces.

Suggestion:
Mark the columns with reflective markings and provide a guide line on the floor of the car park extending from space numbered 18 to the first column to indicate the route to the downstream parking spaces.

4.13 Issue:
The distance between car park space numbered 30 and the wall of the stairwell to its east appears to be 600mm or so. This area is the passage

leading to the lift serving the east (residential) area of Block 2 and appears to be the only lift serving this area. Users of the accessible parking spaces will therefore rely on it. It will not be accessible by wheelchair if a vehicle parked in space number 30 obstructs the width required for universal access. In addition, the corridor leading to the lift appears narrow.

Suggestion:
Move parking spaces numbered 28, 29, and 30 westwards to provide the necessary width and ensure that adequate corridor width is available to provide universal access from the car park to Block 2 residential.

4.14 Issue:
No direct access appears to be provided between the Part V residences and the underground car park, either by lift or by stairs. It is not clear if parking is to be provided for the residents. Overspill parking to the adjacent streets may occur.

Suggestion
Cater for the parking needs of the Part V residents and allow direct access to the car share spaces.

4.15 Issue:
A door is not shown to be provided to the street from the Part V bicycle store. The access appears to be thought the refuse store.

Suggestion
Provide direct access from the street to the bicycle store and dish the existing kerbline on New Wapping Street at the proposed access to facilitate entry and exiting by cyclists.

4.16 Issue:
There will be foot traffic across the foot of the ramps to the underground car parks. The refuse stores are located to the south of the ramps and the lifts (to non-Part V residents) are located to the north. Drivers descending the ramp may not expect pedestrians to cross ahead of them.

Suggestion
Provide a marked crossing point for pedestrians with advance signage to warn descending drivers.

4.17 Issue:
Doors to plant rooms in the underground car parks open outwards and car parking spaces are provided in front of some doors. Access may be obstructed by parked vehicles. The west side of Block 2 car park has the most frequent incidence.

Suggestion
If unobstructed access is required, amend the parking layout to ensure it is available.

4.18 Issue:
The floor level of the café and reception of Block 2 shared accommodation is 3.5m; the level of the plant rooms below are 1.1m. Floor to ceiling heights may be insufficient in the plant rooms.

Suggestion
Provide adequate floor to ceiling heights.

4.19 Issue:
Parking on Sheriff Street close to the junction with New Street may obstruct sightlines for divers exiting New Street.

Suggestion
Remove parking as necessary to provide adequate visibility splays.

4.20 Issue:
The ends of the existing roadside parking area on the south side of Sheriff Street are gently tapered and do not in themselves clearly indicate the end of parking. Lined parking prohibitions are not as effective as well-defined parking bays in restricting unauthorised parking. Drivers may park closer to the junction than intended, obstructing sightlines.

Suggestion
The alignment of the kerbing should be parallel to the road centreline from each junction to the points at which parking is to be allowed, at which location the kerbline should chamfer abruptly to form the partially indented parking bay.

4.21 Issue:
The drawing does not show measures to prevent vehicular access to the pedestrian street from New Street.

Suggestion
Provide removable bollards to the rear of the bell-mouth of the junction, sufficiently robust to prevent vehicle entry and adequately set back to provide a turning head for vehicles turning to return to Sheriff Street.

4.22 Issue:
An accessible toilet is shown to be provided in Block 1 but not in Block 2. Such facilities would be required adjacent to the café, reception and gym in the shared accommodation.

Suggestion
Ensure that the WC shown to be provided in Block 1 (at the café) is suitable for universal use.

4.23 Issue:
The floor level of the café is 3.5m. Assuming a level entry threshold at the café entrance, the path level will be similar. The path level is shown to be 2.45m some 18m to the east. The gradient of the public footpaths could be excessive.

Suggestion
Revise the levels to ensure the gradient of the footpath is adequate for universal use.

4.24 Issue:
There are flights of steps on the pedestrian street and the links to the courtyards and public footpaths. They may not be adequately conspicuous to users and could be a trip hazard.

Suggestion
Provide tactile paving at the top and base of the flights of stairs to warn pedestrians.

4.25 Issue:
On New Wapping Street, to the rear of the terrace of houses on Mayor Street, there is a mismatch between the proposed and existing kerblines and the footpath narrows significantly. This may present a hazard to pedestrians. In addition, a passageway appears to be created between Block 2 and the existing rear wall of the terraced properties. It is a narrow area and may be unlit. Its purpose is unclear.

Suggestion
Move out the existing kerbline to match the proposed and maximise the available width of the footpath. Permanently close off the access to the passageway from the public footpath.

4.26 Issue:
Entry to Mayor Street from New Wapping Street junction is restricted but has a plated exception for access only. On opening of New Street drivers are likely to presume that the access only exception permits them to travel onto Mayor Street to access New Street. Rat-running to avoid the Sheriff Street / New Wapping Street traffic signals could occur. This could lead to an increase in vehicular traffic on Mayor Street and These and increased risk of collision with tram traffic.

Suggestion
Clarify the signage so that it clearly informs and regulates driver behaviour. Ideally measure would be provided to prevent trips between the Mayor Street / New Wapping Street junction and the New Street / Sheriff St junction.

4.27 Issue:
The external ramp located between the door to the lobby and the door to the reception at Block 1 is too steep for universal use.

Suggestion
Ensure that the alternative route via the internal lift is always open and available to users.

4.28 Issue:
The ramp from New Wapping Street to the pedestrian street is long and does not appear to have a sufficient number of intermediate landings. It may prove challenging for older people. The ramp from the pedestrian street to the courtyard of Block 1 appears similar.

Suggestion
Provide a sufficient number of intermediate landings at both ramps.

Observation
It is assumed that the green space shown on the Ground Floor Plan adjacent to the public footpath at Sheriff Street (between grid lines 3 and 4) is not publicly accessible from the street and does not need to be provided with public amenities such as seating, lighting, street furniture etc.

Observation
There is a discrepancy between the proposed levels of the footpath on Mayor Street shown on different drawings: the site plan shows 2.7m (mid-way along Mayor Street) and the Ground Floor plans shows 2.45m.

Observation
The surface level of the entrance to the underground car park of Block 1 is shown as 1.710m on the ground floor plan and as 2m on the lower floor plan.

Observation
The sole access to Block 1 rooms at floor level 5.225m elevation is via the Reception in respect of mobility impaired users. The corridor from Reception to these rooms runs through the Management and Maintenance room and the Staff Locker and Cleaner Store room. It is presumed that these areas will remain open and that access through the corridor will not be locked or restricted.

Observation
When a lift is shown located on the interface between floors of slightly different levels and lift doors are shown to both sides, it is presumed that the lift will serve both floors.

Appendix A - Drawings

DWG. NO.

Ground Floor Plan P4-1010

NOTE
ALL DIMENSIONS TO BE CHECKED ON SITE
NO DIMENSIONS TO BE SCALED FROM THIS DRAWING
THIS DRAWING IS TO BE READ IN CONJUNCTION WITH
RELEVANT CONSULTANTS DRAWINGS

N

1A003 B6
1A002 B11
1A004 A4
1A001 B10
1B001 B10
1A013 A5
1B002 B11
1B003 B6
1B004 A9
1B011 A5
1A005 B1
1A006 A2
1A012 A1
1A007 A2
1A011 A1
1A008 B1
1A010 B7
1B005 B1
1B010 A1
1B006 A2
1B009 B7
1B007 A2
1B008 A2
BLOCK 1 RESIDENTIAL
Lobby
Post Room 19 m²
Staff Locker & Cleaner Store 23 m²
Disabled WC
Management & Maintenance 35 m²
Reception 155 m²
Existing Irish Water Pump Station
73 m²

2A003 B5
2A002 B4
2A004 A4
2A008 A5
2A001 B6
2A005 A3
2A006 A3
2A007 A1
2B001 B5
2B002 A3
2B003 A3
2D002 A3
2B006 B13
2D003 A3
2B005 B14
2D004 A3
2B004 A7
2D005 B23
BLOCK 2 RESIDENTIAL
BLOCK 2 CO-LIVING
AV / Multimedia Room 77 m²
Meter Room
Sub-Station
Cafe LV Room
Gym / Multipurpose Room 145 m²
Bookable Room 41 m²
Staff 33 m²
Co-working Space 59 m²
Reception 81 m² VOID TO ABOVE
Lobby 6 m²
WC
Cafe 112 m²
Line of Mezzanine Above

REV	DATE	DESCRIPTION	CHKD	DRW

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CLIENT
Spencer Place Development Company Limited
PROJECT
Spencer Place Residential City Block 2

DATE	29/03/19
SCALE:	1 : 200 @A1
DRAWN	BD
CHECKED	NP
MODEL FILE NAME	950291-Spencer Place North-

DRAWING
Ground Floor Plan

HJL JOB No. 950291
DRAWING NUMBER P4-1010
DRAWING STATUS: S0 ISSUED FOR PLANNING
REVISION

1 Ground Floor Plan
1 : 200

DWG. NO.
Lower Ground Floor Plan P4-1009

NOTE
ALL DIMENSIONS TO BE CHECKED ON SITE
NO DIMENSIONS TO BE SCALED FROM THIS DRAWING
THIS DRAWING IS TO BE READ IN CONJUNCTION WITH
RELEVANT CONSULTANTS DRAWINGS

N

Attenuation Tank
Flood Defence
Furniture Store
Comms
Lobby
Irrigation
Stair
Lift
Sprinkler Tank Room
Generator Room 1
CAR PARKING
(42 spaces)
CAR SHARE
(11 SPACES)
ELECTRIC CAR
(2 SPACES)
Block 1 Bicycle Store
478 Spaces
BLOCK 1
RESIDENTIAL
DH
Block 1 Refuse
Plant - Mains
L V Room
Plant - CWS
ESB SubStation
EXISTING IRISH WATER
INFRASTRUCTURE
PLANT 2 - MWS / CWS
Generator Room 2
Block 2 - Bicycle Store
98 Spaces
Generator Room 3
Flood Defence
Gas Meter Room
BLOCK 2
CO-LIVING
Sprinkler Tank 3
Aparthotel Corridor
Riser
PLANT 3 - MWS / CWS
Linen Store
Aparthotel Refuse
Part V Refuse
Part V Bicycle Store
62 Spaces
Block 2 - Bicycle Store
88 Spaces
Block 2 Refuse

1 Lower Ground Floor Plan
1 : 200

REV	DATE	DESCRIPTION	CHKD
			DRW

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DATE	29/03/19
SCALE:	1 : 200 @A1
DRAWN	BD
CHECKED	NP
MODEL FILE NAME	950291-Spencer Place North-

DRAWING
Lower Ground Floor Plan

HJL JOB No. 950291
DRAWING NUMBER P4-1009
DRAWING STATUS: S0 ISSUED FOR PLANNING
REVISION

DWG. NO.
- P4-0003

NOTE
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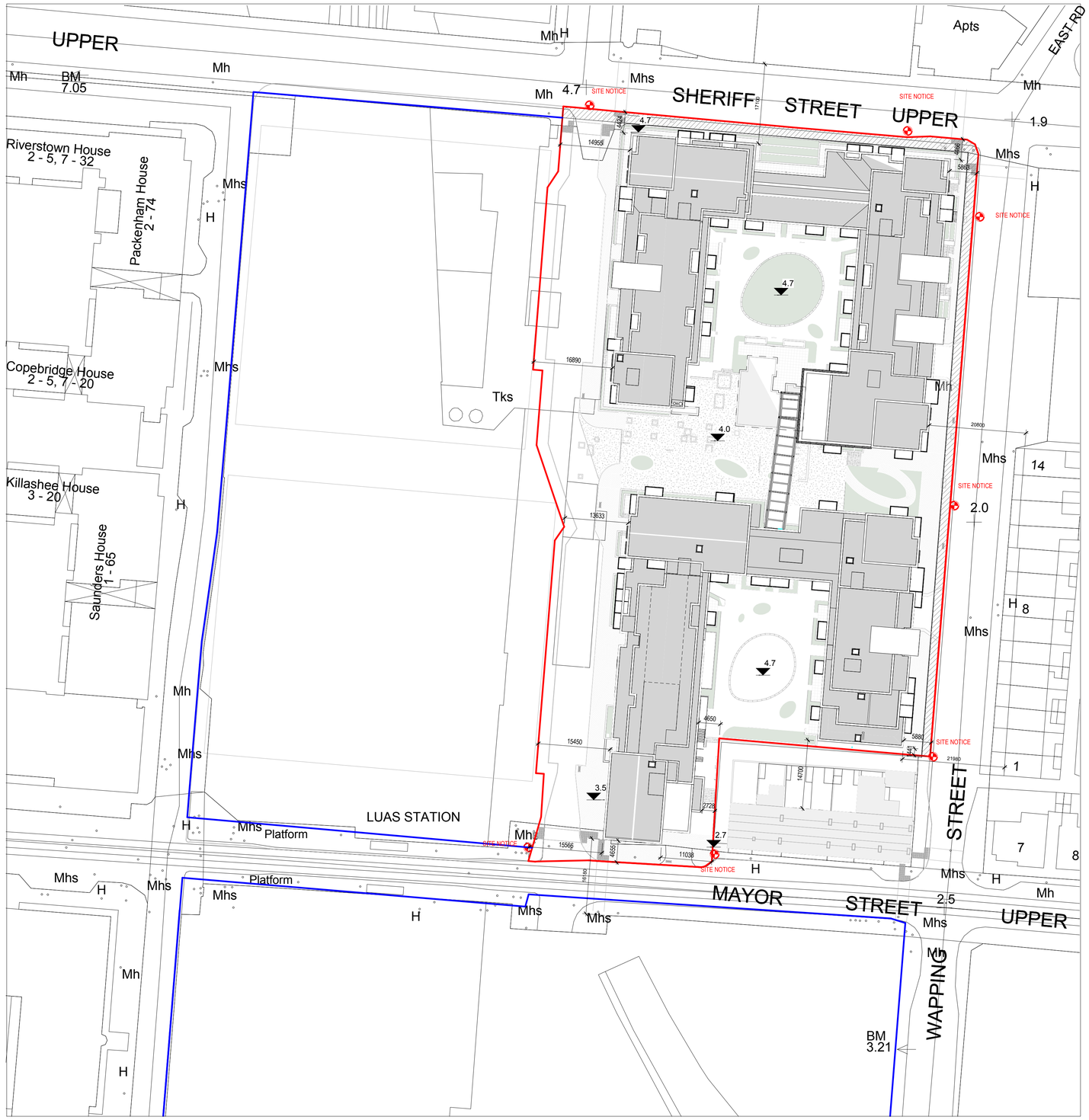
NO DIMENSIONS TO BE SCALED FROM THIS DRAWING
THIS DRAWING IS TO BE READ IN CONJUNCTION WITH
RELEVANT CONSULTANTS DRAWINGS

N



1 Proposed Site Plan
1 : 500

- SITE LOCATION BOUNDARY OUTLINED IN RED
- OTHER LAND OWNED BY APPLICANT AND/OR CIE
- SITE NOTICE LOCATION
- LANDS WITHIN DCC OWNERSHIP

REV	DATE	DESCRIPTION	CHKD	DRW

ISSUED FOR INFORMATION

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CLIENT
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PROJECT
Spencer Place Residential City Block 2

DATE	29/03/19
SCALE:	As indicated @A1
DRAWN	BD
CHECKED	NP
MODEL FILE NAME	950291-Spencer Place North-

DRAWING
Site Plan - Proposed

HJL JOB No. **950291**
DRAWING NUMBER **P4-0003**
DRAWING STATUS: **S0 ISSUED FOR PLANNING**
REVISION

QUALITY AUDIT FEEDBACK FORM

Scheme: Proposed Residential Development at Spencer North, Dublin Docklands

Audit Reference No.: 19117-01-001

Date Audit Completed: 31st July 2019

	To Be Completed By Designer			To Be Completed by Audit Team Leader
Paragraph No. in Quality Audit Report	**Issue accepted (yes/no)**	**Suggested measure accepted (yes/no)**	**Describe alternative measure(s). Give reasons for not accepting suggested measure**	**Alternative measures or reasons accepted by auditors**
4.1	YES	YES	----------	----------
4.2	YES	YES	----------	----------
4.3	YES	YES	----------	----------
4.4	YES	YES	----------	----------
4.5	YES	YES	----------	----------
4.6	YES	YES	----------	----------
4.7	YES	YES	----------	----------
4.8	YES	YES	----------	----------
4.9	YES	YES	----------	----------

4.10	YES	YES	----------	----------
4.11	YES	YES	----------	----------
4.12	YES	YES	----------	----------
4.13	YES	YES	----------	----------
4.14	NO	NO	Users of the Part V accommodation will not need car parking.	----------
4.15	YES	YES	----------	----------
4.16	YES	YES	----------	----------
4.17	YES	YES	----------	----------
4.18	YES	YES	----------	----------
4.19	YES	YES	----------	----------
4.20	YES	YES	----------	----------
4.21	YES	YES	----------	----------
4.22	YES	YES	----------	----------

4.23	YES	YES	----------	----------
4.24	YES	YES	----------	----------
4.25	YES	YES	----------	----------
4.26	YES	YES	----------	----------
4.27	YES	YES	----------	----------
4.28	YES	YES	----------	----------

Signed  **Design Team Leader** **Date 02/08/19**

Print Name **Niall Barrett**

Quality Audit

Signed off  **Audit Team Leader** **Date** 2/8/19

Print Name DERMOT DONOVAN

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