Waterman Moylan
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Traffic and Transport Assessment (Final)

Proposed Residential Development at Rathmullan, Drogheda, Co. Meath

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1. Introduction

Waterman Moylan Consulting Engineers have been appointed by Trailford Ltd. to prepare a Traffic and Transport Assessment for the proposed Strategic Housing Development at Rathmullan, Drogheda, Co. Meath.

2. Objectives

The Traffic and Transport Assessment has been prepared to assess the impact of the proposed development on the surrounding road network.

The TTA will calculate the expected volume of traffic that will be generated by the proposed development and assess the impact that this traffic will have on the operation capacity of junctions in the vicinity of the development. For the purpose of this TTA, the existing junctions that have been analysed are 'Rathmullan Road/Local Collector Road', 'Rathmullan Road/Marley's Lane', 'Rathmullan Road/R132 Dublin Road' and 'Donore Road/Marley's Lane'.

Furthermore, the TTA will highlight sustainable forms of transportation that are accessible from the subject site to assist with the reduction of traffic impact from the proposed site onto the surrounding highway network.

In preparing this report, Waterman Moylan Consulting Engineers have made reference to;

- The Traffic Management Guidelines,
- Guidance on Transport Assessment,
- Design Manual for Urban Roads and Streets,
- Meath County Development Plan 2013-2019.
- NRA Project Appraisal Guidelines – Unit 5.5 Link-Based Traffic Growth Forecasting
- Chartered Institute of Highways and Transportation "Traffic and Transportation Assessment Guidelines"

3. Proposed Development

3.1 Site Location

The site is located on Rathmullan Road in Drogheda, Co. Meath, situated approximately 2.5 km west of Drogheda town centre as indicated in Figure 1 below.

The subject site is bounded to the north by the River Boyne, to the east by existing residential and agricultural areas, to the south by agricultural lands, and to the west by the M1 Dublin to Belfast Motorway.

Figure 1: Site Location

3.2 Description of the Proposed Development

The proposed development consists of a Strategic Housing Development on residential zoned lands c. 2.5 km west of Drogheda town centre. The accommodation provided on the site consists of;

- 661 residential units with a crèche and retail unit.

The main access for the site will be provided via a new 4 arm signalised junction with arms linking the Rathmullan Road (East), the Rathmullan Road (North) the proposed site access and the local collector road to the south of the signalised junction. A second access into the housing development is proposed via a new priority junction to the south of the site onto the existing local collector road.

Upgrade works are proposed to the unnamed local road to the south of the signalised junction and to Rathmullan Road to the north of the signalised junction. Pedestrian access links from the proposed

development and the existing footpath on Rathmullan Road will also be provided via a new footpath which facilitates access to the River Boyne walkway.

The design and layout of the proposal has been prepared to fully comply with the current relevant design standards and specifications applicable to this form of development.

3.3 Existing Land Use

The development site is currently agricultural land use.

4. Existing Traffic Conditions

4.1 Traffic Survey

In order to quantify the volumes of traffic movements at key points on the road network adjacent to the site, a set of classified turning movement traffic counts were commissioned.

The location of these counts was agreed in consultation with Meath County Council's Transportation Department and based upon the locations of the previously approved development.

Accordingly, a Manual classified traffic survey was carried out by 'Abacus Surveys' on Tuesday 10th April 2018 at 2 signalised junctions and 2 priority junctions in the Drogheda Environs during the peak hours of 07:00 – 10:00 and 16:00 – 19:00. The junctions surveyed were,

- Site 01: Rathmullan Road/Local Road,
- Site 02: Rathmullan Road/Marleys Lane (Signalised),
- Site 03: Rathmullan Road/R132 Dublin Road, and
- Site 04: Donore Road/Marley's Lane (Signalised).

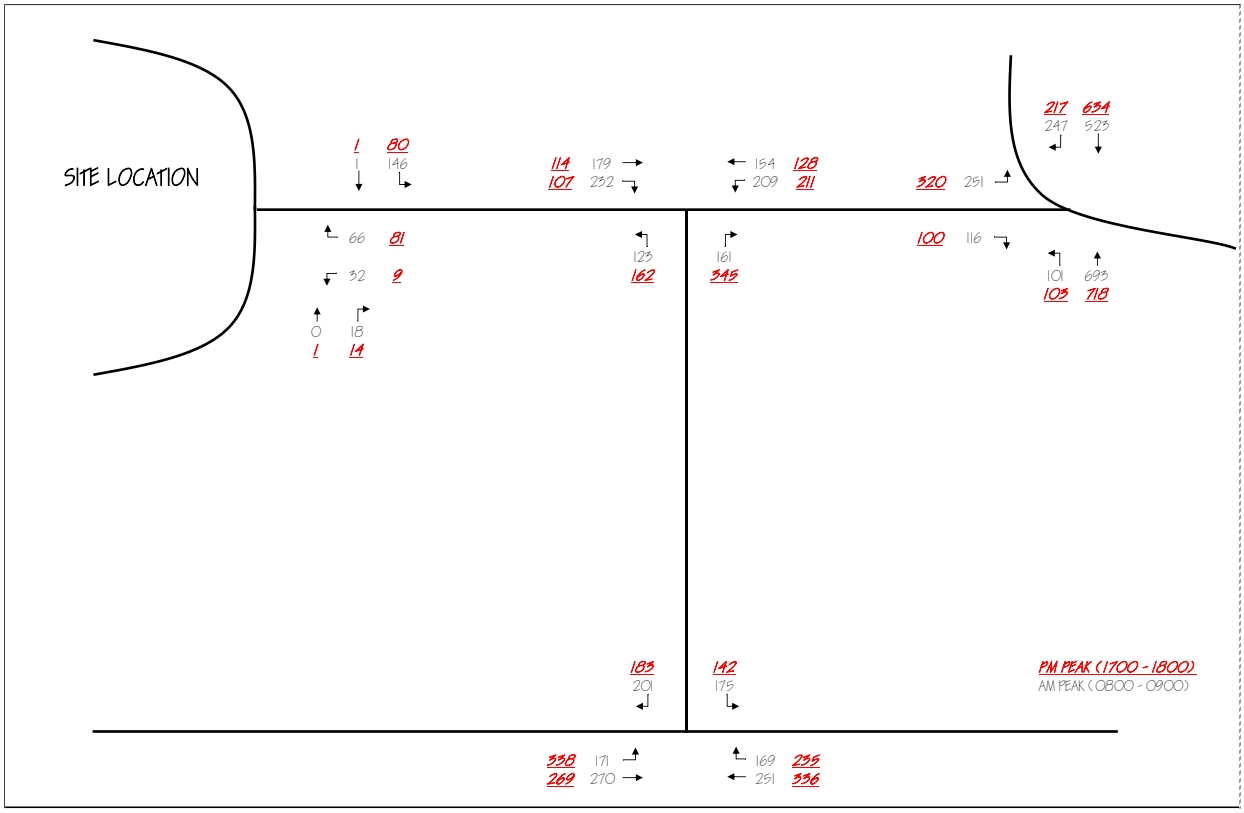
The surveys were carried out on the dates identified above to ensure that flows were representative of normal term time and hence not affected by school holidays or other public holidays or events. As such they provide a reasonable representation of a neutral month during a period of normal school and employment activity. The surveys are designed to provide representative values encompassing AM and PM periods during normal traffic conditions.

The location of the survey points is depicted below at Figure 2.

Figure 2: Location of traffic survey points.

The results of this survey indicated that the peak traffic levels through the junctions occurred between the hours of 08:00 – 09:00 in the AM and 17:00 – 18:00 during the PM. These traffic levels can be seen in Figure 3.

Figure 3: Surveyed Flows (2018)



4.2 Local Road Network

The main entrance into access to the site is from the Rathmullan Road, which is subject to a speed limit of 50km/h and is 2 km in length running from the priority junction with the R132 in Drogheda through to a priority junction with Rathmullan Road (Northern Arm) which continues towards the River Boyne, and a local un-named road which continues south. The Rathmullan Road along this section generally has a cross section of 7.3 m wide with footways running along both sides for the majority of its length.

The Rathmullan Road (northern arm) is a rural road with a width of c. 4m. It traverses the southern bank of the River Boyne and provides access to Oldbridge to the west. The local un-named road is a rural road with a width of c. 4 m. This provides access to several rural properties to the south and west and crosses the M1 via an over-pass.

Along the Rathmullan Road, approximately 800m from the priority junction at the proposed site entrance, is a signalised junction with Marleys Lane. Marleys Lane runs north-south between Rathmullan and Donore Road and is also subject to a speed limit of 50km/h. It has a cross section great than 7.3m with a number of traffic islands acting as traffic calming with footways on both sides.

At the southern end of Marleys Lane is a signalised junction with the Donore Road, which is also subjected to a speed limit of 50km/h. The Donore Road to the east, approximately 1.5km, links up with the R132 signalised junction, and to the west, approximately 700m, to the M1 motorway junction.

The River Boyne Boardwalk traverses the eastern bank of the River Boyne. This is a shared pedestrian / cyclist route that provides access to Drogheda Town Centre (c. 2.5 km to the east) and Oldbridge (c. 1.8 km to the west).

4.3 Proposed Network Improvements

4.3.1 Rathmullan Road / Marleys Road Junction Upgrade

Meath County Council recently granted planning permission for a residential development on lands adjacent to the subject site (Reg. Ref. No. LB170675). As part of the approved adjacent development, it is proposed to upgrade the existing signalised junction of Rathmullan Road/Marley's Lane by providing a right turn lane on Rathmullan Road. See enclosed Drg. No. 18-014/S101 (Details are also shown in Drg. No. 18-014-P051). The modelling carried out for the proposed development that is subject of this TTA, assumes that the upgrade of the junction has been completed in advance of the proposed development.

Louth County Council have advised that the proposed upgrade works are generally acceptable and have provided a letter of consent which is also included in Appendix A.

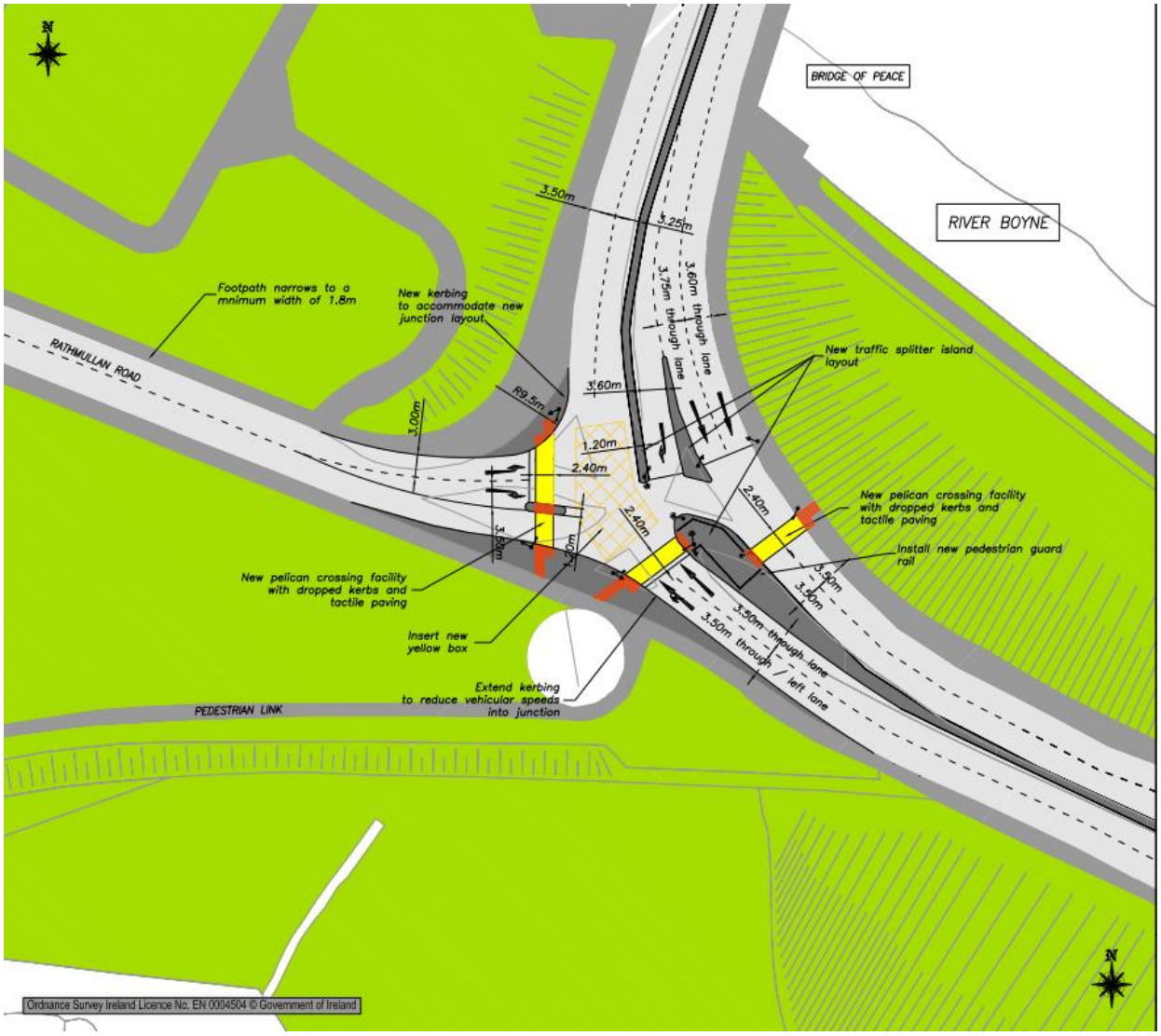
Figure 4: Location of subject site, adjacent site and signalised junction.

4.3.2 Rathmullan Road / R132 Junction Upgrade

The junction has been modelled utilising its current configuration of a priority junction, and it has been established that the junction currently is operating over capacity.

A detailed transportation study was undertaken in December 2006 by WSP on behalf of Drogheda Borough Council. The Drogheda Transportation Study (Dec 2006) has highlighted improvements that are required to be carried out on the R132/Rathmullan road junction. These improvements include the provision of signalising the junction and amending the current island configuration to assist movements through the junction. Details of this proposals can be seen in Figure 5.

Figure 5: R132/Rathmullan Road Junction Upgrade Proposals.



We have prepared upgrade drawing for this junction based on the above Figure 5. Details are set out on our enclosed Drg. No. 18-014/S100 (Details are also shown in Drg. No. 18-014-P052).

This junction has been modelled on the basis of the upgrade proposed. Details of the results of the modelling are set out in Section 6 of this report.

Louth County Council have advised that the proposed upgrade works are generally acceptable and have provided a letter of consent which is also included in Appendix A.

4.3.3 Rathmullan Road

Further to discussions with Meath County Council, it is proposed to realign and upgrade the un-named local road along the site frontage to the south of the new signalised junction with Rathmullan Road. This road will form part of the proposed developments arterial link with a carriageway width of 7m and new kerb lines, road gullies and drainage. The proposed speed limit on this road is 50 km/h. A separated cycle track (2.0m wide) and footpath (2.0m wide) has also been provided along the extents of this road.

Upgrades are also proposed to Rathmullan Road along the site frontage to the north of the signalised junction. This includes the widening of the existing carriageway to 6 m and the provision of a 2m footpath linking the proposed development to the River Boyne Boardwalk. The proposed road and footpath upgrades are shown on Waterman Moylan drawing No. 18-014-P012.

The section of Rathmullan Road adjacent the eastern bank of the River Boyne, to the north of the subject site down to Oldbridge House, currently operates with a stop / yield one-way system in place as the River Boyne greenway is intermittently on-road in this area. It is proposed that this arrangement will be maintained as this road is not intended to operate as a major link and therefore anticipated traffic volumes will be low.

5. Trip Generation and Distribution

5.1 Trip Generation

The volume of traffic expected to be generated by the proposed development has been derived using the trip rates from the Traffic and Transport Assessment's TRICS output for the adjacent residential development which has recently been approved by Meath County Council under Planning Register Reference No. LB170675.

No additional trip generation has been included from the on-site Crèche and retail unit as it is expected that these amenities will serve the proposed residential units within the development and will therefore not generate additional traffic on the surrounding road network.

Table 1: Trip Generation Rates for Proposed Development at AM Peak Hour.

Development	Units	Trip Rate (Arr/Unit)	Trip Rate (Dep/Unit)	No. Arrivals	No. Departures	Total Trips
Residential	661	0.145	0.391	96	259	355

Table 2: Trip Generation Rates for Proposed Development at PM Peak Hour.

Development	Units	Trip Rate (Arr/Unit)	Trip Rate (Dep/Unit)	No. Arrivals	No. Departures	Total Trips
Residential	661	0.346	0.203	229	134	363

It can be seen from the above that the total vehicle movements generated by the proposed development will be 96 arrivals and 259 departures in the AM peak (two-way total of 355). The total number of vehicle movements in the PM peak hour will be 229 arrivals and 134 departures (two-way total of 363).

5.2 Trip Distribution

For the purpose of the Traffic and Transport Assessment for this scheme, the traffic distribution has been assumed to be the same as that assumed for the adjacent approved residential development (Reg. Ref. No. LB170675). The distribution for the AM and PM peak hour generated traffic is detailed in Figure 6 and the corresponding AM & PM peak hour traffic flows, based on the assumed distribution, are shown in Figure 7.

Figure 6: Distribution of Generated Traffic

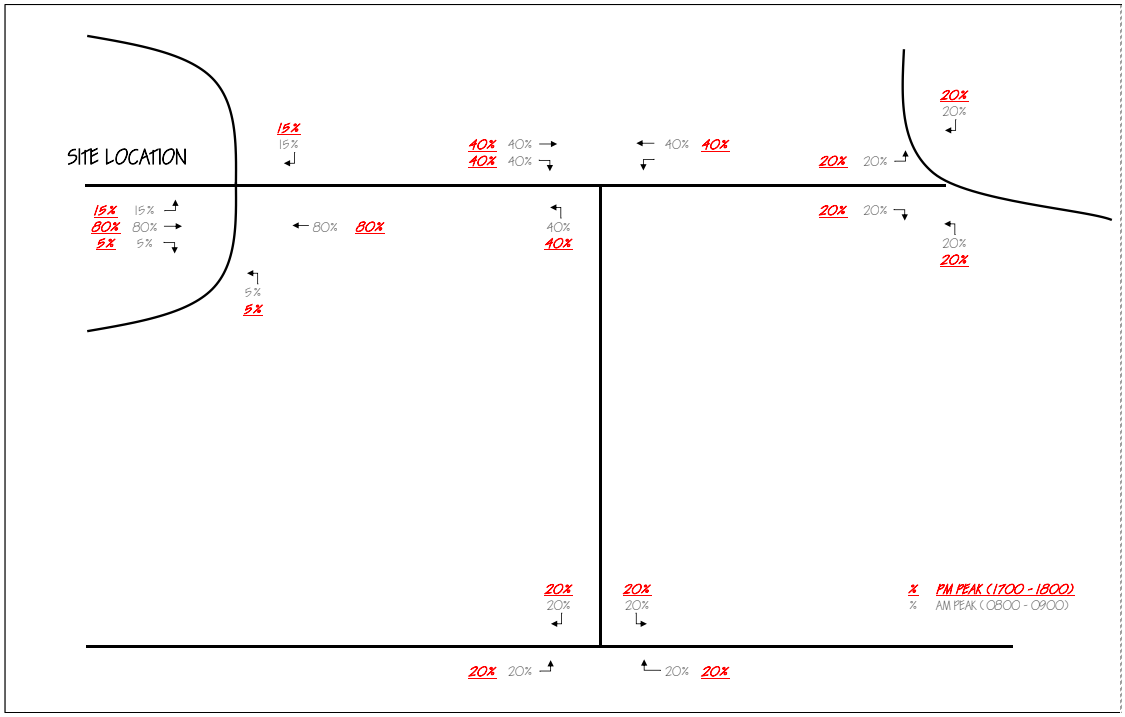
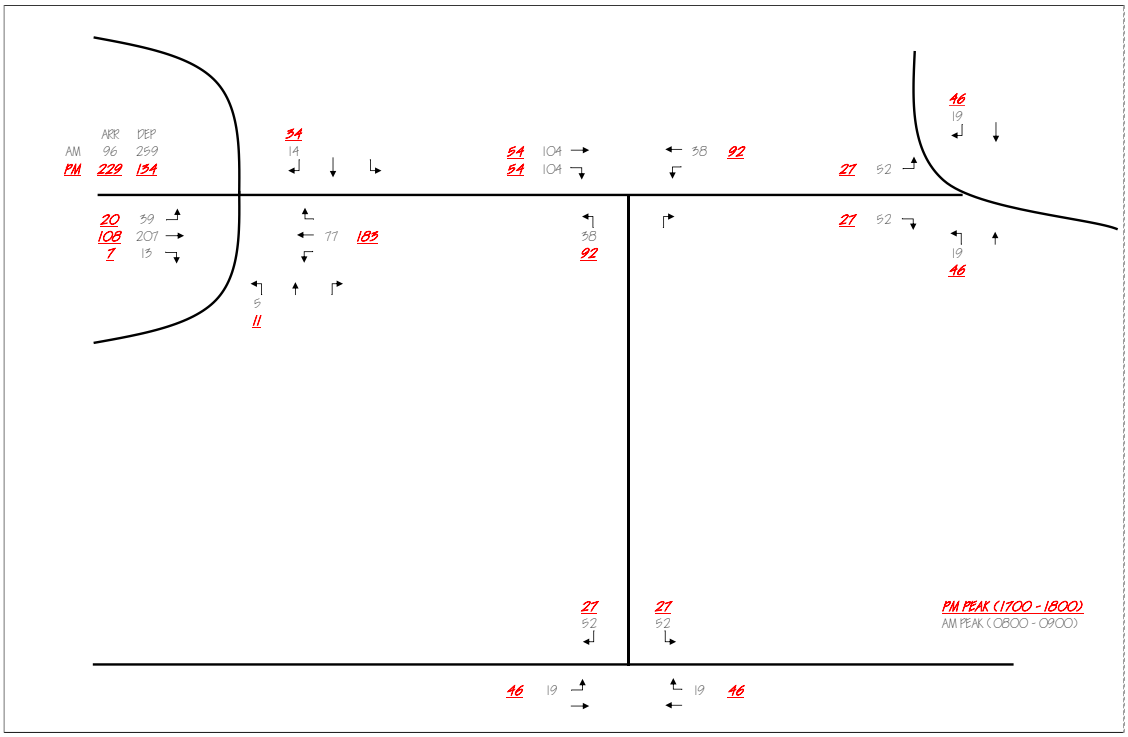


Figure 7: Site Generated Traffic Flows

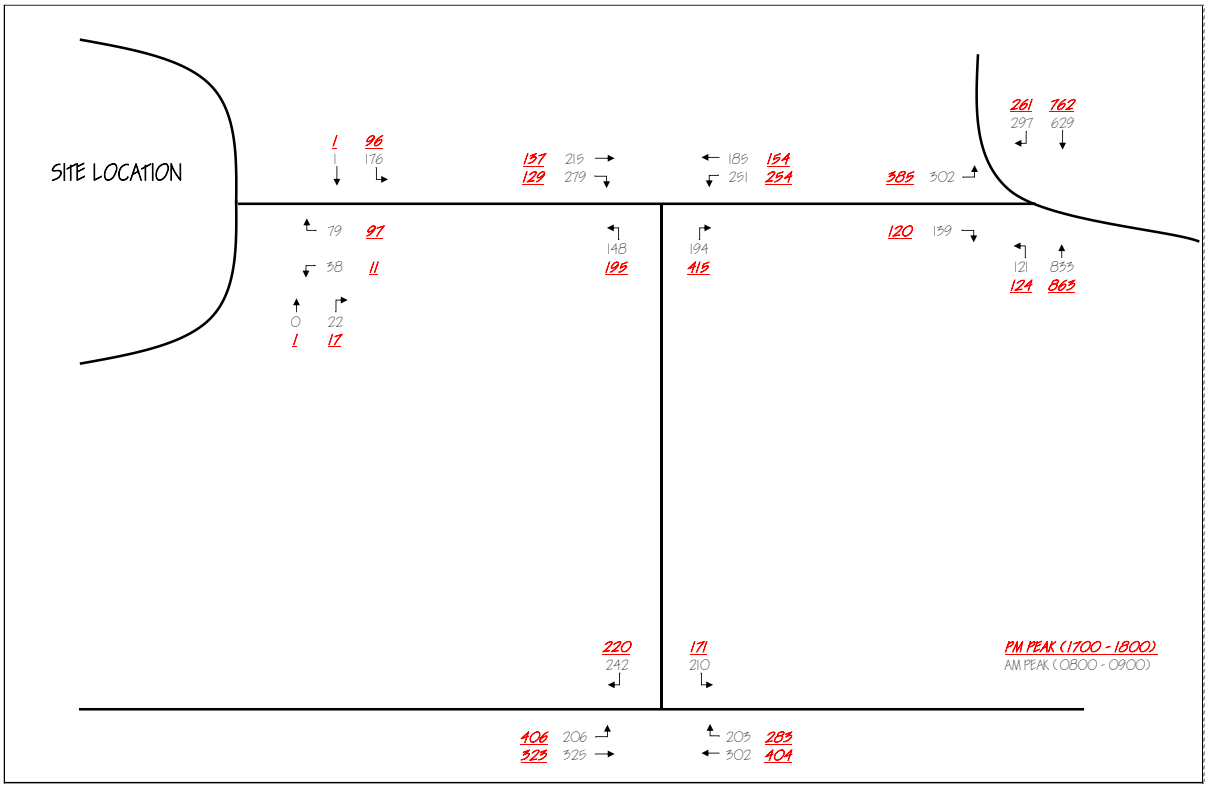


5.3 Traffic Growth

It has been assumed within the Traffic and Transportation Assessment for the subject site that the development will be constructed over a period of approximately 5 years. Therefore, the assumed year of opening is 2023. The junctions were also assessed for the future design years of 2028 and 2038. The background traffic growths used in the analysis are in accordance with the National Traffic Growth Forecasts: Annual Growth Factors within the NRA Project Appraisal Guidelines Unit 5.5 Link-Based Traffic Growth Forecasting. These are:

- 1.011 (Medium Growth) growth factor from 2018 to 2025
- 1.009 (Medium Growth) growth factor from 2026 to 2038

Figure 8: 2038 Design Year Traffic (Base)



5.4 Committed Development

The traffic model also includes for committed traffic from the adjacent approved residential development, (Reg. Ref. No. LB170675). This development has current planning for 156 No. units under Phase 1 with a further 140 additional units to be submitted as part of a Phase 2 development for the site. The generated traffic from the two phases of the development, a total of 296 residential units, has been extracted from the Traffic and Transport Assessment submitted as part of the planning application for the adjacent site. These committed development flows are detailed in Figure 9 and included with the background traffic, proposed development traffic to establish the future year (2038) traffic flows. See Figure 10.

Figure 9: Committed Development Traffic (Phases 1 and 2)

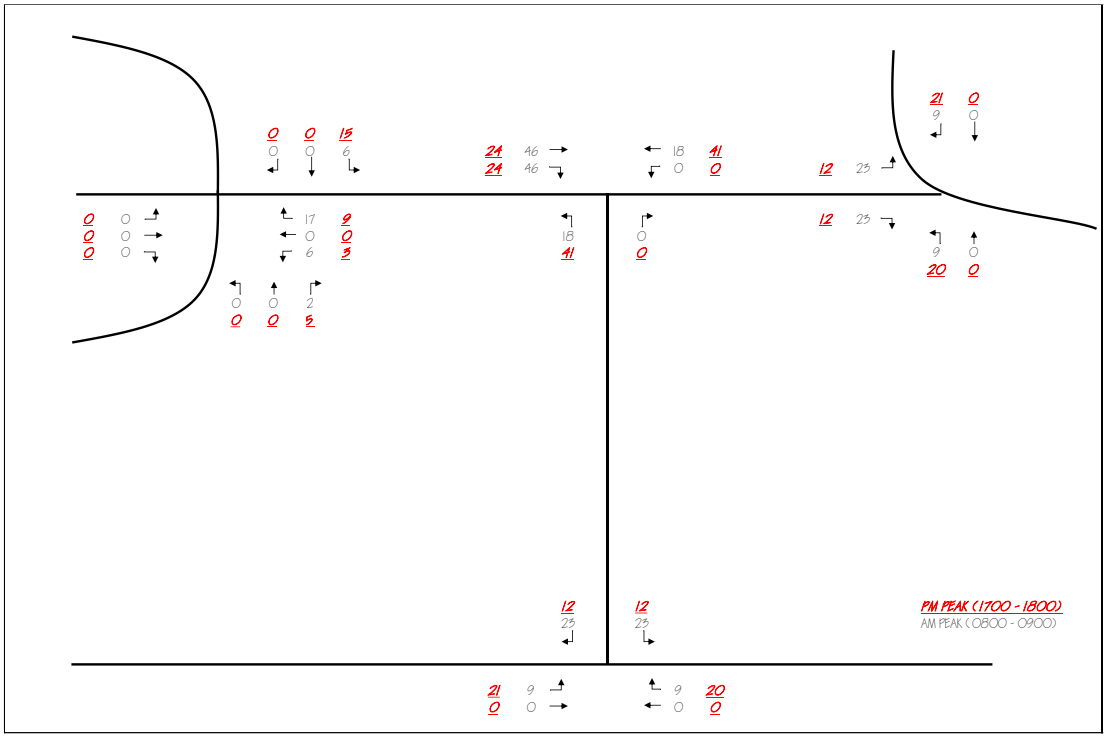
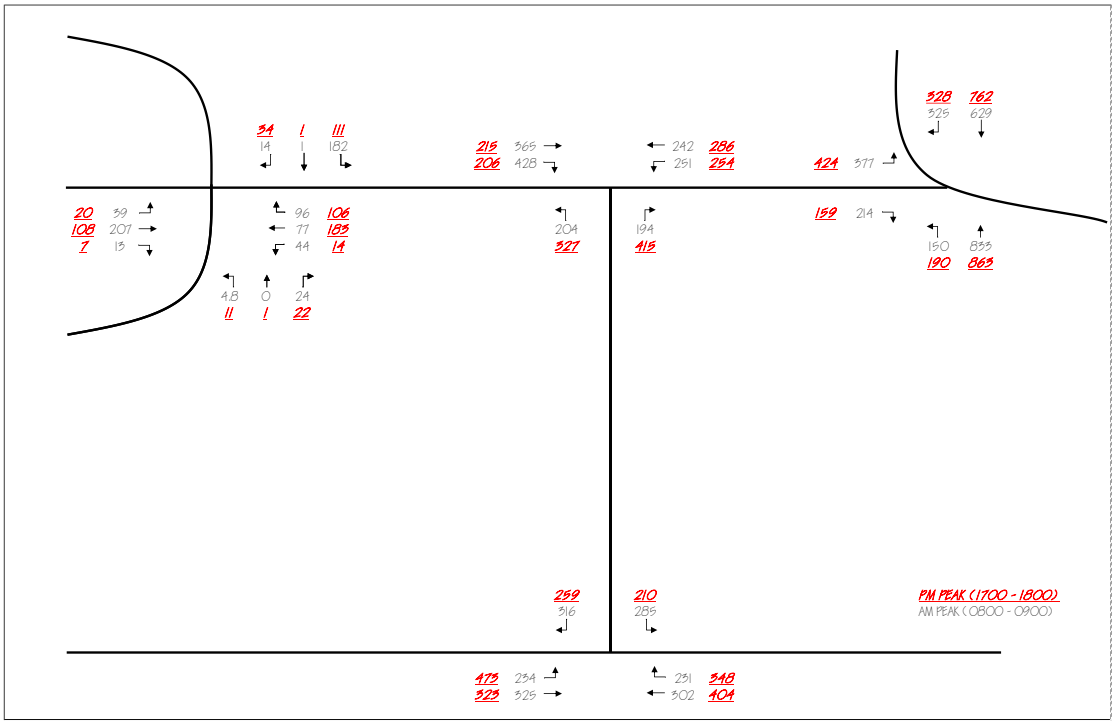


Figure 10: 2038 Design Year Traffic (Base + Site Generated + Committed Development)



6. Road Impact

6.1 Junction Analysis

6.1.1 Introduction and Methodology

The extent of traffic impact from the two proposed residential development has been determined by checking where generated traffic would exceed 10% of traffic at main junctions in the vicinity of the development.

These junctions have been analysed using TRANSYT software.

TRANSYT (Traffic Network Study Tool) software is a widely accepted software for modelling signalled controlled junctions. This programme utilises the phases input by the user and optimises their timings over a 120 second cycle. The outputs of a TRANSYT assessment include a Degree of Saturation percentage (DoS%) figure and queue length for each link on the road network.

Typically, a junction is said to be working satisfactorily when the DoS% of each link does not exceed 90%. Acceptable DoS% values are considered to be in the range of 80% to 100% with higher values indicating restrained movements.

Whilst the R132/Rathmullan Road junction is not a signalised junction, TRANSYT has been utilised due to the complexity of the intersection of the Rathmullan Road minor road movements with the R132 dual carriageway movements.

6.1.2 Assessment Years

The performance of the junctions has been analysed for both the critical AM and PM peak hours (08:00 – 09:00 and 17:00 – 18:00), for year of opening, the 10-year scenario and the 15-year scenario.

6.1.3 Analysis Results

Junction 1 - Rathmullan Road/Local Road

Junction No. 1 is the proposed four arm signalised junction with arms linking the Rathmullan Road (East), the Rathmullan Road (West) the proposed site access and the local access road to the south of the junction. This signalised junction will be constructed as part of the proposed development as an upgrade to the existing priority junction of Rathmullan Road and a local access road.

The TRANSYT modelling results are presented in Table 3.

Table 3: Rathmullan Road/Local Road TRANSYT Modelling Results – Proposed Signalised Junction.

Year	Time	Arm A - Rathmullan Road E		Arm B - Local Road S		Arm C - Proposed Site Access W		Arm D - Rathmullan Road N	
		DOS%	Max Queue.	DOS%	Max Queue.	DOS%	Max Queue.	DOS%	Max Queue.
2023 (BASE + DEV)	AM	50	5.58	18	0.77	44	6.94	47	5.14
	PM	48	7.58	20	0.86	35	3.88	36	3.54
2023 (BASE + DEV + COMM (PHASE 1))	AM	51	5.95	19	0.80	45	7.02	48	5.28
	PM	49	7.86	22	0.96	36	3.93	37	3.78
2028 (BASE + DEV)	AM	51	5.72	19	0.80	44	6.94	49	5.38
	PM	47	7.57	20	0.86	36	3.93	37	3.70
2028 (BASE + DEV + COMM (PHASES 1 AND 2))	AM	53	6.43	20	0.86	47	7.11	50	5.58
	PM	49	7.99	24	1.04	39	4.03	38	4.07
2038 (BASE + DEV)	AM	54	6.08	20	0.86	47	7.11	49	5.80
	PM	50	8.00	21	0.93	38	3.97	36	3.85
2038 (BASE + DEV + COMM (PHASES 1 AND 2))	AM	56	6.73	21	0.93	49	7.36	51	6.00
	PM	51	8.34	25	1.11	41	4.08	39	4.30

The above results indicate that the proposed 4-arm signalised junction will operate well within capacity during the 2038 plus development plus committed scenario with the highest Degree of Saturation (DOS) at 56% during the AM peak period.

Junction 2 - Rathmullan Road/Marleys Lane

Junction No. 2 is an existing signal-controlled junction. Modelling undertaken on this junction assumes that it has been upgraded to provide a right turn pocket in accordance with the recently approved planning permission (Reg. Ref. No. LB170675) on the site adjacent to the proposed development. The TRANSYT analysis results for the Rathmullan Road/Marleys Lane signalised junction are presented in Table 4.

Table 4: Rathmullan Road/Marleys Lane TRANSYT Modelling Results.

Year	Time	Arm 1 - Rathmullan Road E		Arm 2 - Marleys Lane		Arm 3 - Rathmullan Road W	
		DoS (%)	Max Queue.	DoS (%)	Max Queue.	DoS (%)	Max Queue.
2018	AM	14	7.67	56	7.07	50	5.01
	PM	23	8.23	53	9.45	50	2.86
2023 (BASE)	AM	15	8.12	57	7.47	54	5.43
	PM	26	8.89	55	10.00	52	3.04
2023 (BASE + DEV)	AM	18	9.40	70	9.13	65	7.37
	PM	38	11.61	67	13.39	58	4.29
2023 (BASE + DEV + COMM (PHASE 1))	AM	20	9.74	72	9.58	67	7.81
	PM	43	12.35	68	13.88	62	4.68
2028 (BASE)	AM	16	8.66	60	7.81	54	5.57
	PM	29	9.38	57	10.59	50	3.10
2028 (BASE + DEV)	AM	20	9.88	70	9.46	66	7.63
	PM	42	12.14	68	13.88	59	4.42
2028 (BASE + DEV + COMM (PHASES 1 AND 2))	AM	22	10.42	73	10.20	73	8.70
	PM	46	13.24	74	15.78	64	5.04
2038 (BASE)	AM	19	9.71	63	8.71	57	6.04
	PM	34	10.40	62	12.01	55	3.45
2038 (BASE + DEV)	AM	24	10.99	73	10.35	68	8.05
	PM	45	13.08	73	15.80	63	4.78
2038 (BASE + DEV + COMM (PHASES 1 AND 2))	AM	26	11.69	76	11.25	74	9.13
	PM	68	15.24	92	23.50	88	11.56

The above results indicate that the signalised junction will operate within capacity during the 2038 plus development scenario with the highest degree of saturation (DOS) at 73% during the AM/PM peak periods, and with acceptable capacity during the 2038 plus development plus committed development scenario with the highest degree of saturation at 92% during the PM peak period.

Junction 3 - R132/Rathmullan Road

Junction No. 3 is an existing priority junction onto a dual carriageway. TRANSYT has been utilised due to the complexity of the intersection of the Rathmullan Road minor road movements with the R132 dual carriageway movements.

This junction has been modelled on the basis of the upgrade proposed as set out in Section 4.3.2 (Figure 5) of this report. Details of the results of the modelling are set out in Table 5.

Table 5: R132/Rathmullan Road TRANSYT Modelling Results.

Year	Time	Arm 1 - R132 E		Arm 2 - Rathmullan Road		Arm 3 - R132 N	
		DoS (%)	Max Queue.	DoS (%)	Max Queue.	DoS (%)	Max Queue.
2038 (BASE)	AM	65	11.19	76	8.98	72	8.48
	PM	70	12.35	79	11.28	73	7.67
2038 (BASE + DEV)	AM	71	12.23	78	10.53	76	9.35
	PM	78	13.95	85	12.94	80	9.74
2038 (BASE + DEV + COMM (PHASES 1 AND 2))	AM	74	12.78	81	11.32	79	9.76
	PM	87	14.48	87	13.87	57	10.51

The above results indicate that the junction operates within capacity during the 2038 plus committed plus development scenario with the highest degree of saturation (DOS) at 87% during the PM peak period.

Junction 4 - Donore Road/Marleys Lane

Junction No 4 is an existing signal-controlled junction. The TRANSYT analysis results for the Donore Road/Marleys Lane signalised junction are presented in Table 6.

Table 6: Donore Road/Marleys Lane TRANSYT Modelling Results.

Year	Time	Arm 1 - Donore Road W		Arm 2 - Marleys Lane		Arm 3 - Donore Road E	
		DoS (%)	Max Queue.	DoS (%)	Max Queue.	DoS (%)	Max Queue.
2018	AM	12	8.09	55	8.47	47	4.34
	PM	15	10.47	62	8.26	54	6.00
2023 (BASE)	AM	13	8.81	56	8.85	50	4.62
	PM	16	11.41	63	8.73	57	6.45
2023 (BASE + DEV)	AM	18	10.26	60	10.78	52	5.13
	PM	19	13.00	68	10.22	63	7.71
2023 (BASE + DEV + COMM (PHASE 1))	AM	19	10.50	62	11.29	54	5.33
	PM	20	13.40	68	10.50	65	8.14
2028 (BASE)	AM	14	9.31	59	9.36	49	4.78
	PM	17	12.06	66	9.25	57	6.62
2028 (BASE + DEV)	AM	19	10.66	62	11.28	54	5.39
	PM	20	13.69	69	10.56	65	8.11
2028 (BASE + DEV + COMM (PHASES 1 AND 2))	AM	21	11.43	64	11.97	57	5.66
	PM	22	14.51	71	11.23	69	8.86
2038 (BASE)	AM	17	10.49	61	10.27	54	5.33
	PM	20	13.59	70	10.23	60	7.30
2038 (BASE + DEV)	AM	22	12.10	65	12.33	56	5.78
	PM	23	15.54	70	11.45	70	9.00
2038 (BASE + DEV + COMM (PHASES 1 AND 2))	AM	25	12.78	66	13.01	58	6.11
	PM	26	16.41	72	12.11	72	9.58

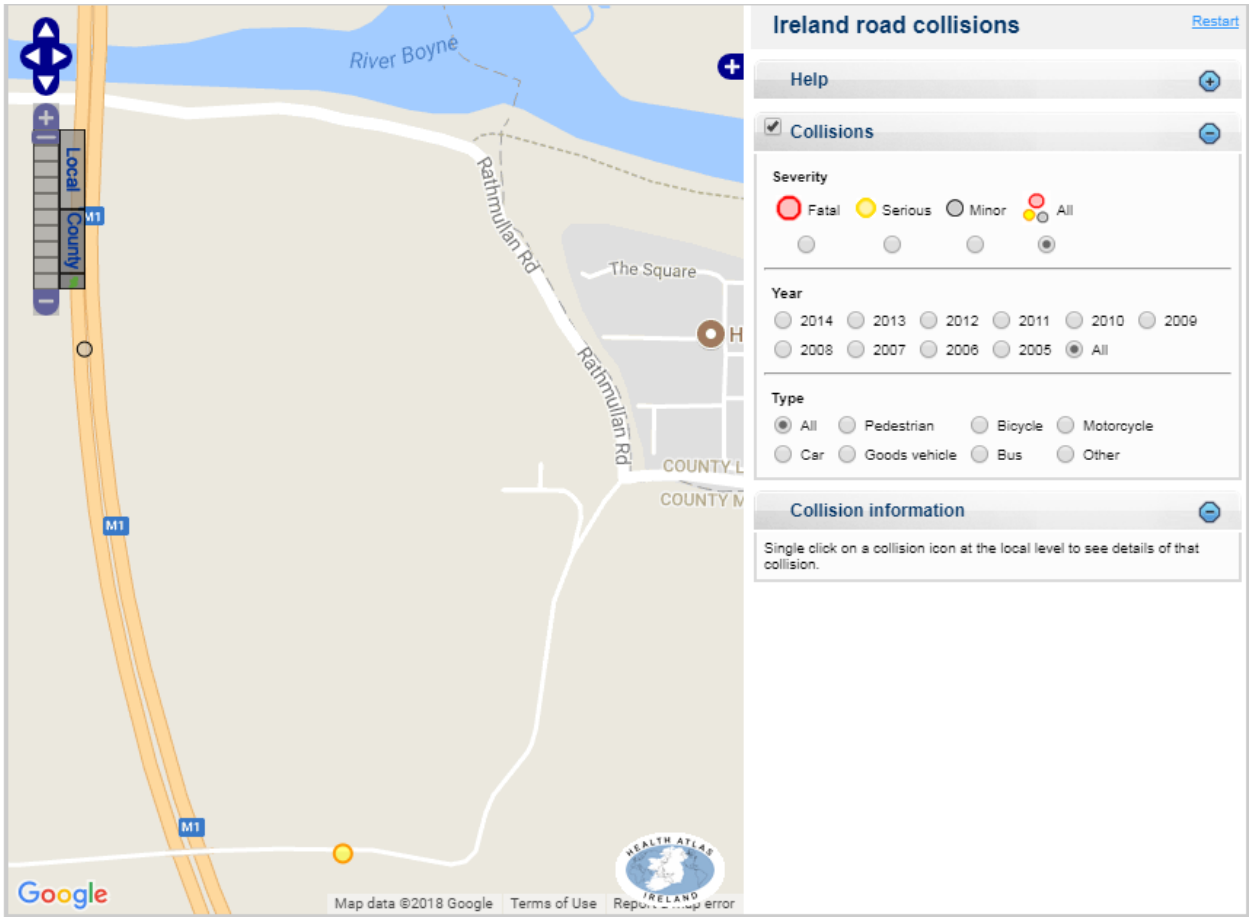
The above results indicate that the signalised junction operates well within capacity during the 2038 plus committed plus development scenario with the highest degree of saturation (DOS) at 72% during the PM peak period.

7. Road Safety, Sustainable Access and Parking Provision

7.1 Road Safety

Traffic collision data has been reviewed for the period 2005-2014 from the Road Safety Authority (RSA) traffic collision database. This review will assist to identify any potential safety concerns in relation to the existing road network. These incidents are categorised into class of severity, which includes minor, serious, or fatal collisions. The analysis is shown in Figure 11.

Figure 11: RSA Traffic Collision Data.



From the information obtained from the RSA Traffic Collision Database, there has been one serious collision that occurred in 2005 and is to the south of the subject site, near the location of the secondary access to the site. This incident was a head on collision between two vehicles that occurred between the hours of 16:00 – 19:00.

At the proposed priority access junction in this location, it is proposed that visibility splays of 2.4m x 49m in accordance with a 50km/h speed limit within the National Roads Authority's 'Geometric Design of Major/Minor Priority Junctions and Vehicular Access to National Roads'.

7.2 Sustainable Access

In order to fully appreciate the levels of public transport accessibility provided within the catchment of the proposed development, representation of the catchment areas for existing transport infrastructure has been prepared. This procedure allows a picture to be developed which demonstrates the key areas which benefit from direct or semi-direct access to the site.

These figures represent the higher end of the scale with regard to reasonable commuting distances. For the purpose of this report a more conservative approach has been taken to determine the catchment areas around the proposed development and key public transport corridors. The catchment areas have been assumed where a high proportion of users within the catchment areas would see the corresponding form of transport as an attractive mode of travel:

- Direct bus route 500m catchment
- QBC Routes 700m catchment
- Rail 1000m catchment
- Walking 2.5km catchment
- Cycling 5km catchment

7.2.1 Walking/Cycling

A pedestrian link will be provided between the proposed development and the existing walkway along the River Boyne by the inclusion of a new 2.0m wide footpath along Rathmullan Road to the north-east. There is an existing continuous footpath along the north side of Rathmullan Road. The proposed development provides a connection to this footpath.

The proposed development includes the provision of internal shared cyclist / pedestrian facilities and a separate off-road cycle-track along the site frontage to the south of the signalised junction. Cyclist access to Drogheda Town Centre is along Rathmullan Road or via the River Boyne greenway.

Figure 12 and Figure 13 detail these catchments through the form of isochrones to summarise the accessibility of the subject site on foot or cycling.

Figure 12: 2.5km Walking Isochrone

Figure 13: 5km Cycling Isochrone

7.2.2 Public Transport

The site is not directly served by public transport services, though the closest services would be approx. 1km east of the site access, being the Drogheda (Opp Hillview Estate) stop which is served by the 173 bus route.

Figure 14: Location of Public Transport Services.

A summary of these stops can be seen in Tables 7 and 8 below.

Table 7: Drogheda (Opp Hillview Estate).

Drogheda (Opp Hillview Estate)		
Service	Service Route	Frequency
173	West Street Drogheda - Dominick Street (Opp Church)	Hourly

Table 8: Rowan Heights.

Rowan Heights		
Service	Service Route	Frequency
173	West Street Drogheda - Dominick Street (Opp Church)	Hourly

The Drogheda Bus Station is located 2.5m to the east of the subject site, which provides a high number of local and national bus routes.

The Drogheda Rail Station is located 3.5km to the east of the subject site, which is located on the Northern Commuter line running between Newry and Dublin Pearse Street. This line extends north to Belfast Central and south to Rosslare Europort.

7.3 Parking Provision

Section 11.9 of the Meath County Development Plan 2013-2019 (MCDP) sets out the maximum car parking standards for various development categories.

The car parking spaces provided with the proposed development area are set out in Table 9 below.

Table 9: Car Parking Permitted and Provided.

Land Use	Rate	Unit Numbers /GFA	Maximum Carparking Spaces Permitted (MCDP)	Carparking Spaces Provided	Visitor Carparking Spaces Provided
Dwellings	2 per dwelling	509 No. units	1,018	1,018 on-curtilage	53 on-street
1 & 2 Bedroom Apartments	1.25 per unit	22 No. units	28	28 on-street	6 on-street
3 & 4 Bedroom Apartments	2 per unit	131 No. units	262	163 on-street	37 on-street
Retail/Cafe	1 Per 20 sq. m	430.4	22	25 on-street	-
Crèche	1 per employee & dedicated set down area 1 per 5 children	486	20	10 spaces for staff and 7 Drop off spaces	
Total			**1350**	**1,251**	**96**

As can be seen from Table 9 above, the provision of car parking spaces complies with the requirements of the Meath County Development Plan 2013-2019.

8. Conclusions

- Waterman Moylan Consulting Engineers have been appointed by Trailford Ltd. to prepare a Traffic and Transport Assessment for the proposed Strategic Housing Development at Rathmullan, Drogheda, Co. Meath.
- The main access for the site (Junction 1) will be provided via a new 4-arm signalised junction with arms linking the Rathmullan Road (East), the Rathmullan Road (West) the proposed site access and the local collector road to the south of the junction. A second access into the housing development is proposed via a new priority junction to the south of the site onto the existing local collector road.
- A traffic survey was carried out by 'Abacus Surveys' on:
  - Site 01: Rathmullan Road/Local Road,
  - Site 02: Rathmullan Road/Marley's Lane (Signalised),
  - Site 03: Rathmullan Road/R132 Dublin Road, and
  - Site 04: Donore Road/Marley's Lane (Signalised).
- The volume of traffic expected to be generated by the proposed development has been derived using the trip rates from the Traffic and Transport Assessment's TRICS output for the adjacent residential development which has recently been approved by Meath County Council.
- The trips generated for the proposed development are 96 arrivals and 259 departures for the AM Peak, and 229 arrivals and 134 departures for the PM Peak
- The extent of traffic impact from the two proposed residential development has been determined by checking where generated traffic would exceed 10% of traffic at main junctions in the vicinity of the development, these include all junctions.
- Junction 1 has been modelled based on new signal-controlled junction and the results indicate that the junction will operate well within capacity for the 2038 plus committed plus development scenario.
- Junctions 2 and 4 results indicate that they will operate within capacity during the 2038 plus committed plus development scenario.
- Junction No. 3 has been modelled utilising its current configuration of a priority junction, and it has been established that the junction currently is operating over capacity. Improvements are proposed to this junction which include the provision of signalising the junction and amending the current island configuration to assist movements through the junction. The results of modelling with these improvements indicate that the junction will operate within capacity during the 2038 plus committed plus development scenario with the highest degree of saturation at 87% during the PM peak period.
- From the information obtained from the RSA Traffic Collision Database, there has been one serious collision that occurred in 2005 and is to the south of the subject site, near the location of the secondary access to the site. This incident was a head on collision between two vehicles that occurred between the hours of 16:00 – 19:00.
- The Drogheda Bus Station is located 2.5m to the east of the subject site, which provides a high number of local and national bus routes.
- The Drogheda Rail Station is located 3.5km to the east of the subject site, which is located on the Northern Commuter line running between Newry and Dublin Pearse Street. This line extends north to Belfast Central and south to Rosslare Europort.

Appendix A

Louth County Council Consent Letter: proposed junction upgrades

Comhairle Contae **Lú**
Louth County Council

Mr Joe Gibbons
Waterman Moylan
Block S, East Point Business Park
Alfie Byrne Road
Dublin
D03 H3F4

26th June 2019

Re: Residential Development at Rathmullan, Drogheda Co Louth
SHD Planning Application Ref : ABP-303439-19

Dear Sirs,

I refer to the above matter and wish to advise that Louth County Council consents to the making of a planning application in relation to lands which is in its ownership at Rathmullan, Drogheda and for the proposed layout of the junction upgrades at Rathmullan Road/R132 junction and also the Rathmullan Road/Marleys Lane junction Drogheda, Co Louth, are generally acceptable, in order to mitigate the effect of additional traffic on these junctions, with regard to a pre-application submission to be made to An Bord Pleanala under the Strategic Housing Development (SHD) provisions of the Planning and Development Act. See attached drawings :-

Drawing No's 18-014/S100 prepared by Waterman Moylan Consulting Engineers

Drawing No's 18-014/S101 prepared by Waterman Moylan Consulting Engineers

Please be advised that nothing contained herein shall constitute or be construed as a contract or memorandum of same to the satisfaction of the Statute of Frauds (Ireland) Act, 1965. No binding agreement shall come into existence until such time as contracts in duplicate are agreed, executed, exchanged, returned and full contract deposit paid and accepted.

Yours sincerely

Alan Sherry
Senior Executive Officer

Comhairle Contae Lú
Halla an Chontae
Ionad na Mílaoise
Dún Dealgan
Contae Lú
A91 KFW6

Louth County Council
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Dundalk
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T + 353 42 9335457
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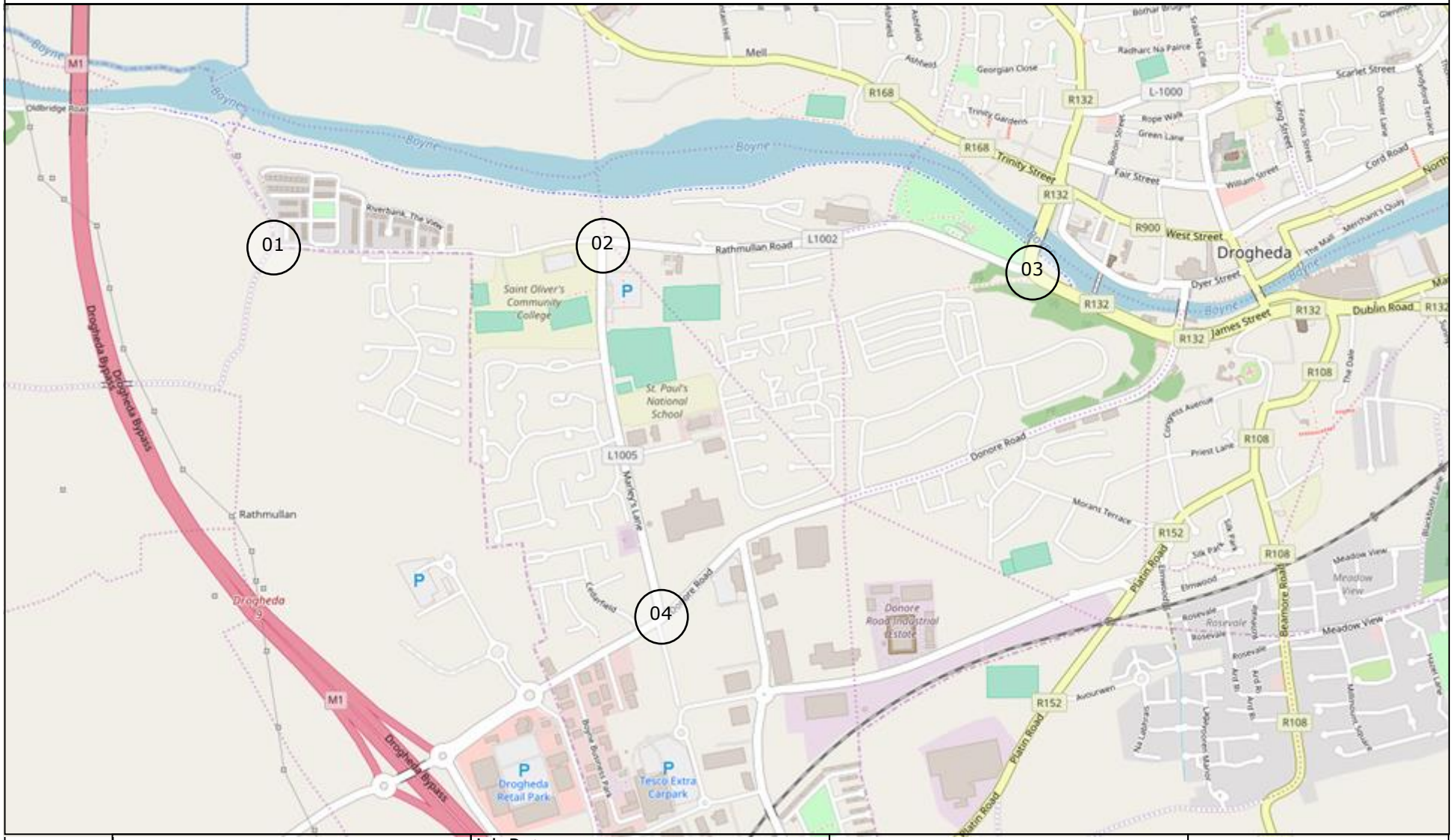
Cuirfear fáilte roimh chomhfhreagras Gaeilge - Correspondence in Irish is welcome

Appendix B

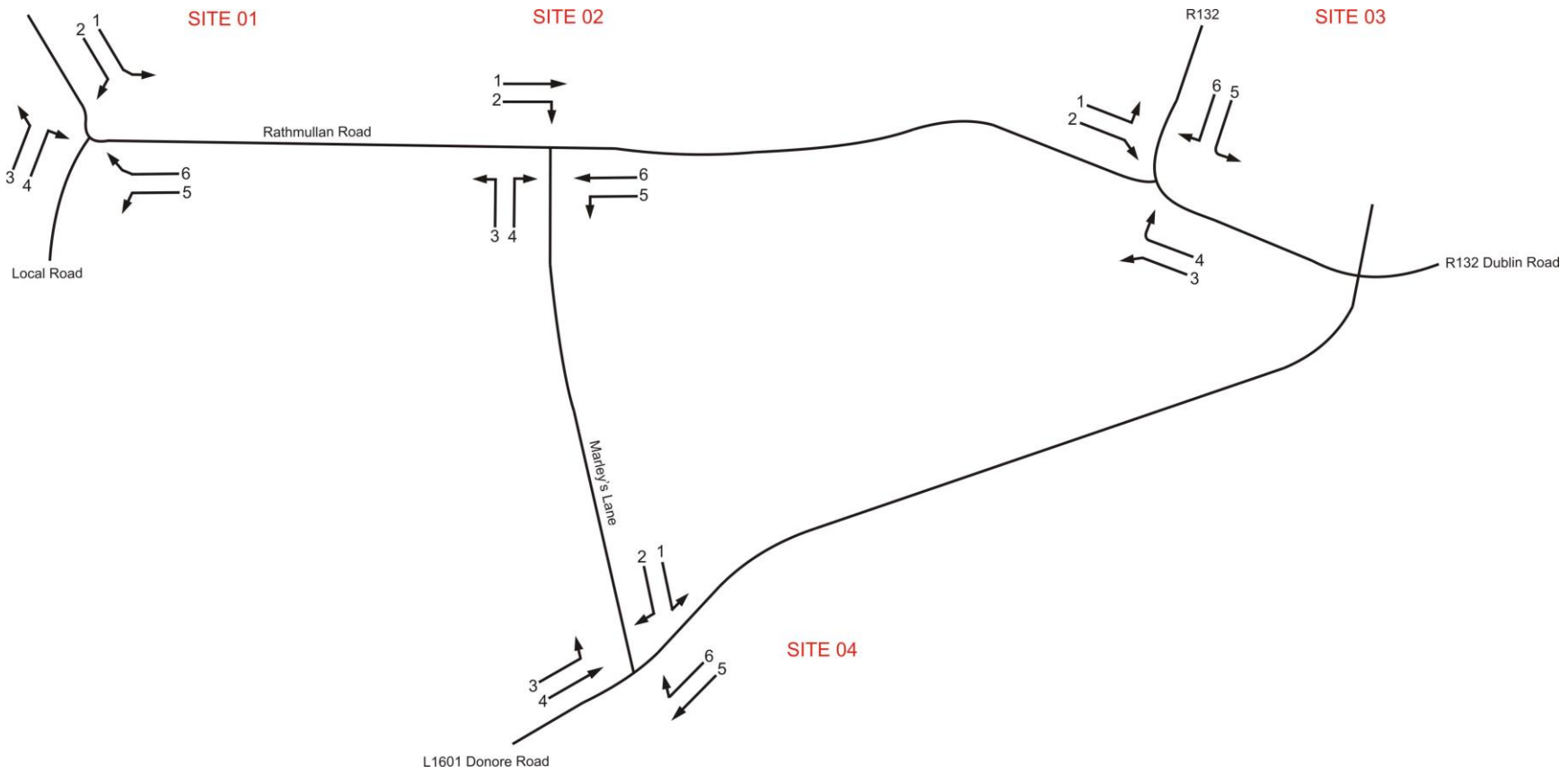
Traffic Counts

Site Locations



Job number: Ath/18/016	Job Date: 10th April 2018	Drawing No: Ath/18/016-01	abacus Transportation Surveys
Client: Waterman-Moylan Consulting	Job Day: Tuesday	Author: SPW	

Site/Movement Numbering



Job number: Ath/18/016	Job Date: 10th April 2018	Drawing No: Ath/18/016-02	abacus Transportation Surveys
Client: Waterman-Moylan Consulting	Job Day: Tuesday	Author: SPW	

ABACUS TRANSPORTATION SURVEYS

DROGHEDA TRAFFIC COUNTS **APRIL 2018**
MANUAL CLASSIFIED JUNCTION TURNING COUNTS **ATH/18/016**

SITE: 01 DATE: 10th April 2018

LOCATION: Rathmullan Road/Local Road DAY: Tuesday

TIME	MOVEMENT 1 CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	MOVEMENT 2 CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	MOVEMENT 3 CAR	LGV	OGV1	OGV2	BUS	TOT	PCU
07:00	1	1	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	4	1	0	0	0	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30	4	3	1	0	0	8	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45	7	4	0	0	1	12	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	16	9	1	0	1	27	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	11	2	0	0	1	14	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15	37	0	1	0	0	38	39	1	0	0	0	0	1	1	0	0	0	0	0	0	0
08:30	43	0	1	0	0	44	45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45	47	2	0	0	1	50	51	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	138	4	2	0	2	146	149	1	0	0	0	0	1	1	0	0	0	0	0	0	0
09:00	15	4	0	0	1	20	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15	12	1	0	0	0	13	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30	22	1	0	0	1	24	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45	14	0	0	0	0	14	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	63	6	0	0	2	71	73	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P/TOT	217	19	3	0	5	244	251	1	0	0	0	0	1	1	0	0	0	0	0	0	0

TIME	MOVEMENT 4 CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	MOVEMENT 5 CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	MOVEMENT 6 CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	PCU's Through Junction
07:00	0	0	0	0	0	0	0	3	0	0	0	0	3	3	5	0	0	0	0	5	5	10
07:15	2	0	0	0	0	2	2	1	0	0	0	0	1	1	4	0	0	0	0	4	4	12
07:30	2	0	0	0	0	2	2	0	0	0	0	0	0	0	9	0	0	0	0	9	9	20
07:45	2	0	0	0	1	3	4	2	1	0	0	0	3	3	3	4	0	0	0	7	7	27
H/TOT	6	0	0	0	1	7	8	6	1	0	0	0	7	7	21	4	0	0	0	25	25	69
08:00	2	0	0	0	0	2	2	1	0	0	0	0	1	1	10	2	0	0	2	14	16	34
08:15	1	2	0	0	0	3	3	8	0	0	0	2	10	12	11	0	0	0	0	11	11	66
08:30	8	0	0	0	0	8	8	5	1	0	0	0	6	6	13	1	0	0	0	14	14	73
08:45	4	1	0	0	0	5	5	14	1	0	0	0	15	15	22	2	1	0	2	27	30	101
H/TOT	15	3	0	0	0	18	18	28	2	0	0	2	32	34	56	5	1	0	4	66	71	273
09:00	2	0	0	0	0	2	2	13	1	0	0	1	15	16	18	1	0	0	0	19	19	58
09:15	5	0	0	0	0	5	5	3	0	0	0	0	3	3	4	2	0	0	0	6	6	27
09:30	3	0	0	0	0	3	3	2	0	0	0	0	2	2	3	0	0	0	0	3	3	33
09:45	3	1	0	0	0	4	4	1	0	0	0	0	1	1	5	1	0	0	0	6	6	25
H/TOT	13	1	0	0	0	14	14	19	1	0	0	1	21	22	30	4	0	0	0	34	34	143
P/TOT	34	4	0	0	1	39	40	53	4	0	0	3	60	63	107	13	1	0	4	125	130	484

ABACUS TRANSPORTATION SURVEYS

DROGHEDA TRAFFIC COUNTS **APRIL 2018**
MANUAL CLASSIFIED JUNCTION TURNING COUNTS **ATH/18/016**

SITE: 01 DATE: 10th April 2018

LOCATION: Rathmullan Road/Local Road DAY: Tuesday

TIME	MOVEMENT 1 CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	MOVEMENT 2 CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	MOVEMENT 3 CAR	LGV	OGV1	OGV2	BUS	TOT	PCU
16:00	7	0	0	0	1	8	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	14	2	0	0	0	16	16	2	0	0	0	0	2	2	0	0	0	0	0	0	0
16:30	9	3	0	0	0	12	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	20	1	0	0	0	21	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	50	6	0	0	1	57	58	2	0	0	0	0	2	2	0	0	0	0	0	0	0
17:00	18	3	0	0	0	21	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	17	4	0	0	0	21	21	1	0	0	0	0	1	1	1	0	0	0	0	1	1
17:30	15	3	0	0	0	18	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	19	1	0	0	0	20	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	69	11	0	0	0	80	80	1	0	0	0	0	1	1	1	0	0	0	0	1	1
18:00	20	2	1	0	0	23	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:15	17	2	0	0	0	19	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:30	15	1	0	0	0	16	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:45	15	0	0	0	0	15	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	67	5	1	0	0	73	74	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P/TOT	186	22	1	0	1	210	212	3	0	0	0	0	3	3	1	0	0	0	0	1	1

TIME	MOVEMENT 4 CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	MOVEMENT 5 CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	MOVEMENT 6 CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	PCU's Through Junction
16:00	2	0	0	0	0	2	2	1	0	0	0	0	1	1	9	3	0	0	0	12	12	24
16:15	2	0	0	0	0	2	2	5	1	0	0	0	6	6	21	5	0	0	1	27	28	54
16:30	2	0	0	0	0	2	2	3	0	0	0	1	4	5	27	2	0	0	0	29	29	48
16:45	2	0	1	0	0	3	4	5	0	0	0	0	5	5	17	2	0	0	0	19	19	49
H/TOT	8	0	1	0	0	9	10	14	1	0	0	1	16	17	74	12	0	0	1	87	88	175
17:00	4	0	0	0	0	4	4	1	0	0	0	0	1	1	20	6	1	0	0	27	28	54
17:15	2	0	0	0	0	2	2	3	0	0	0	0	3	3	19	2	0	0	0	21	21	49
17:30	4	0	0	0	0	4	4	1	0	0	0	0	1	1	13	3	0	0	0	16	16	39
17:45	4	0	0	0	0	4	4	4	0	0	0	0	4	4	14	3	0	0	0	17	17	45
H/TOT	14	0	0	0	0	14	14	9	0	0	0	0	9	9	66	14	1	0	0	81	82	187
18:00	2	1	0	0	0	3	3	2	1	0	0	0	3	3	13	1	0	0	0	14	14	44
18:15	6	0	0	0	0	6	6	5	0	0	0	0	5	5	11	2	0	0	0	13	13	43
18:30	1	1	0	0	0	2	2	2	0	0	0	0	2	2	7	1	0	0	0	8	8	28
18:45	1	0	0	0	0	1	1	3	0	0	0	0	3	3	6	1	0	0	0	7	7	26
H/TOT	10	2	0	0	0	12	12	12	1	0	0	0	13	13	37	5	0	0	0	42	42	141
P/TOT	32	2	1	0	0	35	36	35	2	0	0	1	38	39	177	31	1	0	1	210	212	502

ABACUS TRANSPORTATION SURVEYS

DROGHEDA TRAFFIC COUNTS **APRIL 2018**
MANUAL CLASSIFIED JUNCTION TURNING COUNTS **ATH/18/016**

SITE: 02 DATE: 10th April 2018

LOCATION: Rathmullan Road/Marley's Lane DAY: Tuesday

TIME	MOVEMENT 1							MOVEMENT 2							MOVEMENT 3							MOVEMENT 4							MOVEMENT 5							MOVEMENT 6							PCU's Through Junction
	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU		CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	
07:00	11	1	0	0	0	12	12	17	3	0	0	0	20	20	8	2	0	0	0	10	10	07:00	14	1	0	0	2	17	19	36	2	0	0	0	38	38	9	1	0	0	0	10	10	109
07:15	23	2	0	0	0	25	25	21	3	0	0	0	24	24	7	0	0	0	0	7	7	07:15	25	5	0	0	0	30	30	28	9	0	1	1	39	41	10	0	0	0	0	10	10	137
07:30	28	1	0	0	0	29	29	23	4	1	0	0	28	29	6	0	0	0	1	7	8	07:30	15	6	0	1	1	23	25	38	8	2	0	0	48	49	22	0	0	0	0	22	22	162
07:45	29	2	0	0	7	38	45	28	3	0	0	4	35	39	12	3	0	0	6	21	27	07:45	20	18	1	0	0	39	40	28	6	1	0	0	35	36	16	4	0	0	3	23	26	212
H/TOT	91	6	0	0	7	104	111	89	13	1	0	4	107	112	33	5	0	0	7	45	52	**H/TOT**	74	30	1	1	3	109	114	130	25	3	1	1	160	164	57	5	0	0	3	65	68	620
08:00	29	2	1	0	6	38	45	31	4	0	0	1	36	37	15	3	1	0	4	23	28	08:00	31	10	0	0	0	41	41	31	5	1	0	0	37	38	17	1	1	0	5	24	30	217
08:15	45	3	0	0	3	51	54	52	3	2	0	1	58	60	22	0	0	0	3	25	28	08:15	31	5	1	1	0	38	40	45	2	0	0	1	48	49	27	2	0	0	4	33	37	268
08:30	44	3	1	0	0	48	49	66	1	1	0	3	71	75	29	0	0	0	0	29	29	08:30	31	4	1	1	1	38	41	61	6	0	1	0	68	69	40	1	1	0	0	42	43	305
08:45	38	2	0	0	2	42	44	62	5	0	0	0	67	67	35	8	0	0	3	46	49	08:45	39	4	1	0	0	44	45	48	5	3	0	0	56	58	51	3	0	0	1	55	56	318
H/TOT	156	10	2	0	11	179	191	211	13	3	0	5	232	239	101	11	1	0	10	123	134	**H/TOT**	132	23	3	2	1	161	166	185	18	4	1	1	209	213	135	7	2	0	10	154	165	1107
09:00	47	3	0	0	0	50	50	50	6	0	0	1	57	58	38	3	0	0	0	41	41	09:00	55	8	1	0	1	65	67	32	4	1	0	3	40	44	34	2	0	0	0	36	36	295
09:15	20	3	0	0	0	23	23	19	1	0	0	0	20	20	13	3	0	0	0	16	16	09:15	35	3	1	0	1	40	42	37	8	0	0	3	48	51	15	1	0	0	0	16	16	168
09:30	18	3	0	0	0	21	21	15	1	0	0	1	17	18	10	0	0	0	0	10	10	09:30	39	9	1	0	1	50	52	23	1	0	0	1	25	26	16	1	0	0	0	17	17	144
09:45	30	1	0	0	1	32	33	15	1	0	0	0	16	16	12	1	0	0	1	14	15	09:45	35	6	0	0	0	41	41	33	9	2	0	1	45	47	10	1	0	0	0	11	11	163
H/TOT	115	10	0	0	1	126	127	99	9	0	0	2	110	112	73	7	0	0	1	81	82	**H/TOT**	164	26	3	0	3	196	201	125	22	3	0	8	158	168	75	5	0	0	0	80	80	769
P/TOT	362	26	2	0	19	409	429	399	35	4	0	11	449	462	207	23	1	0	18	249	268	**P/TOT**	370	79	7	3	7	466	480	440	65	10	2	10	527	545	267	17	2	0	13	299	313	2497

ABACUS TRANSPORTATION SURVEYS

DROGHEDA TRAFFIC COUNTS **APRIL 2018**
MANUAL CLASSIFIED JUNCTION TURNING COUNTS **ATH/18/016**

SITE: 02 DATE: 10th April 2018

LOCATION: Rathmullan Road/Marley's Lane DAY: Tuesday

TIME	MOVEMENT 1							MOVEMENT 2							MOVEMENT 3							MOVEMENT 4							MOVEMENT 5							MOVEMENT 6							PCU's Through Junction
	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU		CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	
16:00	24	1	0	0	2	27	29	21	0	0	0	1	22	23	12	3	0	0	1	16	17	16:00	38	4	1	0	0	43	44	51	2	0	1	2	56	59	22	2	0	0	0	24	24	196
16:15	19	2	0	0	0	21	21	24	3	0	0	0	27	27	26	4	0	0	2	32	34	16:15	61	9	0	1	0	71	72	34	4	2	0	2	42	45	37	3	0	0	0	40	40	239
16:30	27	3	0	0	1	31	32	22	1	0	0	0	23	23	30	4	0	0	1	35	36	16:30	56	7	1	0	1	65	67	41	6	0	0	2	49	51	18	0	0	0	0	18	18	227
16:45	27	0	0	0	0	27	27	22	1	0	0	0	23	23	27	2	0	0	0	29	29	16:45	57	8	0	0	0	65	65	60	12	0	0	1	73	74	28	3	0	0	0	31	31	249
H/TOT	97	6	0	0	3	106	109	89	5	0	0	1	95	96	95	13	0	0	4	112	116	**H/TOT**	212	28	2	1	1	244	247	186	24	2	1	7	220	229	105	8	0	0	0	113	113	911
17:00	29	2	0	0	0	31	31	22	2	0	0	0	24	24	36	9	0	0	0	45	45	17:00	52	12	0	0	1	65	66	42	4	0	0	0	46	46	32	2	0	0	0	34	34	246
17:15	25	2	0	0	0	27	27	26	4	0	0	0	30	30	35	3	0	0	0	38	38	17:15	61	15	3	0	0	79	81	48	8	0	0	0	56	56	33	3	0	0	0	36	36	268
17:30	20	3	0	0	0	23	23	19	1	0	0	0	20	20	31	3	0	0	0	34	34	17:30	90	20	0	0	1	111	112	57	8	1	0	0	66	67	26	2	0	0	0	28	28	284
17:45	32	1	0	0	0	33	33	29	4	0	0	0	33	33	44	1	0	0	0	45	45	17:45	80	10	0	0	0	90	90	41	2	0	0	0	43	43	26	4	0	0	0	30	30	274
H/TOT	106	8	0	0	0	114	114	96	11	0	0	0	107	107	146	16	0	0	0	162	162	**H/TOT**	283	57	3	0	2	345	349	188	22	1	0	0	211	212	117	11	0	0	0	128	128	1071
18:00	23	3	1	0	0	27	28	21	1	0	0	0	22	22	42	2	0	0	0	44	44	18:00	79	4	1	1	0	85	87	34	2	0	0	0	36	36	32	2	0	0	0	34	34	250
18:15	23	3	0	0	0	26	26	23	2	0	0	0	25	25	38	5	0	0	0	43	43	18:15	66	8	0	0	0	74	74	37	5	0	0	0	42	42	20	1	0	0	0	21	21	231
18:30	23	1	0	0	0	24	24	33	3	0	0	0	36	36	26	4	0	0	0	30	30	18:30	49	3	0	0	0	52	52	49	4	0	0	0	53	53	34	1	0	0	0	35	35	230
18:45	20	1	0	0	0	21	21	29	1	0	0	0	30	30	30	4	0	0	0	34	34	18:45	63	15	0	0	0	78	78	46	3	0	0	0	49	49	22	1	0	0	0	23	23	235
H/TOT	89	8	1	0	0	98	99	106	7	0	0	0	113	113	136	15	0	0	0	151	151	**H/TOT**	257	30	1	1	0	289	291	166	14	0	0	0	180	180	108	5	0	0	0	113	113	946
P/TOT	292	22	1	0	3	318	322	291	23	0	0	1	315	316	377	44	0	0	4	425	429	**P/TOT**	752	115	6	2	3	878	887	540	60	3	1	7	611	621	330	24	0	0	0	354	354	2928

ABACUS TRANSPORTATION SURVEYS

DROGHEDA TRAFFIC COUNTS **APRIL 2018**
MANUAL CLASSIFIED JUNCTION TURNING COUNTS **ATH/18/016**

SITE: 03 DATE: 10th April 2018

LOCATION: Rathmullan Road/R132 Dublin Road DAY: Tuesday

TIME	MOVEMENT 1							MOVEMENT 2							MOVEMENT 3							MOVEMENT 4							MOVEMENT 5							MOVEMENT 6							PCU's Through Junction
	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU		CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	
07:00	13	1	0	0	2	16	18	7	1	0	0	0	8	8	10	0	0	0	0	10	10	07:00	66	7	0	3	4	80	88	44	12	2	4	7	69	82	32	4	0	0	0	36	36	242
07:15	34	4	0	0	0	38	38	19	2	0	0	0	21	21	8	2	0	1	0	11	12	07:15	70	12	4	7	3	96	110	55	13	0	7	4	79	92	25	9	1	0	1	36	38	311
07:30	35	2	0	0	1	38	39	13	3	0	1	0	17	18	12	2	0	0	0	14	14	07:30	107	18	3	3	2	133	140	69	20	1	3	11	104	119	39	11	1	0	0	51	52	383
07:45	35	13	1	0	4	53	58	18	1	0	0	1	20	21	14	3	0	0	1	18	19	07:45	119	20	6	2	4	151	161	96	15	4	5	3	123	135	30	8	2	0	2	42	45	438
H/TOT	117	20	1	0	7	145	153	57	7	0	1	1	66	68	44	7	0	1	1	53	55	**H/TOT**	362	57	13	15	13	460	499	264	60	7	19	25	375	428	126	32	4	0	3	165	170	1373
08:00	41	8	0	0	4	53	57	20	1	0	0	3	24	27	14	0	0	0	3	17	20	08:00	147	13	1	4	6	171	183	114	14	3	3	4	138	147	36	5	1	0	4	46	51	485
08:15	56	6	1	1	3	67	72	32	3	0	0	2	37	39	22	1	0	0	2	25	27	08:15	143	16	4	1	5	169	177	96	11	6	1	5	119	128	59	4	0	0	2	65	67	510
08:30	58	6	1	1	0	66	68	30	1	0	0	0	31	31	29	2	0	0	0	31	31	08:30	147	21	6	3	3	180	190	117	16	7	1	2	143	150	69	5	2	1	0	77	79	549
08:45	59	4	0	0	2	65	67	22	2	0	0	0	24	24	25	2	1	0	0	28	29	08:45	157	14	0	1	1	173	175	99	15	3	1	5	123	131	52	6	0	0	1	59	60	486
H/TOT	214	24	2	2	9	251	264	104	7	0	0	5	116	121	90	5	1	0	5	101	107	**H/TOT**	594	64	11	9	15	693	725	426	56	19	6	16	523	556	216	20	3	1	7	247	257	2029
09:00	36	4	1	0	0	41	42	31	1	0	0	0	32	32	25	4	0	0	0	29	29	09:00	143	25	3	2	7	180	191	92	18	2	1	4	117	123	42	6	1	0	3	52	56	472
09:15	62	4	1	0	1	68	70	24	4	0	0	1	29	30	21	3	0	0	2	26	28	09:15	122	8	3	2	7	142	153	109	13	5	5	1	133	143	36	6	1	0	0	43	44	467
09:30	38	7	0	0	1	46	47	22	2	0	0	0	24	24	6	1	0	0	1	8	9	09:30	107	16	6	1	5	135	144	96	20	6	2	5	129	140	31	2	0	0	0	33	33	397
09:45	53	6	0	0	1	60	61	12	3	0	0	0	15	15	9	0	0	0	1	10	11	09:45	107	18	5	2	2	134	141	101	20	0	3	1	125	130	32	8	2	1	0	43	45	403
H/TOT	189	21	2	0	3	215	219	89	10	0	0	1	100	101	61	8	0	0	4	73	77	**H/TOT**	479	67	17	7	21	591	630	398	71	13	11	11	504	536	141	22	4	1	3	171	177	1740
P/TOT	520	65	5	2	19	611	635	250	24	0	1	7	282	290	195	20	1	1	10	227	239	**P/TOT**	1435	188	41	31	49	1744	1854	1088	187	39	36	52	1402	1520	483	74	11	2	13	583	604	5142

ABACUS TRANSPORTATION SURVEYS

DROGHEDA TRAFFIC COUNTS **APRIL 2018**
MANUAL CLASSIFIED JUNCTION TURNING COUNTS **ATH/18/016**

SITE: 03 DATE: 10th April 2018

LOCATION: Rathmullan Road/R132 Dublin Road DAY: Tuesday

TIME	MOVEMENT 1							MOVEMENT 2							MOVEMENT 3							MOVEMENT 4							MOVEMENT 5							MOVEMENT 6							PCU's Through Junction
	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU		CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	
16:00	51	4	1	0	1	57	59	19	4	0	0	2	25	27	31	2	0	0	1	34	35	16:00	173	17	5	1	5	201	210	114	18	2	4	4	142	152	46	4	0	0	1	51	52	535
16:15	55	10	0	1	0	66	67	23	1	0	0	0	24	24	29	3	1	0	0	33	34	16:15	140	22	5	4	5	176	189	135	12	3	2	2	154	160	40	7	2	0	1	50	52	526
16:30	63	9	0	0	1	73	74	19	0	0	0	0	19	19	20	0	1	1	0	22	24	16:30	139	22	6	9	3	179	197	114	14	1	0	3	132	136	49	2	0	0	2	53	55	504
16:45	64	11	1	1	1	78	81	17	1	0	0	0	18	18	23	4	0	0	0	27	27	16:45	127	21	5	0	1	154	158	135	13	4	0	1	153	156	58	7	0	0	1	66	67	506
H/TOT	233	34	2	2	3	274	281	78	6	0	0	2	86	88	103	9	2	1	1	116	119	**H/TOT**	579	82	21	14	14	710	753	498	57	10	6	10	581	604	193	20	2	0	5	220	226	2070
17:00	55	11	0	0	1	67	68	23	0	0	0	0	23	23	25	3	0	0	0	28	28	17:00	144	22	5	1	4	176	184	139	16	2	1	2	160	164	61	3	0	0	0	64	64	531
17:15	60	10	3	0	0	73	75	27	5	0	0	0	32	32	16	5	1	0	0	22	23	17:15	178	15	3	1	1	198	202	152	12	1	0	1	166	168	52	6	0	0	0	58	58	556
17:30	61	19	0	0	1	81	82	19	1	1	0	0	21	22	22	1	0	0	0	23	23	17:30	155	19	2	1	4	181	187	163	11	0	0	3	177	180	44	5	0	0	0	49	49	543
17:45	87	12	0	0	0	99	99	23	1	0	0	0	24	24	29	1	0	0	0	30	30	17:45	143	18	1	0	1	163	165	117	10	3	0	1	131	134	41	5	0	0	0	46	46	497
H/TOT	263	52	3	0	2	320	324	92	7	1	0	0	100	101	92	10	1	0	0	103	104	**H/TOT**	620	74	11	3	10	718	737	571	49	6	1	7	634	645	198	19	0	0	0	217	217	2127
18:00	69	2	1	1	0	73	75	17	1	0	0	0	18	18	26	2	1	0	0	29	30	18:00	175	10	1	1	11	198	211	153	21	0	1	0	175	176	51	2	0	0	0	53	53	562
18:15	62	5	0	0	0	67	67	16	2	0	0	0	18	18	25	2	0	0	0	27	27	18:15	143	10	4	0	1	158	161	95	7	1	0	2	105	108	33	3	0	0	0	36	36	417
18:30	47	5	0	0	0	52	52	16	1	0	0	0	17	17	25	2	0	0	1	28	29	18:30	134	15	0	0	5	154	159	98	10	4	0	3	115	120	48	4	0	0	0	52	52	429
18:45	71	5	1	0	0	77	78	19	1	0	0	0	20	20	23	2	0	0	0	25	25	18:45	136	11	4	0	3	154	159	118	9	0	0	0	127	127	47	3	0	0	0	50	50	459
H/TOT	249	17	2	1	0	269	271	68	5	0	0	0	73	73	99	8	1	0	1	109	111	**H/TOT**	588	46	9	1	20	664	690	464	47	5	1	5	522	531	179	12	0	0	0	191	191	1866
P/TOT	745	103	7	3	5	863	875	238	18	1	0	2	259	262	294	27	4	1	2	328	333	**P/TOT**	1787	202	41	18	44	2092	2180	1533	153	21	8	22	1737	1780	570	51	2	0	5	628	634	6064

ABACUS TRANSPORTATION SURVEYS

DROGHEDA TRAFFIC COUNTS **APRIL 2018**
MANUAL CLASSIFIED JUNCTION TURNING COUNTS **ATH/18/016**

SITE: 04 DATE: 10th April 2018

LOCATION: Donore Road/Marley's Lane DAY: Tuesday

TIME	MOVEMENT 1							MOVEMENT 2							MOVEMENT 3							TIME	MOVEMENT 4							MOVEMENT 5							MOVEMENT 6							PCU's Through Junction
	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU		CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	
07:00	4	0	0	0	0	4	4	42	5	0	0	4	51	55	9	2	0	0	0	11	11	07:00	9	3	0	2	4	18	25	29	8	2	1	5	45	52	8	1	0	0	0	9	9	156
07:15	4	1	0	0	0	5	5	39	11	0	0	2	52	54	24	4	0	0	0	28	28	07:15	19	6	2	5	3	35	46	33	4	2	1	2	42	46	5	0	0	0	0	5	5	184
07:30	5	1	0	0	0	6	6	48	16	2	0	0	66	67	18	5	0	0	1	24	25	07:30	35	7	1	4	2	49	57	34	6	1	6	5	52	65	5	2	1	0	1	9	11	231
07:45	13	7	0	0	2	22	24	44	10	1	1	0	56	58	27	6	0	0	4	37	41	07:45	42	8	2	1	3	56	61	36	11	1	2	3	53	59	15	2	0	0	3	20	23	266
H/TOT	26	9	0	0	2	37	39	173	42	3	1	6	225	234	78	17	0	0	5	100	105	**H/TOT**	105	24	5	12	12	158	188	132	29	6	10	15	192	223	33	5	1	0	4	43	48	836
08:00	12	3	0	0	3	18	21	38	3	1	0	0	42	43	20	5	2	0	2	29	32	08:00	37	8	0	1	5	51	57	25	5	3	7	7	47	65	19	5	0	0	3	27	30	247
08:15	35	5	0	0	1	41	42	61	2	2	0	1	66	68	26	4	1	2	0	33	36	08:15	53	9	4	2	1	69	75	47	9	0	0	1	57	58	23	0	0	0	1	24	25	304
08:30	48	4	0	0	3	55	58	40	3	1	1	1	46	49	45	2	0	1	1	49	51	08:30	48	5	1	6	4	64	76	41	11	2	0	3	57	61	48	1	1	0	2	52	55	350
08:45	57	2	2	0	0	61	62	43	4	0	0	0	47	47	47	9	1	1	2	60	64	08:45	73	8	1	0	4	86	91	71	12	5	1	1	90	95	60	3	0	0	3	66	69	427
H/TOT	152	14	2	0	7	175	183	182	12	4	1	2	201	206	138	20	4	4	5	171	183	**H/TOT**	211	30	6	9	14	270	299	184	37	10	8	12	251	278	150	9	1	0	9	169	179	1328
09:00	63	7	0	0	1	71	72	57	11	1	0	1	70	72	28	7	0	0	2	37	39	09:00	48	5	2	1	3	59	64	68	10	1	8	6	93	110	34	5	0	0	1	40	41	398
09:15	31	4	0	0	1	36	37	33	6	0	0	1	40	41	26	6	0	0	2	34	36	09:15	48	7	0	4	4	63	72	66	6	4	1	3	80	86	25	1	0	0	1	27	28	301
09:30	25	5	1	0	0	31	32	24	2	0	0	0	26	26	38	7	1	0	2	48	51	09:30	38	10	5	6	2	61	73	54	12	3	2	3	74	81	13	3	0	0	2	18	20	282
09:45	24	3	0	0	0	27	27	33	10	2	0	1	46	48	32	4	0	0	0	36	36	09:45	35	14	1	2	0	52	55	47	8	4	5	1	65	75	12	3	0	0	0	15	15	256
H/TOT	143	19	1	0	2	165	168	147	29	3	0	3	182	187	124	24	1	0	6	155	162	**H/TOT**	169	36	8	13	9	235	265	235	36	12	16	13	312	352	84	12	0	0	4	100	104	1236
P/TOT	321	42	3	0	11	377	390	502	83	10	2	11	608	627	340	61	5	4	16	426	450	**P/TOT**	485	90	19	34	35	663	752	551	102	28	34	40	755	853	267	26	2	0	17	312	330	3401

ABACUS TRANSPORTATION SURVEYS

DROGHEDA TRAFFIC COUNTS **APRIL 2018**
MANUAL CLASSIFIED JUNCTION TURNING COUNTS **ATH/18/016**

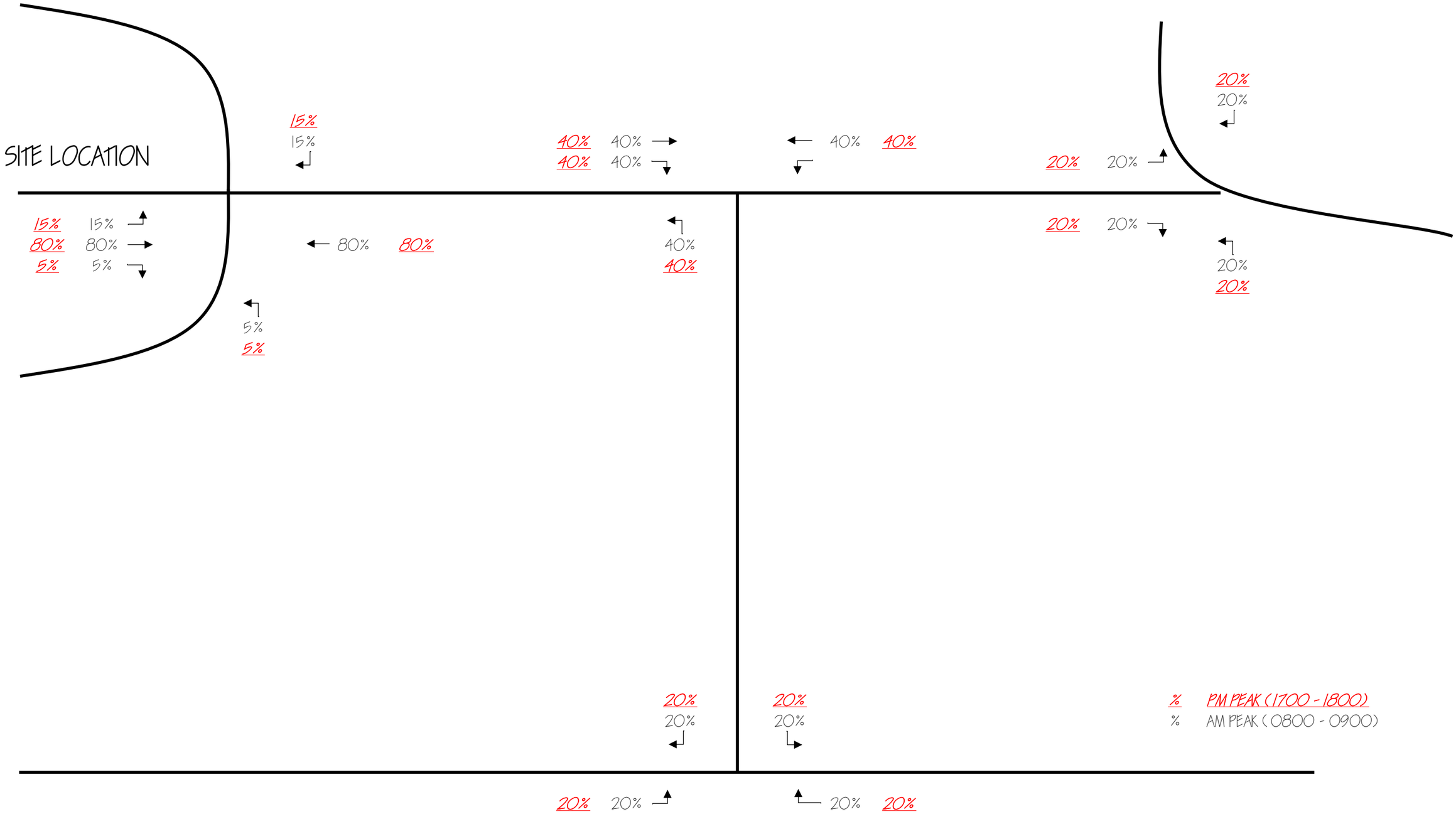
SITE: 04 DATE: 10th April 2018

LOCATION: Donore Road/Marley's Lane DAY: Tuesday

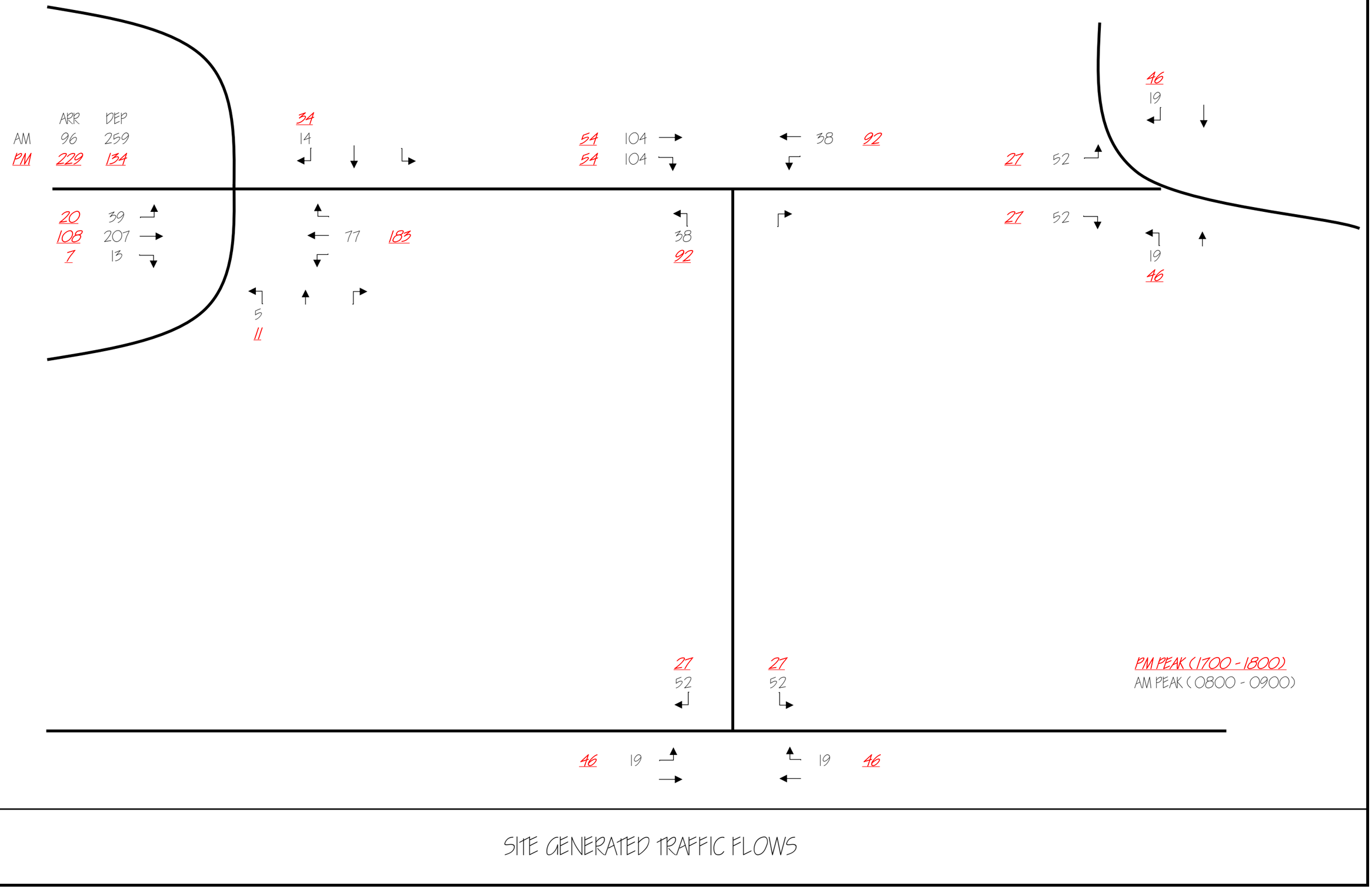
TIME	MOVEMENT 1							MOVEMENT 2							MOVEMENT 3							TIME	MOVEMENT 4							MOVEMENT 5							MOVEMENT 6							PCU's Through Junction
	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU		CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	
16:00	29	4	0	0	3	36	39	40	3	1	0	2	46	49	32	5	0	0	1	38	39	16:00	53	9	0	4	5	71	81	57	7	6	0	1	71	75	40	2	1	0	2	45	48	330
16:15	33	3	0	0	0	36	36	49	7	2	1	0	59	61	53	9	1	0	3	66	70	16:15	54	6	3	6	3	72	84	65	8	4	4	5	86	98	39	6	0	1	2	48	51	401
16:30	28	3	0	0	0	31	31	40	3	0	0	1	44	45	60	6	0	0	2	68	70	16:30	42	6	1	1	1	51	54	58	17	1	1	5	82	89	44	5	0	0	2	51	53	342
16:45	38	6	0	0	0	44	44	40	4	0	0	2	46	48	51	10	0	0	2	63	65	16:45	54	7	2	1	3	67	72	61	12	0	1	3	77	81	34	7	0	0	3	44	47	358
H/TOT	128	16	0	0	3	147	150	169	17	3	1	5	195	203	196	30	1	0	8	235	244	**H/TOT**	203	28	6	12	12	261	292	241	44	11	6	14	316	343	157	20	1	1	9	188	199	1430
17:00	35	4	0	0	1	40	41	42	5	0	0	0	47	47	55	7	1	0	2	65	68	17:00	66	14	2	0	2	84	87	73	5	1	0	1	80	82	38	11	0	0	0	49	49	373
17:15	30	3	1	0	0	34	35	41	8	0	0	0	49	49	67	10	2	0	0	79	80	17:15	46	6	3	1	1	57	61	81	7	1	1	2	92	96	56	11	0	0	0	67	67	387
17:30	32	3	0	0	0	35	35	38	4	1	0	0	43	44	95	20	0	0	1	116	117	17:30	52	8	1	0	2	63	66	68	4	0	2	2	76	81	64	3	0	0	1	68	69	411
17:45	28	5	0	0	0	33	33	40	4	0	0	0	44	44	63	13	1	1	0	78	80	17:45	56	4	1	0	4	65	70	72	12	0	0	4	88	92	47	4	0	0	0	51	51	369
H/TOT	125	15	1	0	1	142	144	161	21	1	0	0	183	184	280	50	4	1	3	338	344	**H/TOT**	220	32	7	1	9	269	283	294	28	2	3	9	336	350	205	29	0	0	1	235	236	1540
18:00	29	3	0	0	0	32	32	44	5	0	0	0	49	49	74	2	0	0	0	76	76	18:00	41	7	1	0	3	52	56	56	6	0	0	1	63	64	43	10	0	0	0	53	53	330
18:15	36	2	0	0	0	38	38	38	3	0	0	0	41	41	57	7	0	0	0	64	64	18:15	56	4	0	0	3	63	66	58	6	1	0	1	66	68	41	9	0	0	1	51	52	329
18:30	39	6	0	0	0	45	45	36	5	0	0	1	42	43	48	3	1	0	0	52	53	18:30	60	5	4	0	1	70	73	57	8	0	0	6	71	77	38	9	0	0	0	47	47	338
18:45	43	0	0	0	0	43	43	39	5	1	0	0	45	46	46	9	0	0	0	55	55	18:45	59	5	0	1	3	68	72	52	8	1	0	1	62	64	30	2	0	0	0	32	32	311
H/TOT	147	11	0	0	0	158	158	157	18	1	0	1	177	179	225	21	1	0	0	247	248	**H/TOT**	216	21	5	1	10	253	267	223	28	2	0	9	262	272	152	30	0	0	1	183	184	1307
P/TOT	400	42	1	0	4	447	452	487	56	5	1	6	555	565	701	101	6	1	11	820	835	**P/TOT**	639	81	18	14	31	783	841	758	100	15	9	32	914	965	514	79	1	1	11	606	619	4277

Appendix C

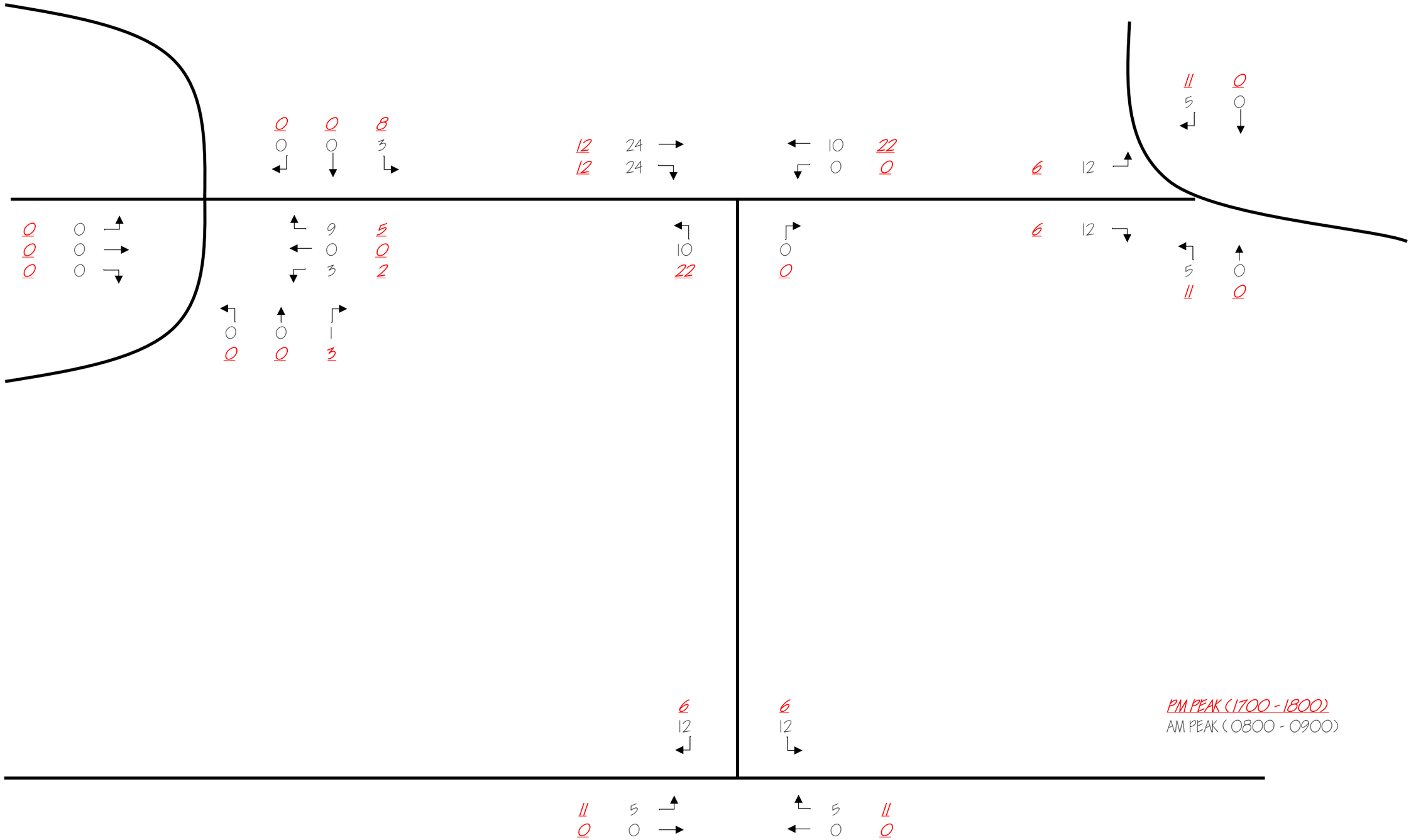
Traffic Flows



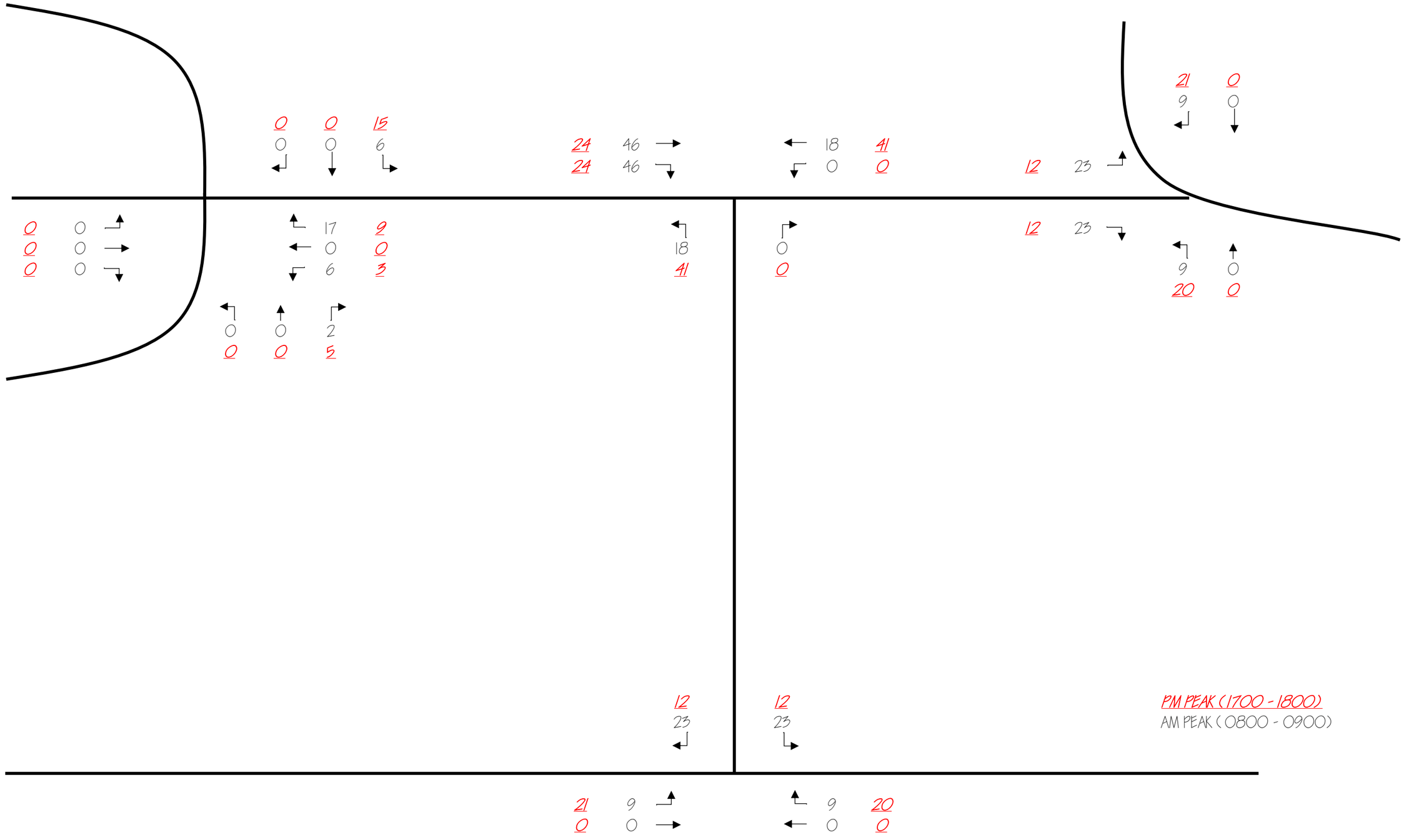
DISTRIBUTION OF GENERATED TRAFFIC



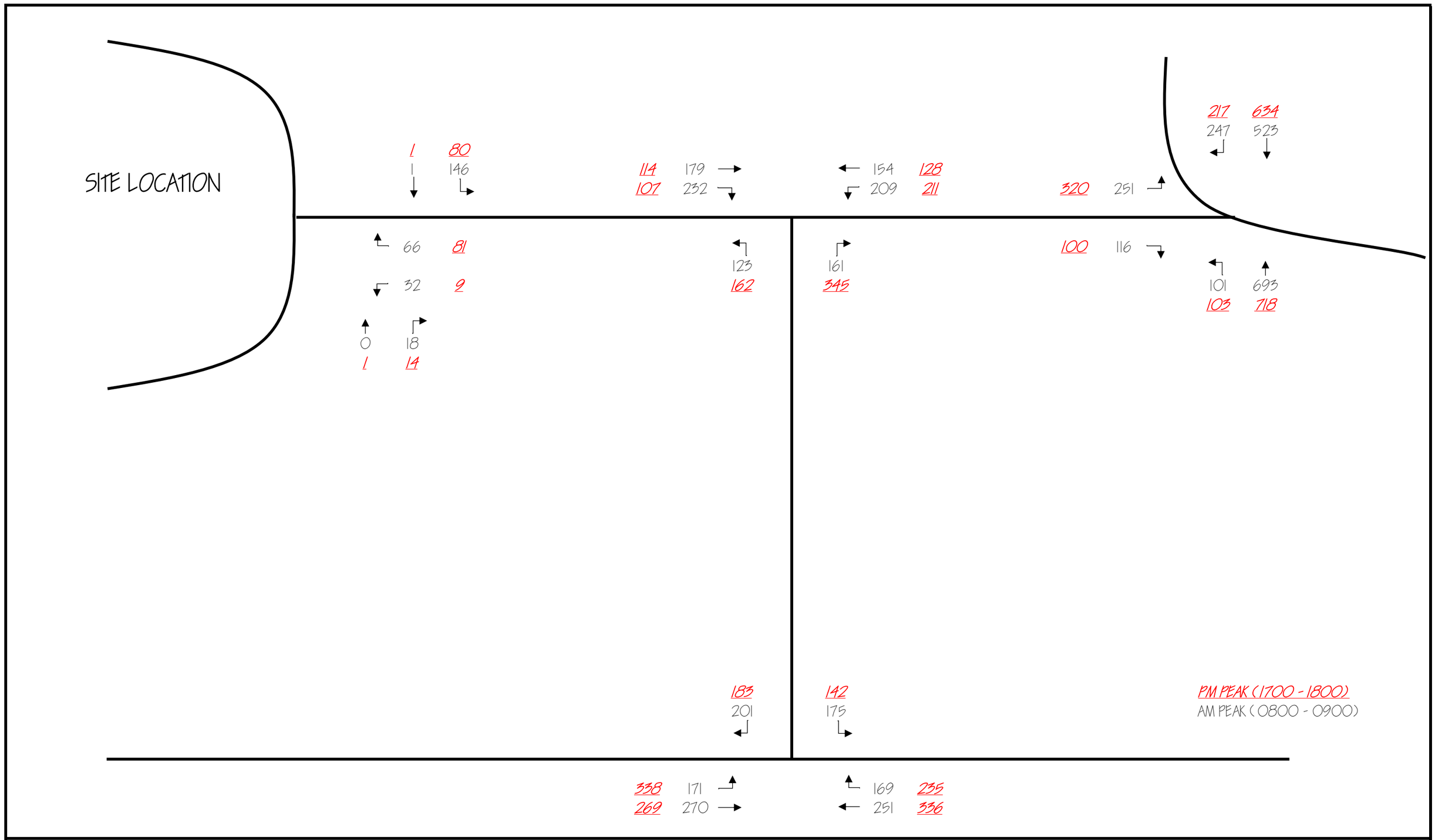
SITE GENERATED TRAFFIC FLOWS



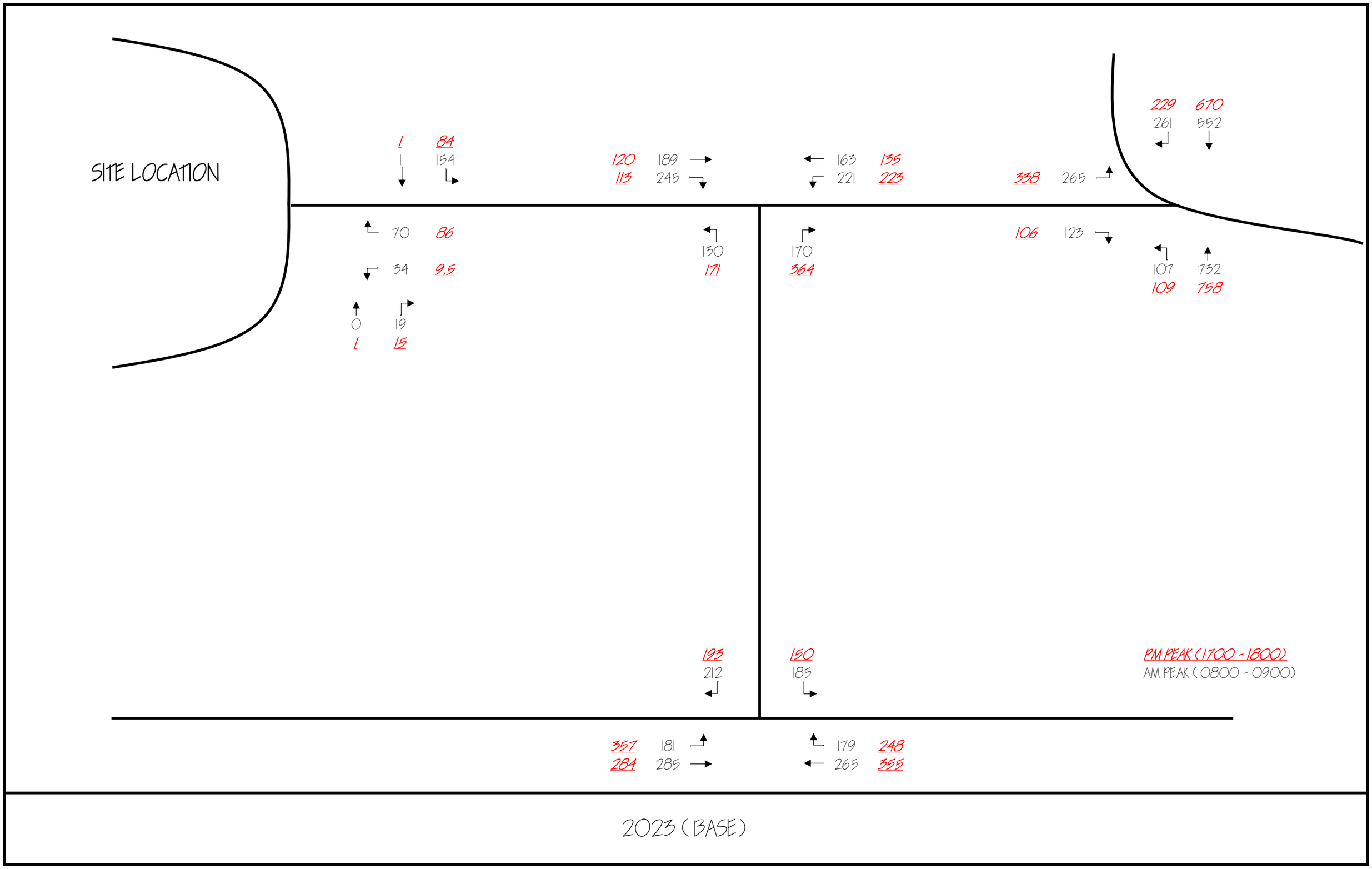
COMMITTED DEVELOPMENT TRAFFIC PHASE 1



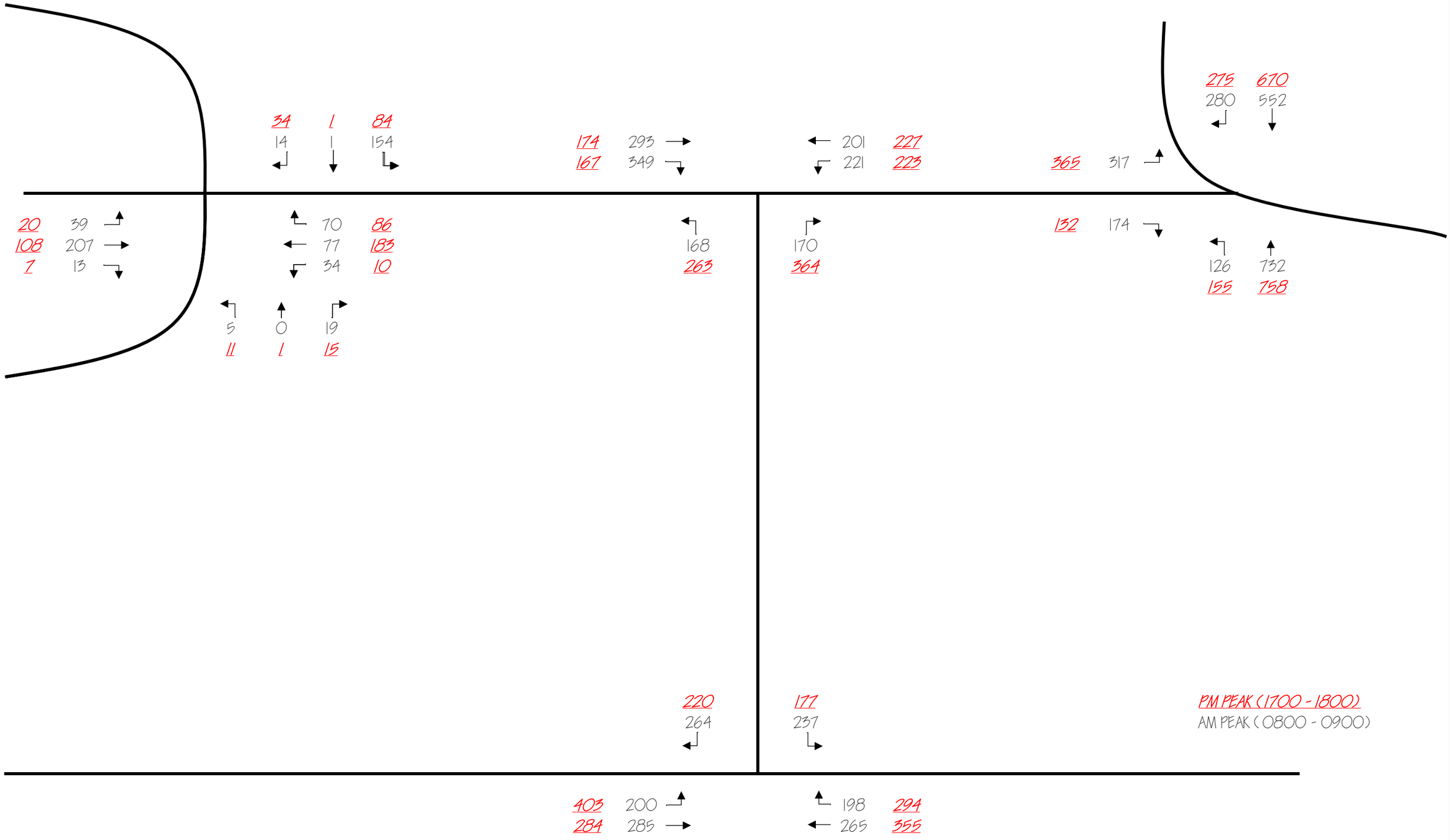
COMMITTED DEVELOPMENT TRAFFIC PHASES 1 AND 2



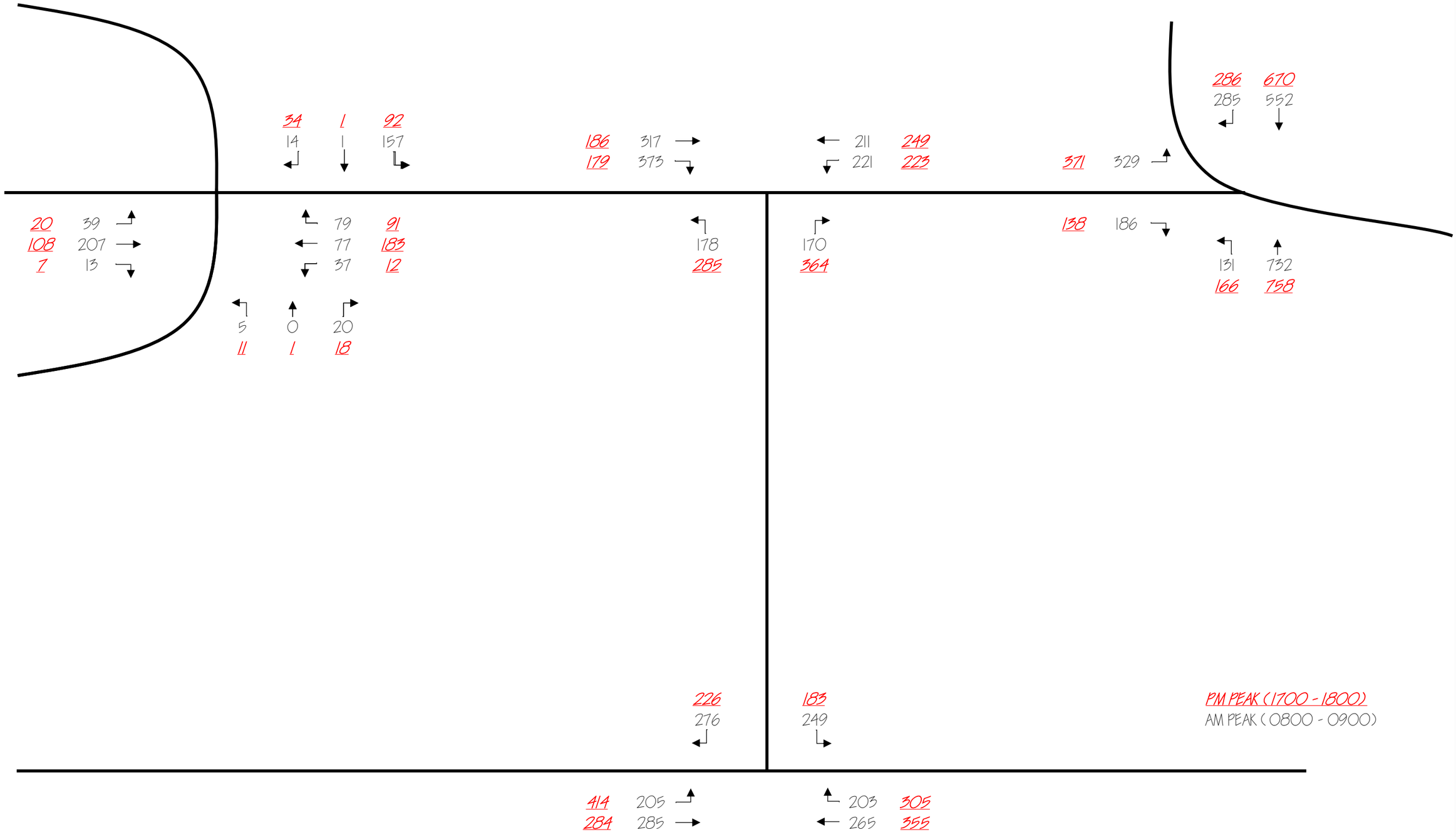
SURVEYED FLOWS (2018)


SITE LOCATION
1
1
84
154
120
113
189
245
163
221
135
223
338
265
229
261
670
552
70
34
86
95
0
1
19
15
130
171
170
364
106
123
107
109
732
758
193
212
150
185
PM PEAK (1700 - 1800)
AM PEAK (0800 - 0900)
357
284
181
285
179
265
248
355

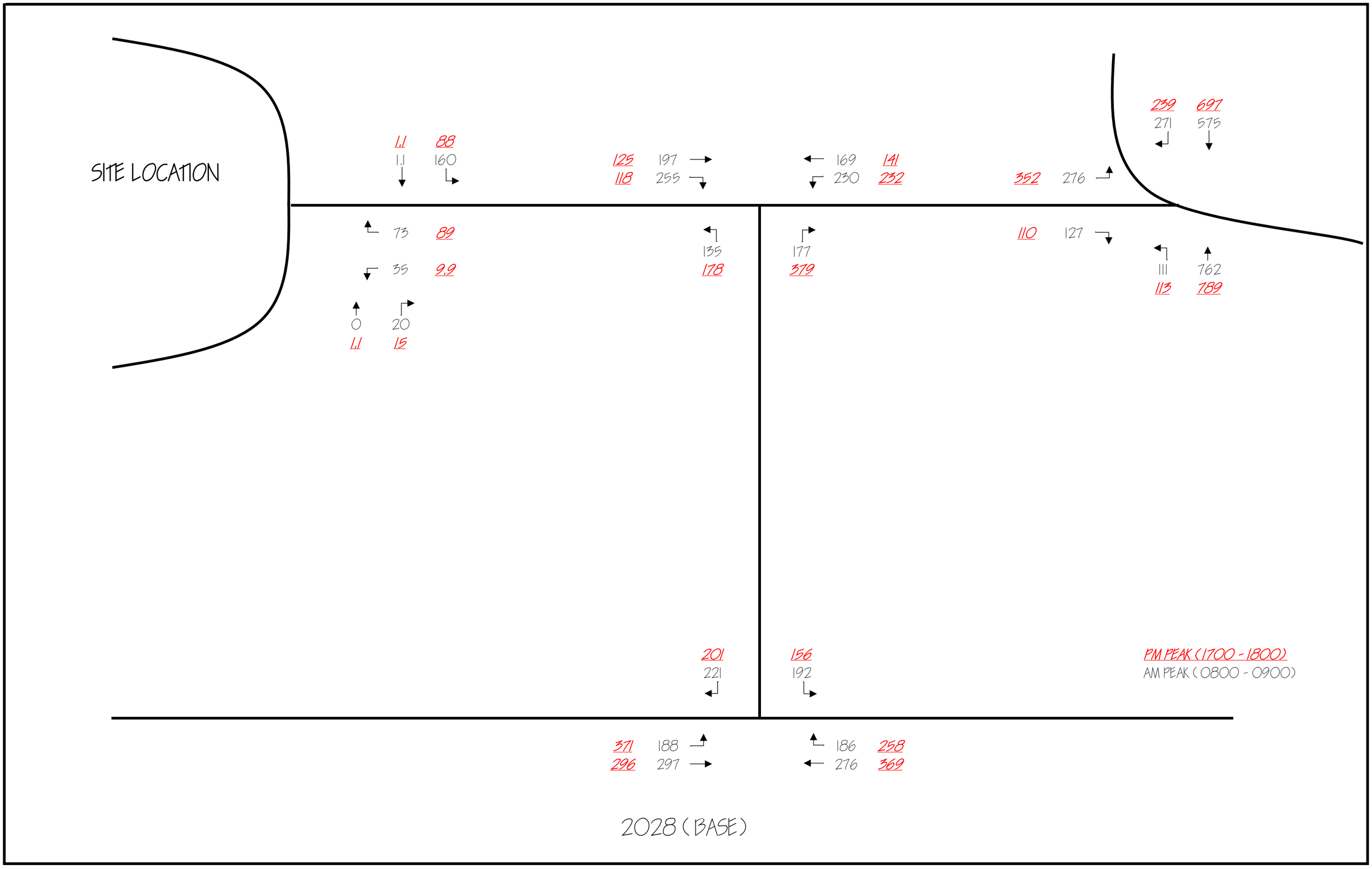
2023 (BASE)



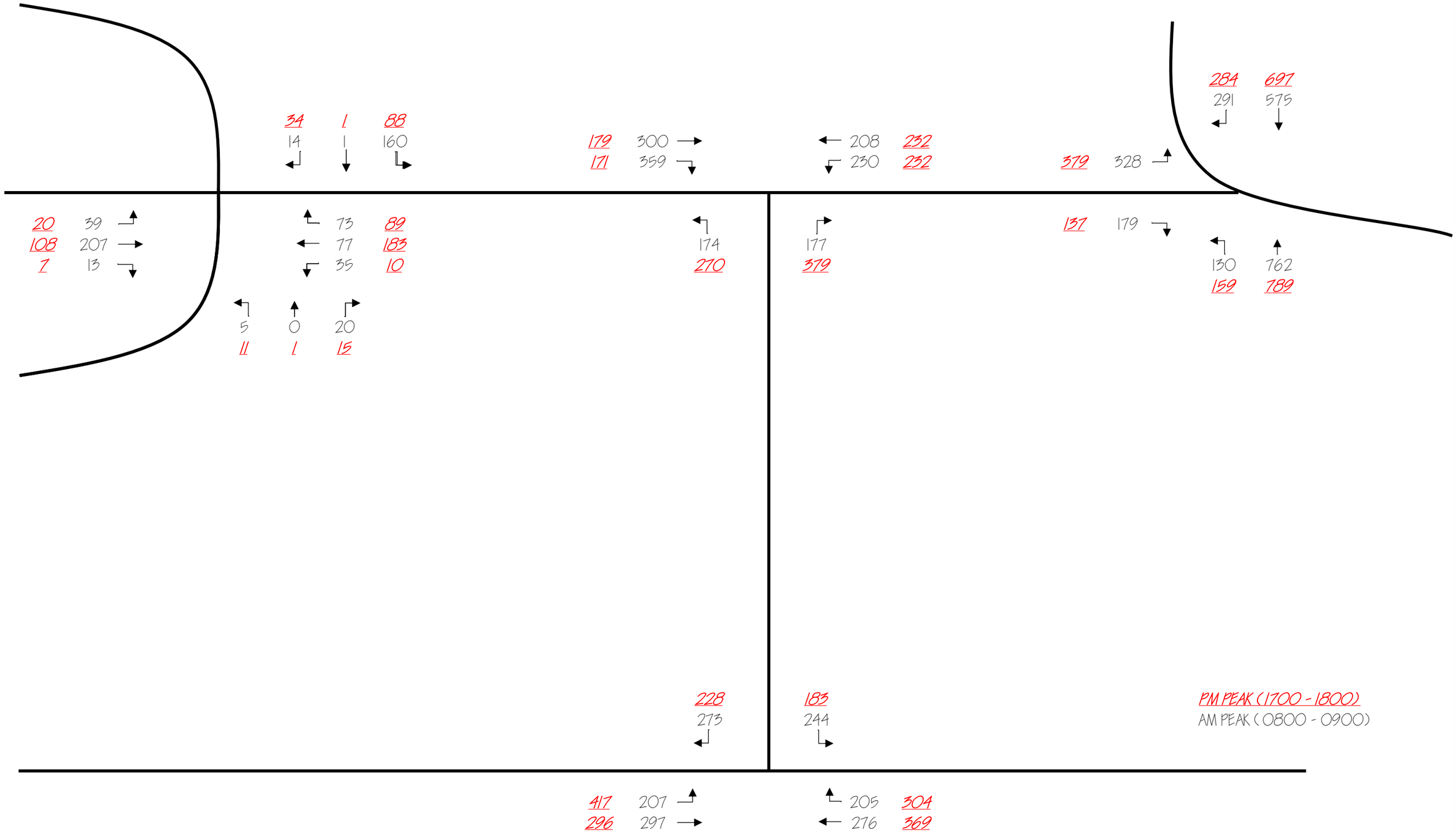
2023 (BASE + SITE GENERATED)



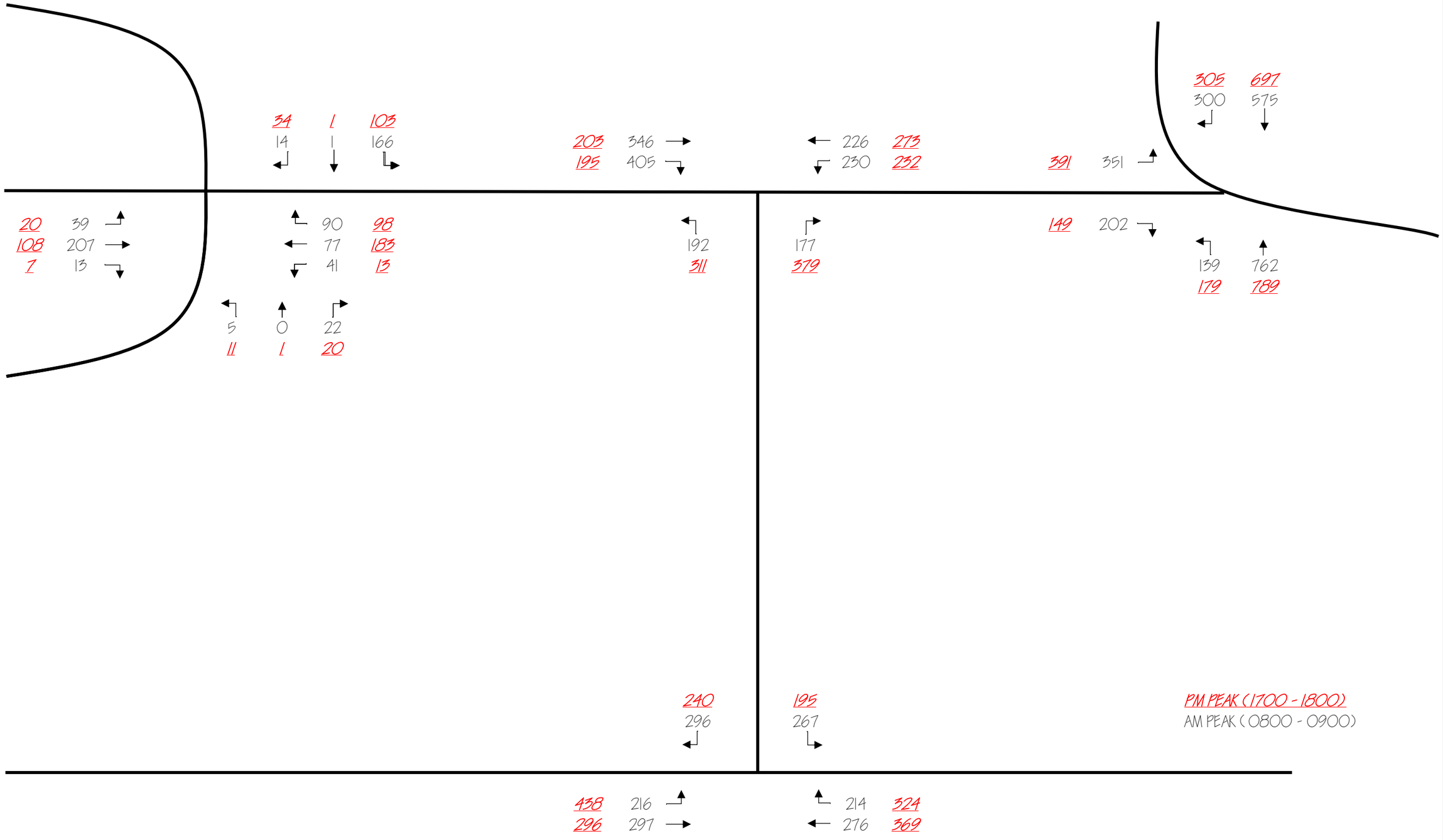
2023 (BASE + SITE GENERATED + COMMITTED DEVELOPMENT PHASE 1)


SITE LOCATION
1.1
1.1
88
160
125
118
197
255
169
230
141
232
352
276
239
271
697
575
73
35
89
99
0
1.1
20
15
135
178
177
379
110
127
111
113
762
789
201
221
156
192
PM PEAK (1700 - 1800)
AM PEAK (0800 - 0900)
371
296
188
297
186
276
258
369

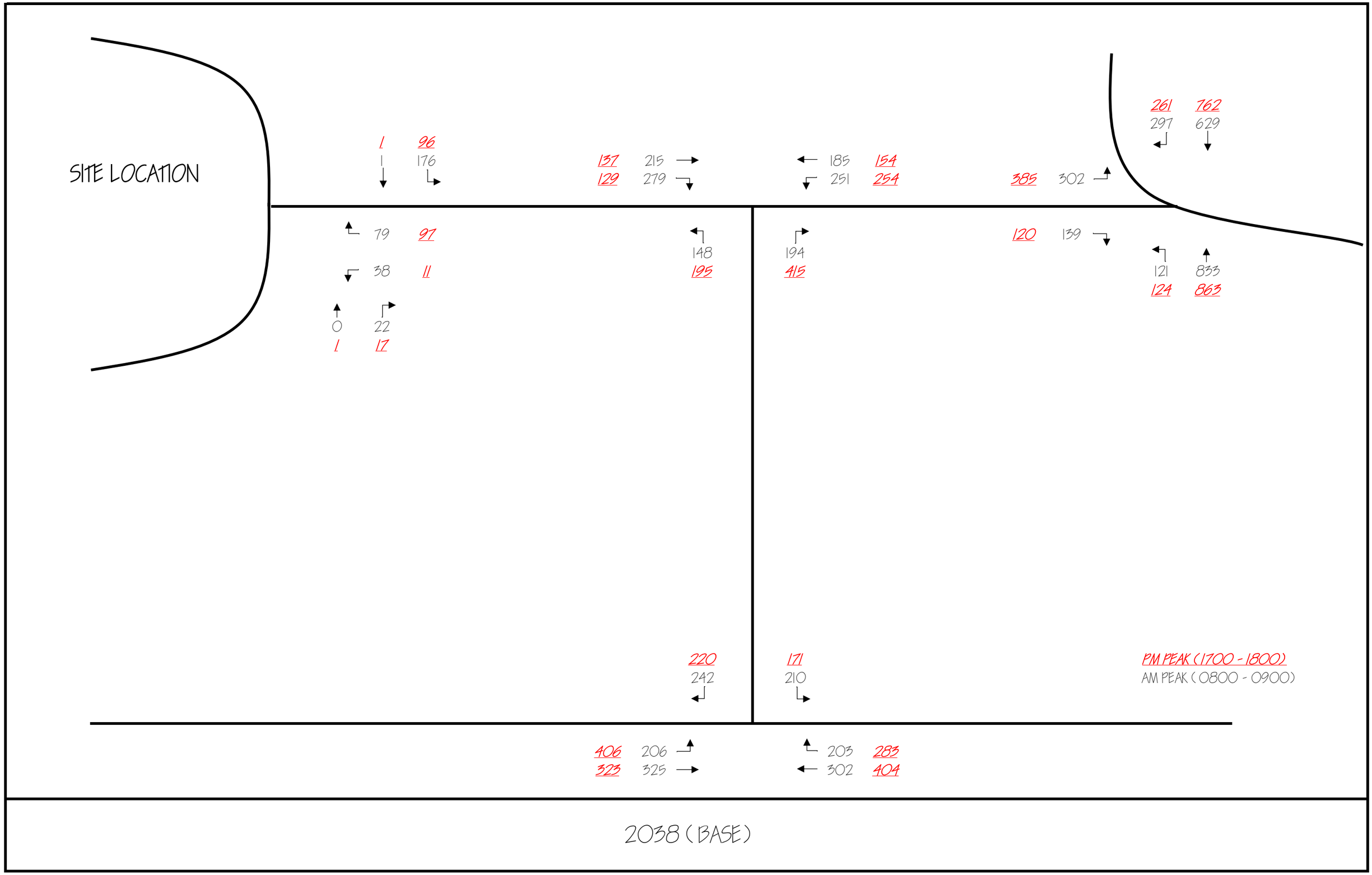
2028 (BASE)

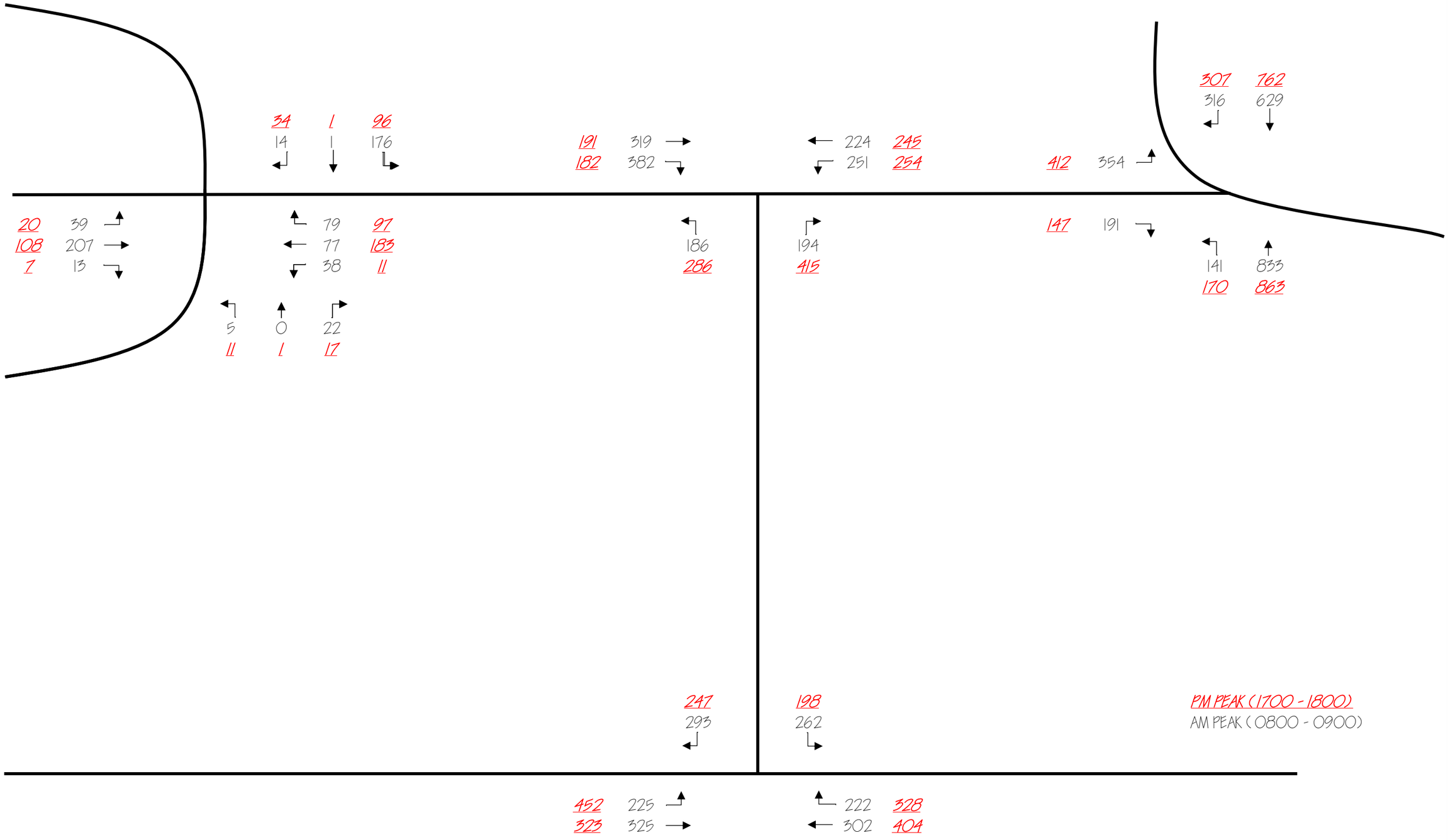


2028 (BASE + SITE GENERATED)

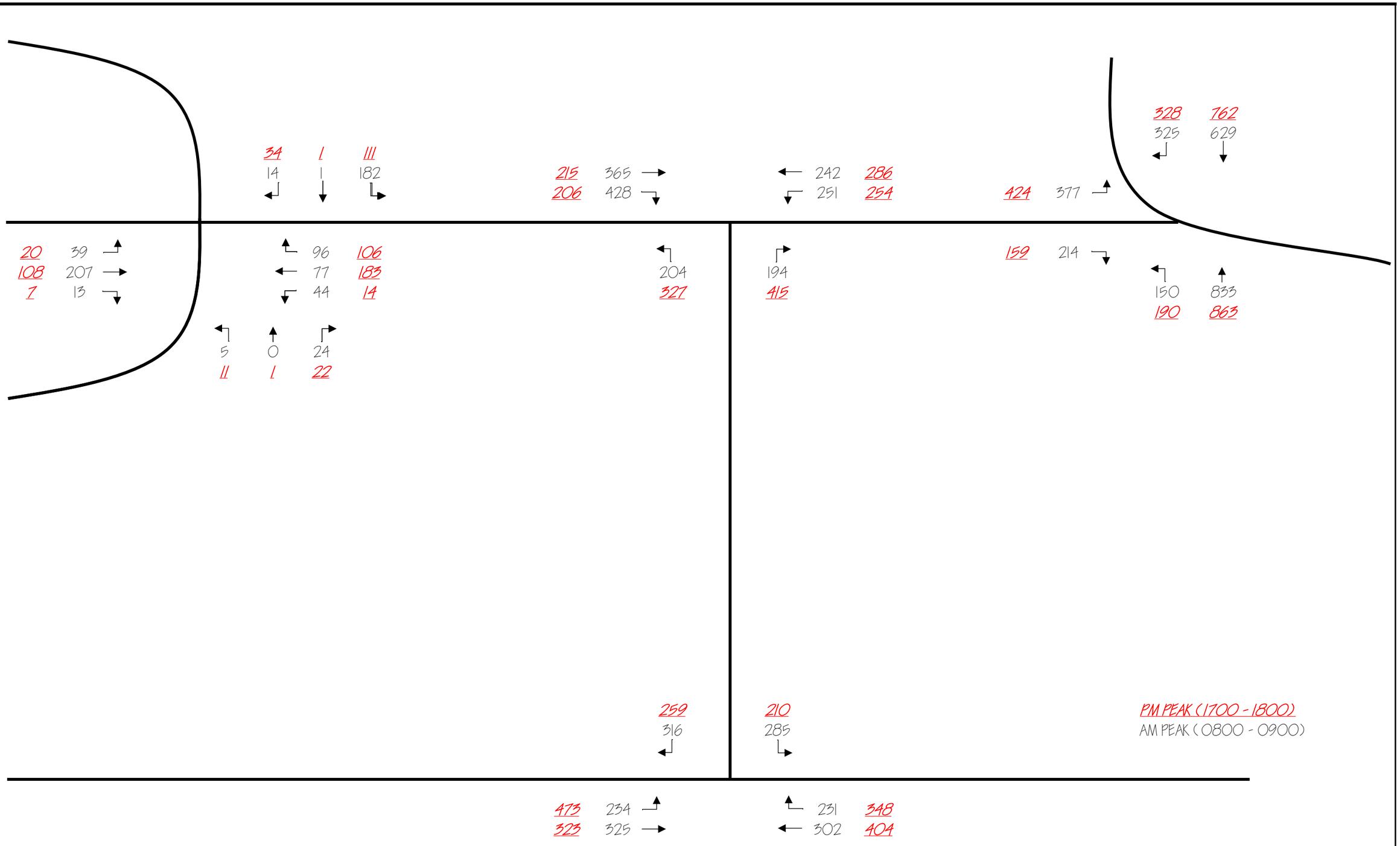


2028 (BASE + SITE GENERATED + COMMITED DEVELOPMENT PHASES 1 AND 2)


SITE LOCATION
1 96
1 176
137 215
129 279
185 154
251 254
385 302
261 762
297 629
79 97
38 11
0 22
1 17
148
195
194
415
120 139
121 833
124 863
220
242
171
210
PM PEAK (1700 - 1800)
AM PEAK (0800 - 0900)
406 206
323 325
203 283
302 404
2038 (BASE)



2038 (BASE + SITE GENERATED)



2038 (BASE + SITE GENERATED + COMMITTED DEVELOPMENT PHASES 1 AND 2)

Appendix D

Junction Modelling

TRANSYT 15

Version: 15.5.0.6767
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+44 (0)1344 770558 software@trl.co.uk www.trlsoftware.co.uk

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Filename: Rathmullan Road - Local Road AM.t15
Path: M:\Projects\18\18-014 - Rathmullan Drogheda SHD Planning Application\Design\Civil\Traffic\Junction Modelling\Junction 1 - 21-11-2018 - Rathmullan Road-Local Road\Proposed Signalised Junction
Report generation date: 10/05/2019 10:42:47

»Network Diagrams
«A1 - 2023 (BASE + DEV) - AM : D1 - 2023 (BASE + DEV) - AM* :
»Summary
»Network Options
»Traffic Nodes
»Arms and Traffic Streams
»Pedestrian Crossings
»Local OD Matrix - Local Matrix: 1
»Signal Timings
»Results - Link
»Results - Traffic Stream
»Data Entry - Stage Start and End
»Data Entry - Phase
»Data Entry - Traffic Stream
»Data entry - Link
»Results - Pedestrian
»Traffic Stream Results
»Pedestrian Crossing Results
»Network Results
»Point to Point Journey Time
»Final Prediction Table

File summary

File description

File title	(untitled)
Location	
Site number	
UTCRegion	
Driving side	Left
Date	06/12/2011
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	DOMAIN\f.silva
Description	

Generated on 10/05/2019 10:43:41 using TRANSYT 15 (15.5.0.6767)

Model and Results

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

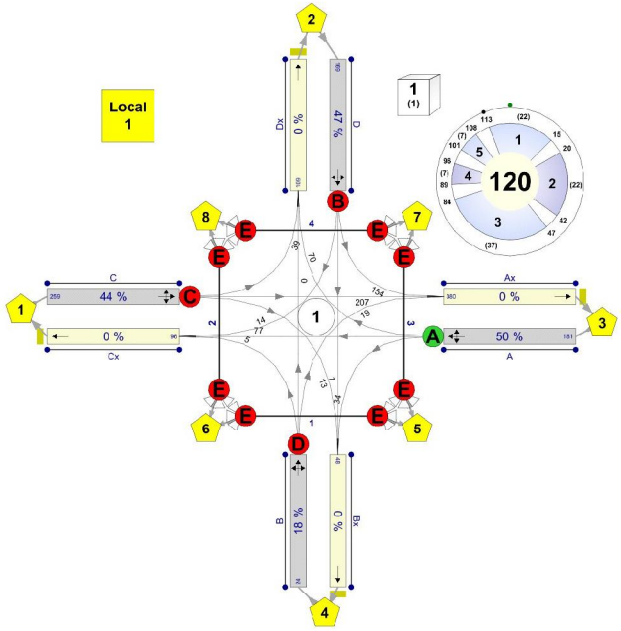
Units

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

Sorting

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

Network Diagrams



(untitled)
Diagram produced using TRANSYT 15.5.0.6767

A1 - 2023 (BASE + DEV) - AM
D1 - 2023 (BASE + 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)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
1	10/05/2019 10:42:14	10/05/2019 10:42:15	08:00	120	197.10	13.40	50.28	A/1	0	0	A/1	Dx/1	A/

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2023 (BASE + DEV) - AM		D1	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2023 (BASE + DEV) - AM				08:00	

Network Options

Network timings

Network cycle time (s)	Restrict to SCOOT cycle times	Time segment length (min)	Number of time segments	Modelled time period (min)
120		60	1	60

Signals options

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

Advanced

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

Traffic options

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

Advanced

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

TRL THE FUTURE OF TRANSPORT
Generated on 10/05/2019 10:43:41 using TRANSYT 15 (15.5.0.6767)

Normal Traffic parameters

Dispersion type	Dispersion coefficient
Default	35

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Bus	1.00	70	15	0.47	30	85

Tram parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Tram	1.00	0	0	0.47	100	100

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order
Hill Climb (Fast)	15, 40, -1, 15, 40, 1, -1, 1	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05		✓	1

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
1	(untitled)	

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
A	(untitled)		1
B	(untitled)		1
C	(untitled)		1
D	(untitled)		1
Ax	(untitled)		
Bx	(untitled)		
Cx	(untitled)		
Dx	(untitled)		

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
A	1	(untitled)		✓	50.00	✓	Sum of lanes	1800	✓		Normal	
B	1	(untitled)		✓	50.00	✓	Sum of lanes	1800	✓		Normal	
C	1	(untitled)		✓	50.00	✓	Sum of lanes	1800	✓		Normal	
D	1	(untitled)		✓	50.00	✓	Sum of lanes	1800	✓		Normal	
Ax	1	(untitled)		✓	137.40						Normal	
Bx	1	(untitled)		✓	140.18						Normal	
Cx	1	(untitled)		✓	140.00						Normal	
Dx	1	(untitled)		✓	137.24						Normal	

Lanes

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

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
(ALL)	1	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
(ALL)	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	120

Normal - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	1	100	100

Flows

Arm	Traffic Stream	Total Flow (Veh/hr)	Normal Flow (Veh/hr)
A	1	181	181
B	1	24	24
C	1	259	259
D	1	169	169
Ax	1	380	380
Bx	1	48	48
Cx	1	96	96
Dx	1	109	109

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled
A	1	1	A	
B	1	1	D	
C	1	1	C	
D	1	1	B	

Generated on 10/05/2019 10:43:41 using TRANSYT 15 (15.5.0.6767)

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
(ALL)	1	6.00	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	1	1	C/1	Ax/1	16.49	30.00	✓	Straight	Straight Movement
Bx	1	1	A/1	Bx/1	16.82	30.00	✓	Nearside	40.00
Cx	1	1	A/1	Cx/1	16.80	30.00	✓	Straight	Straight Movement
Dx	1	1	C/1	Dx/1	16.47	30.00	✓	Nearside	40.00
Ax	1	2	B/1	Ax/1	16.49	30.00	✓	Offside	55.00
Bx	1	2	D/1	Bx/1	16.82	30.00	✓	Straight	Straight Movement
Cx	1	2	B/1	Cx/1	16.80	30.00	✓	Nearside	45.00
Dx	1	2	A/1	Dx/1	16.47	30.00	✓	Offside	55.00
Ax	1	3	D/1	Ax/1	16.49	30.00	✓	Nearside	40.00
Bx	1	3	C/1	Bx/1	16.82	30.00	✓	Offside	60.00
Cx	1	3	D/1	Cx/1	16.80	30.00	✓	Offside	55.00
Dx	1	3	B/1	Dx/1	16.47	30.00	✓	Straight	Straight Movement

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
1	(untitled)		1		Farside	7.00	4.67	5.40
2	(untitled)		1		Farside	8.00	5.33	5.40
3	(untitled)		1		Farside	8.00	5.33	5.40
4	(untitled)		1		Farside	7.00	4.67	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	E	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(ALL)	11000

Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	100	100		0.00		

Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1	(untitled)	✓	✓	Path Equalisation	✓		✓			✓	1.25		

Normal Input Flows (Veh/hr)

		To							
		1	2	3	4	5	6	7	8
From	1	0	39	207	13	0	0	0	0
	2	14	0	154	1	0	0	0	0
	3	77	70	0	34	0	0	0	0
	4	5	0	19	0	0	0	0	0
	5	0	0	0	0	0	0	0	0
	6	0	0	0	0	0	0	0	0
	7	0	0	0	0	0	0	0	0
	8	0	0	0	0	0	0	0	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows (Veh/hr)

		To							
		1	2	3	4	5	6	7	8
From	1	0	0	0	0	0	0	0	0
	2	0	0	0	0	0	0	0	0
	3	0	0	0	0	0	0	0	0
	4	0	0	0	0	0	0	0	0
	5	0	0	0	0	0	50	50	0
	6	0	0	0	0	50	0	0	50
	7	0	0	0	0	50	0	0	50
	8	0	0	0	0	0	50	50	0

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
1	1	(untitled)	C/1	Cx/1	#0000FF
	2	(untitled)	D/1	Dx/1	#FF0000
	3	(untitled)	A/1	Ax/1	#00FF00
	4	(untitled)	B/1	Bx/1	#FFFF00
	5	(untitled)	3:2E, 1:1E	3:2X, 1:1X	#FF00FF
	6	(untitled)	2:1E, 1:2E	2:1X, 1:2X	#008000
	7	(untitled)	4:2E, 3:1E	4:2X, 3:1X	#FFA500
	8	(untitled)	4:1E, 2:2E	4:1X, 2:2X	#00FFFF

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (Veh/hr)
1	1		1	2	C/1, Dx/1	Normal	39
	2		1	3	C/1, Ax/1	Normal	207
	3		1	4	C/1, Bx/1	Normal	13
	5		2	3	D/1, Ax/1	Normal	154
	6		2	4	D/1, Bx/1	Normal	1
	7		2	1	D/1, Cx/1	Normal	14
	8		3	2	A/1, Dx/1	Normal	70
	9		3	4	A/1, Bx/1	Normal	34
	10		3	1	A/1, Cx/1	Normal	77
	11		4	2	B/1, Dx/1	Normal	0
	12		4	3	B/1, Ax/1	Normal	19
	13		4	1	B/1, Cx/1	Normal	5

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Pedestrian Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Pedestrian calculated flow (Ped/hr)
1	17		8	7	4:1E, 4:2X	Normal	50
	18		8	6	2:2E, 2:1X	Normal	50
	22		5	7	3:2E, 3:1X	Normal	50
	23		5	6	1:1E, 1:2X	Normal	50
	34		6	8	2:1E, 2:2X	Normal	50
	35		6	5	1:2E, 1:1X	Normal	50
	41		7	8	4:2E, 4:1X	Normal	50
	42		7	5	3:1E, 3:2X	Normal	50

Signal Timings

Network Default: 120s cycle time; 120 steps

Controller Stream 1

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)
1	(untitled)		1	NetworkDefault	120

Controller Stream 1 - Properties

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
1	Unspecified						Relative

Controller Stream 1 - Optimisation

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
1	✓	✓	Offsets And Green Splits	✓	

Phases

Controller Stream	Phase	Name	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type	Blackout Time (s)
1	A	(untitled)	7	300	2	3	Traffic	
	B	(untitled)	7	300	2	3	Traffic	
	C	(untitled)	7	300	2	3	Traffic	
	D	(untitled)	7	300	2	3	Traffic	
	E	(untitled)	5	7	0	0	Pedestrian	0

Library Stages

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)
1	1	A	1
	2	B	1
	3	C	1
	4	D	1
	5	E	1

Stage Sequences

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends
1	1	(untitled)	Single	1, 2, 3, 4, 5	15, 42, 84, 96, 108

Intergreen Matrix for Controller Stream 1

		To				
		A	B	C	D	E
From	A		5	5	5	5
	B	5		5	5	5
	C	5	5		5	5
	D	5	5	5		5
	E	5	5	5	5	

Banned Stage transitions for Controller Stream 1

		To				
		1	2	3	4	5
From	1					
	2					
	3					
	4					
	5					

Interstage Matrix for Controller Stream 1

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

Resultant Stages

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
1	1	✓	1	A	113	15	22	1	7
	2	✓	2	B	20	42	22	1	7
	3	✓	3	C	47	84	37	1	7
	4	✓	4	D	89	96	7	1	7
	5	✓	5	E	101	108	7	1	5

Resultant Phase Green Periods

Controller Stream	Phase	Green period	Is base green period	Start time (s)	End time (s)	Duration (s)
1	A	1	✓	113	15	22
	B	1	✓	20	42	22
	C	1	✓	47	84	37
	D	1	✓	89	96	7
	E	1	✓	101	108	7

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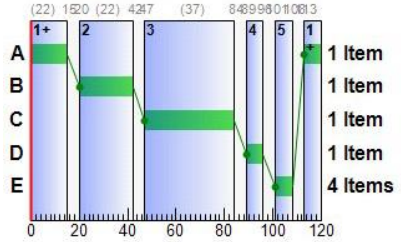
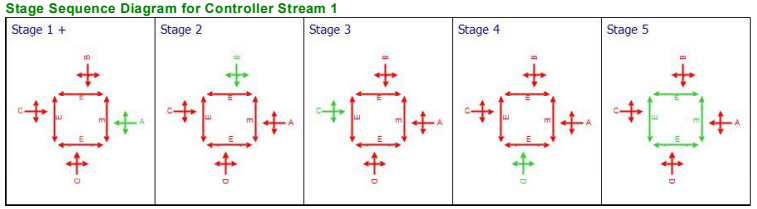
Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
A	1	1	1	A	113	15	22
B	1	1	1	D	89	96	7
C	1	1	1	C	47	84	37
D	1	1	1	B	20	42	22

Phase Timings Diagram for Controller Stream 1



Stage Sequence Diagram for Controller Stream 1



Resultant penalties

Time Segment	Controller stream	Phase min max penalty (£ per hr)	Intergreen broken penalty (£ per hr)	Stage constraint broken penalty (£ per hr)	Cost of controller stream penalties (£ per hr)
08:00-09:00	1	0.00	0.00	0.00	0.00

Results - Link

Results - Traffic Stream

Results - Traffic Stream: Vehicle summary

Time Segment	Arm	Traffic Stream	Name	Phase	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Calculated capacity (Veh/hr)	Degree of saturation (%)	Practical reserve capacity (%)	Mean Delay per Veh (s)	Mean max queue (Veh)	Utilised storage (%)	JourneyTime (s)
08:00-09:00	A	1	(untitled)	A	181	1800	22	360	50	99	47.71	5.58	64.19	53.71
	B	1	(untitled)	D	24	1800	7	135	18	463	54.98	0.77	8.81	60.98
	C	1	(untitled)	C	259	1800	37	585	44	126	34.37	6.94	79.79	40.37
	D	1	(untitled)	B	169	1800	22	360	47	113	46.77	5.14	59.06	52.77
	Ax	1	(untitled)		380	Unrestricted	120	Unrestricted	0	Unrestricted	0.00	0.00	0.00	16.49
	Bx	1	(untitled)		48	Unrestricted	120	Unrestricted	0	Unrestricted	0.00	0.00	0.00	16.82
	Cx	1	(untitled)		96	Unrestricted	120	Unrestricted	0	Unrestricted	0.00	0.00	0.00	16.80
	Dx	1	(untitled)		109	Unrestricted	120	Unrestricted	0	Unrestricted	0.00	0.00	0.00	16.47

Data Entry - Stage Start and End

Resultant Stage

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
1	1	✓	1	A	113	15	22	1	7
	2	✓	2	B	20	42	22	1	7
	3	✓	3	C	47	84	37	1	7
	4	✓	4	D	89	96	7	1	7
	5	✓	5	E	101	108	7	1	5

Data Entry - Phase

Phase

Controller Stream	Phase	Phase	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type
1	A	A	7	300	2	3	Traffic
	B	B	7	300	2	3	Traffic
	C	C	7	300	2	3	Traffic
	D	D	7	300	2	3	Traffic
	E	E	5	7	0	0	Pedestrian

Data Entry - Traffic Stream

Traffic Stream

Arm	Traffic Stream	Auto length	Length (m)	Traffic model	Max queue storage (PCU)	Traffic type	Has Saturation Flow	Is signal controlled	Is give way	Saturation flow source	Saturation flow (PCU/hr)	Delay weighting multiplier (%)	Stop weighting multiplier (%)
A	1	✓	50.00	NetworkDefault	0.00	Normal	✓	✓		Sum of lanes	1800	100	100
B	1	✓	50.00	NetworkDefault	0.00	Normal	✓	✓		Sum of lanes	1800	100	100
C	1	✓	50.00	NetworkDefault	0.00	Normal	✓	✓		Sum of lanes	1800	100	100
D	1	✓	50.00	NetworkDefault	0.00	Normal	✓	✓		Sum of lanes	1800	100	100
Ax	1	✓	137.40	NetworkDefault	0.00	Normal						100	100
Bx	1	✓	140.18	NetworkDefault	0.00	Normal						100	100
Cx	1	✓	140.00	NetworkDefault	0.00	Normal						100	100
Dx	1	✓	137.24	NetworkDefault	0.00	Normal						100	100

Data entry - Link

Results - Pedestrian

Pedestrian Crossings: Pedestrian summary

Time Segment	Pedestrian crossing	Side	Calculated Flow Entering (Ped/hr)	Degree of saturation (%)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)
08:00-09:00	(ALL)	(ALL)	50	8	7	53.68	1.57

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Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (Veh)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	A	1	50	99	181	1800	22	47.71	5.58	64.19	34.07	2.08	36.14
	B	1	18	463	24	1800	7	54.98	0.77	8.81	5.20	0.29	5.49
	C	1	44	126	259	1800	37	34.37	6.94	79.79	35.12	2.57	37.69
	D	1	47	113	169	1800	22	46.77	5.14	59.06	31.18	1.91	33.09
	Ax	1	0	Unrestricted	380	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	Bx	1	0	Unrestricted	48	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	Cx	1	0	Unrestricted	96	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	Dx	1	0	Unrestricted	109	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Calculated sat flow (Veh/hr)	Calculated capacity (Veh/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))
08:00-09:00	A	1	181	181	0		1800	360	50		99	0.00	22
	B	1	24	24	0		1800	135	18		463	0.00	7
	C	1	259	259	0		1800	585	44		126	0.00	37
	D	1	169	169	0		1800	360	47		113	0.00	22
	Ax	1	380	380	0		Unrestricted	Unrestricted	0		Unrestricted	0.90	120
	Bx	1	48	48	0		Unrestricted	Unrestricted	0		Unrestricted	1.03	120
	Cx	1	96	96	0		Unrestricted	Unrestricted	0		Unrestricted	1.15	120
	Dx	1	109	109	0		Unrestricted	Unrestricted	0		Unrestricted	1.02	120

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-hr/hr)	Random plus oversat delay (Veh-hr/hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	A	1	6.00	47.71	2.15	0.25	34.07	91.46	158.06	7.48	2.08
	B	1	6.00	54.98	0.35	0.02	5.20	94.73	22.16	0.57	0.29
	C	1	6.00	34.37	2.30	0.18	35.12	79.25	200.02	5.23	2.57
	D	1	6.00	46.77	1.99	0.21	31.18	90.14	146.21	6.13	1.91
	Ax	1	16.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Bx	1	16.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Cx	1	16.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Dx	1	16.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (Veh)	Mean max queue (Veh)	Max queue storage (Veh)	Utilised storage (%)	Average storage excess queue (Veh)	Average limit excess queue (Veh)	Excess queue penalty (£ per hr)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))	Estimated blocking
08:00-09:00	A	1	0.00	5.58	8.70	64.19	0.00	0.00	0.00	0.00	0.00	0.00	
	B	1	0.00	0.77	8.70	8.81	0.00	0.00	0.00	7.00	0.00	7.00	
	C	1	0.00	6.94	8.70	79.79	0.00	0.00	0.00	0.00	0.00	0.00	
	D	1	0.00	5.14	8.70	59.06	0.00	0.00	0.00	0.00	0.00	0.00	
	Ax	1	0.00	0.00	23.90	0.00	0.00	0.00	0.00	39.00	0.00	39.00	
	Bx	1	0.00	0.00	24.38	0.00	0.00	0.00	0.00	89.00	0.00	89.00	
	Cx	1	0.00	0.00	24.35	0.00	0.00	0.00	0.00	74.00	0.00	74.00	
	Dx	1	0.00	0.00	23.87	0.00	0.00	0.00	0.00	69.00	0.00	69.00	

Traffic Stream Results: Journey times

Time Segment	Arm	Traffic Stream	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	A	1	9.05	2.70	3.35	53.71
	B	1	1.20	0.41	2.95	60.98
	C	1	12.95	2.90	4.46	40.37
	D	1	8.45	2.48	3.41	52.77
	Ax	1	52.21	1.74	30.00	16.49
	Bx	1	6.73	0.22	30.00	16.82
	Cx	1	13.44	0.45	30.00	16.80
	Dx	1	14.96	0.50	30.00	16.47

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	Mean Max Queue EoTS (Veh)	Max End of Green Queue EoTS (Veh)	Max End of Red Queue EoTS (Veh)	PCU Factor	Cost of traffic penalties (£ per hr)	Performance Index (£ per hr)
08:00-09:00	A	1	0.00	0.00	✓	0.00	5.58	0.25	5.08	1.00	0.00	36.14
	B	1	0.00	0.00	✓	0.00	0.77	0.02	0.76	1.00	0.00	5.49
	C	1	0.00	0.00	✓	0.00	6.94	0.18	6.00	1.00	0.00	37.69
	D	1	0.00	0.00	✓	0.00	5.14	0.21	4.71	1.00	0.00	33.09
	Ax	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00
	Bx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00
	Cx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00
	Dx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	8	50	11000	7	53.68	1.57	10.59	10.59

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))
08:00-09:00	(ALL)	(ALL)	50	50	0		11000	642	8		1183	0.00	7

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Uniform delay (Ped-hr/hr)	Random plus oversat delay (Ped-hr/hr)	Weighted cost of delay (£ per hr)
08:00-09:00	1	1	5.67	53.68	0.75	0.00	10.59
		2	5.67	53.68	0.75	0.00	10.59
	2	1	6.33	53.68	0.75	0.00	10.59
		2	6.33	53.68	0.75	0.00	10.59
	3	1	6.33	53.68	0.75	0.00	10.59
		2	6.33	53.68	0.75	0.00	10.59
	4	1	5.67	53.68	0.75	0.00	10.59
		2	5.67	53.68	0.75	0.00	10.59

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Average storage excess queue (Ped)	Average limit excess queue (Ped)	Excess queue penalty (£ per hr)
08:00-09:00	(ALL)	(ALL)	1.57	10.00	15.69	0.00	0.00	0.00

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Pedestrian Crossings: Journey times

Time Segment	Crossing	Side	Distance travelled (Ped-km/hr)	Time spent (Ped-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	1	1	0.40	0.82	0.49	59.34
		2	0.40	0.82	0.49	59.34
	2	1	0.45	0.83	0.54	60.01
		2	0.45	0.83	0.54	60.01
	3	1	0.45	0.83	0.54	60.01
		2	0.45	0.83	0.54	60.01
	4	1	0.40	0.82	0.49	59.34
		2	0.40	0.82	0.49	59.34

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	0.00	1.57	1.00	0.00	10.59

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
1	10/05/2019 10:42:14	10/05/2019 10:42:15	08:00	120	197.10	13.40	50.28	A/1	0	0	A/1	Dx/1	A/

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	50	0	1266	568	21.14	105.57	6.84	112.41

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	8	400	56	53.68	84.69	84.69

Network Results: Flows and signals

Time Segment	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))
08:00-09:00	1666	1666	0		50		99	624

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-hr/hr)	Random plus oversat delay (Veh-hr/hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	10.01	28.95	12.75	0.65	190.25	32.77	526.45	19.42	6.84

Network Results: Queues and blocking

Time Segment	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))
08:00-09:00	79.79	0.00	278.00	0.00	278.00

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
08:00-09:00	122.39	18.03	6.79

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	PCU Factor	Cost of traffic penalties (£ per hr)	Controller stream penalties (£ per hr)	Performance Index (£ per hr)
08:00-09:00	0.00	0.00	✓	0.00	1.00	0.00	0.00	197.10

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

		To							
		1	2	3	4	5	6	7	8
From	1	0.0	56.8	56.9	57.2	0.0	0.0	0.0	0.0
	2	69.6	0.0	69.3	69.6	0.0	0.0	0.0	0.0
	3	70.5	70.2	0.0	70.5	0.0	0.0	0.0	0.0
	4	77.8	0.0	77.5	0.0	0.0	0.0	0.0	0.0
	5	0.0	0.0	0.0	0.0	0.0	59.3	60.0	0.0
	6	0.0	0.0	0.0	0.0	59.3	0.0	0.0	60.0
	7	0.0	0.0	0.0	0.0	60.0	0.0	0.0	59.3
	8	0.0	0.0	0.0	0.0	0.0	60.0	59.3	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (Veh/hr)	Pedestrian calculated flow (Ped/hr)	Normal journey time (s)	Pedestrian journey time (s)	Calculated Total Flow (Veh/hr)	Avg journey time (s)
1	1	2	39		56.84		39	56.84
2	1	3	207		56.86		207	56.86
3	1	4	13		57.20		13	57.20
5	2	3	154		69.26		154	69.26
6	2	4	1		69.60		1	69.60
7	2	1	14		69.57		14	69.57
8	3	2	70		70.18		70	70.18
9	3	4	34		70.54		34	70.54
10	3	1	77		70.51		77	70.51
11	4	2	0		0.00		0	0.00
12	4	3	19		77.47		19	77.47
13	4	1	5		77.78		5	77.78
17	8	7		50		59.34	50	59.34
18	8	6		50		60.01	50	60.01
22	5	7		50		60.01	50	60.01
23	5	6		50		59.34	50	59.34
34	6	8		50		60.01	50	60.01
35	6	5		50		59.34	50	59.34
41	7	8		50		59.34	50	59.34
42	7	5		50		60.01	50	60.01

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Final Prediction Table

Traffic Stream Results

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QUEUES
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (Veh)
A	1	(untitled)	1	1	A	181	1800	22	0.00	50	99	53.71	47.71	91.46	5.58
B	1	(untitled)	1	1	D	24	1800	7	7.00	18	463	60.98	54.98	94.73	0.77
C	1	(untitled)	1	1	C	259	1800	37	0.00	44	126	40.37	34.37	79.25	6.94
D	1	(untitled)	1	1	B	169	1800	22	0.00	47	113	52.77	46.77	90.14	5.14
Ax	1	(untitled)				380	Unrestricted	120	39.00	0	Unrestricted	16.49	0.00	0.00	0.00
Bx	1	(untitled)				48	Unrestricted	120	89.00	0	Unrestricted	16.82	0.00	0.00	0.00
Cx	1	(untitled)				96	Unrestricted	120	74.00	0	Unrestricted	16.80	0.00	0.00	0.00
Dx	1	(untitled)				109	Unrestricted	120	69.00	0	Unrestricted	16.47	0.00	0.00	0.00

Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE			PER PED		QUEUES	WEIGHTS	PEN
Pedestrian	Side	Name	Traffic node	Controller stream	Phase	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Ped (s)	Mean max queue (Ped)	Delay weighting (%)	Co tra pen (£ p
1	1	(untitled)	1	1	E	50	11000	7	8	1183	59.34	53.68	1.57	100	0
	2	(untitled)	1	1	E	50	11000	7	8	1183	59.34	53.68	1.57	100	0
2	1	(untitled)	1	1	E	50	11000	7	8	1183	60.01	53.68	1.57	100	0
	2	(untitled)	1	1	E	50	11000	7	8	1183	60.01	53.68	1.57	100	0
3	1	(untitled)	1	1	E	50	11000	7	8	1183	60.01	53.68	1.57	100	0
	2	(untitled)	1	1	E	50	11000	7	8	1183	60.01	53.68	1.57	100	0
4	1	(untitled)	1	1	E	50	11000	7	8	1183	59.34	53.68	1.57	100	0
	2	(untitled)	1	1	E	50	11000	7	8	1183	59.34	53.68	1.57	100	0

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (Veh-hr/hr)	Random plus oversat delay (Veh-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	118.99	11.40	10.44	6.78	0.65	105.57	6.84	0.00	112.41
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	3.40	6.63	0.51	5.96	0.00	84.69	0.00	0.00	84.69
TOTAL	122.39	18.03	6.79	12.75	0.65	190.25	6.84	0.00	197.10

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

TRANSYT 15

Version: 15.5.0.6767
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Filename: Rathmullan Road - Local Road PM.t15
Path: M:\Projects\18\18-014 - Rathmullan Drogheda SHD Planning Application\Design\Civil\Traffic\Junction Modelling\Junction 1 - 21-11-2018 - Rathmullan Road-Local Road\Proposed Signalised Junction
Report generation date: 10/05/2019 10:50:05

»Network Diagrams
«A1 - 2023 (BASE + DEV) - PM : D1 - 2023 (BASE + DEV) - PM* :
»Summary
»Network Options
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»Arms and Traffic Streams
»Pedestrian Crossings
»Local OD Matrix - Local Matrix: 1
»Signal Timings
»Results - Link
»Results - Traffic Stream
»Data Entry - Stage Start and End
»Data Entry - Phase
»Data Entry - Traffic Stream
»Data entry - Link
»Results - Pedestrian
»Traffic Stream Results
»Pedestrian Crossing Results
»Network Results
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»Final Prediction Table

File summary

File description

File title	(untitled)
Location	
Site number	
UTCRegion	
Driving side	Left
Date	06/12/2011
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	DOMAIN\f.silva
Description	

Model and Results

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

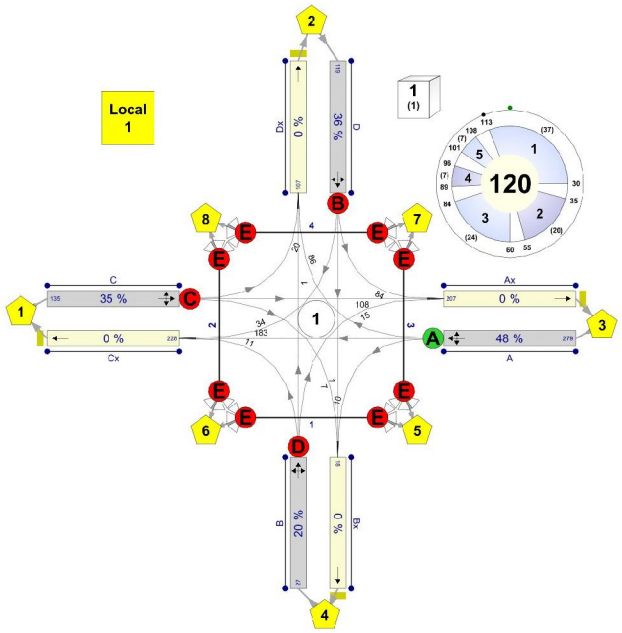
Units

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

Sorting

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

Network Diagrams



(untitled)
Diagram produced using TRANSYT 15.5.0.6767

A1 - 2023 (BASE + DEV) - PM
D1 - 2023 (BASE + 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)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
1	10/05/2019 10:49:55	10/05/2019 10:49:57	17:00	120	179.22	12.21	47.69	A/1	0	0	A/1	Dx/1	A/

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2023 (BASE + DEV) - PM		D1	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2023 (BASE + DEV) - PM				17:00	

Network Options

Network timings

Network cycle time (s)	Restrict to SCOOT cycle times	Time segment length (min)	Number of time segments	Modelled time period (min)
120		60	1	60

Signals options

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

Advanced

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

Traffic options

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

Advanced

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

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Normal Traffic parameters

Dispersion type	Dispersion coefficient
Default	35

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Bus	1.00	70	15	0.47	30	85

Tram parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Tram	1.00	0	0	0.47	100	100

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order
Hill Climb (Fast)	15, 40, -1, 15, 40, 1, -1, 1	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05		✓	1

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
1	(untitled)	

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
A	(untitled)		1
B	(untitled)		1
C	(untitled)		1
D	(untitled)		1
Ax	(untitled)		
Bx	(untitled)		
Cx	(untitled)		
Dx	(untitled)		

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
A	1	(untitled)		✓	50.00	✓	Sum of lanes	1800	✓		Normal	
B	1	(untitled)		✓	50.00	✓	Sum of lanes	1800	✓		Normal	
C	1	(untitled)		✓	50.00	✓	Sum of lanes	1800	✓		Normal	
D	1	(untitled)		✓	50.00	✓	Sum of lanes	1800	✓		Normal	
Ax	1	(untitled)		✓	137.40						Normal	
Bx	1	(untitled)		✓	140.18						Normal	
Cx	1	(untitled)		✓	140.00						Normal	
Dx	1	(untitled)		✓	137.24						Normal	

Lanes

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

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
(ALL)	1	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
(ALL)	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	120

Normal - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	1	100	100

Flows

Arm	Traffic Stream	Total Flow (Veh/hr)	Normal Flow (Veh/hr)
A	1	279	279
B	1	27	27
C	1	135	135
D	1	119	119
Ax	1	207	207
Bx	1	18	18
Cx	1	228	228
Dx	1	107	107

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled
A	1	1	A	
B	1	1	D	
C	1	1	C	
D	1	1	B	

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Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
(ALL)	1	6.00	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	1	1	C/1	Ax/1	16.49	30.00	✓	Straight	Straight Movement
Bx	1	1	A/1	Bx/1	16.82	30.00	✓	Nearside	40.00
Cx	1	1	A/1	Cx/1	16.80	30.00	✓	Straight	Straight Movement
Dx	1	1	C/1	Dx/1	16.47	30.00	✓	Nearside	40.00
Ax	1	2	B/1	Ax/1	16.49	30.00	✓	Offside	55.00
Bx	1	2	D/1	Bx/1	16.82	30.00	✓	Straight	Straight Movement
Cx	1	2	B/1	Cx/1	16.80	30.00	✓	Nearside	45.00
Dx	1	2	A/1	Dx/1	16.47	30.00	✓	Offside	55.00
Ax	1	3	D/1	Ax/1	16.49	30.00	✓	Nearside	40.00
Bx	1	3	C/1	Bx/1	16.82	30.00	✓	Offside	60.00
Cx	1	3	D/1	Cx/1	16.80	30.00	✓	Offside	55.00
Dx	1	3	B/1	Dx/1	16.47	30.00	✓	Straight	Straight Movement

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
1	(untitled)		1		Farside	7.00	4.67	5.40
2	(untitled)		1		Farside	8.00	5.33	5.40
3	(untitled)		1		Farside	8.00	5.33	5.40
4	(untitled)		1		Farside	7.00	4.67	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	E	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(ALL)	11000

Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	100	100		0.00		

Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1	(untitled)	✓	✓	Path Equalisation	✓		✓			✓	1.25		

Normal Input Flows (Veh/hr)

		To							
		1	2	3	4	5	6	7	8
From	1	0	20	108	7	0	0	0	0
	2	34	0	84	1	0	0	0	0
	3	183	86	0	10	0	0	0	0
	4	11	1	15	0	0	0	0	0
	5	0	0	0	0	0	0	0	0
	6	0	0	0	0	0	0	0	0
	7	0	0	0	0	0	0	0	0
	8	0	0	0	0	0	0	0	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows (Veh/hr)

		To							
		1	2	3	4	5	6	7	8
From	1	0	0	0	0	0	0	0	0
	2	0	0	0	0	0	0	0	0
	3	0	0	0	0	0	0	0	0
	4	0	0	0	0	0	0	0	0
	5	0	0	0	0	0	50	50	0
	6	0	0	0	0	50	0	0	50
	7	0	0	0	0	50	0	0	50
	8	0	0	0	0	0	50	50	0

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
1	1	(untitled)	C/1	Cx/1	#0000FF
	2	(untitled)	D/1	Dx/1	#FF0000
	3	(untitled)	A/1	Ax/1	#00FF00
	4	(untitled)	B/1	Bx/1	#FFFF00
	5	(untitled)	3:2E, 1:1E	3:2X, 1:1X	#FF00FF
	6	(untitled)	2:1E, 1:2E	2:1X, 1:2X	#008000
	7	(untitled)	4:2E, 3:1E	4:2X, 3:1X	#FFA500
	8	(untitled)	4:1E, 2:2E	4:1X, 2:2X	#00FFFF

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (Veh/hr)
1	1		1	2	C/1, Dx/1	Normal	20
	2		1	3	C/1, Ax/1	Normal	108
	3		1	4	C/1, Bx/1	Normal	7
	5		2	3	D/1, Ax/1	Normal	84
	6		2	4	D/1, Bx/1	Normal	1
	7		2	1	D/1, Cx/1	Normal	34
	8		3	2	A/1, Dx/1	Normal	86
	9		3	4	A/1, Bx/1	Normal	10
	10		3	1	A/1, Cx/1	Normal	183
	11		4	2	B/1, Dx/1	Normal	1
	12		4	3	B/1, Ax/1	Normal	15
	13		4	1	B/1, Cx/1	Normal	11

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Pedestrian Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Pedestrian calculated flow (Ped/hr)
1	17		8	7	4:1E, 4:2X	Normal	50
	18		8	6	2:2E, 2:1X	Normal	50
	22		5	7	3:2E, 3:1X	Normal	50
	23		5	6	1:1E, 1:2X	Normal	50
	34		6	8	2:1E, 2:2X	Normal	50
	35		6	5	1:2E, 1:1X	Normal	50
	41		7	8	4:2E, 4:1X	Normal	50
	42		7	5	3:1E, 3:2X	Normal	50

Signal Timings

Network Default: 120s cycle time; 120 steps

Controller Stream 1

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)
1	(untitled)		1	NetworkDefault	120

Controller Stream 1 - Properties

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
1	Unspecified						Relative

Controller Stream 1 - Optimisation

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
1	✓	✓	Offsets And Green Splits	✓	

Phases

Controller Stream	Phase	Name	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type	Blackout Time (s)
1	A	(untitled)	7	300	2	3	Traffic	
	B	(untitled)	7	300	2	3	Traffic	
	C	(untitled)	7	300	2	3	Traffic	
	D	(untitled)	7	300	2	3	Traffic	
	E	(untitled)	5	7	0	0	Pedestrian	0

Library Stages

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)
1	1	A	1
	2	B	1
	3	C	1
	4	D	1
	5	E	1

Stage Sequences

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends
1	1	(untitled)	Single	1, 2, 3, 4, 5	30, 55, 84, 96, 108

Intergreen Matrix for Controller Stream 1

		To				
		A	B	C	D	E
From	A		5	5	5	5
	B	5		5	5	5
	C	5	5		5	5
	D	5	5	5		5
	E	5	5	5	5	

Banned Stage transitions for Controller Stream 1

		To				
		1	2	3	4	5
From	1					
	2					
	3					
	4					
	5					

Interstage Matrix for Controller Stream 1

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

Resultant Stages

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
1	1	✓	1	A	113	30	37	1	7
	2	✓	2	B	35	55	20	1	7
	3	✓	3	C	60	84	24	1	7
	4	✓	4	D	89	96	7	1	7
	5	✓	5	E	101	108	7	1	5

Resultant Phase Green Periods

Controller Stream	Phase	Green period	Is base green period	Start time (s)	End time (s)	Duration (s)
1	A	1	✓	113	30	37
	B	1	✓	35	55	20
	C	1	✓	60	84	24
	D	1	✓	89	96	7
	E	1	✓	101	108	7

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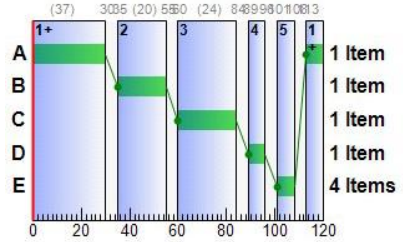
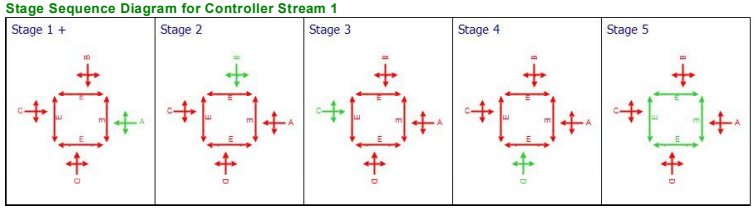
Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
A	1	1	1	A	113	30	37
B	1	1	1	D	89	96	7
C	1	1	1	C	60	84	24
D	1	1	1	B	35	55	20

Phase Timings Diagram for Controller Stream 1



Stage Sequence Diagram for Controller Stream 1



Resultant penalties

Time Segment	Controller stream	Phase min max penalty (£ per hr)	Intergreen broken penalty (£ per hr)	Stage constraint broken penalty (£ per hr)	Cost of controller stream penalties (£ per hr)
17:00-18:00	1	0.00	0.00	0.00	0.00

Results - Link

Results - Traffic Stream

Results - Traffic Stream: Vehicle summary

Time Segment	Arm	Traffic Stream	Name	Phase	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Calculated capacity (Veh/hr)	Degree of saturation (%)	Practical reserve capacity (%)	Mean Delay per Veh (s)	Mean max queue (Veh)	Utilised storage (%)	JourneyTime (s)
17:00-18:00	A	1	(untitled)	A	279	1800	37	585	48	110	35.15	7.58	87.16	41.15
	B	1	(untitled)	D	27	1800	7	135	20	400	55.50	0.86	9.95	61.50
	C	1	(untitled)	C	135	1800	24	390	35	189	42.25	3.88	44.61	48.25
	D	1	(untitled)	B	119	1800	20	330	36	177	45.92	3.54	40.70	51.92
	Ax	1	(untitled)		207	Unrestricted	120	Unrestricted	0	Unrestricted	0.00	0.00	0.00	16.49
	Bx	1	(untitled)		18	Unrestricted	120	Unrestricted	0	Unrestricted	0.00	0.00	0.00	16.82
	Cx	1	(untitled)		228	Unrestricted	120	Unrestricted	0	Unrestricted	0.00	0.00	0.00	16.80
	Dx	1	(untitled)		107	Unrestricted	120	Unrestricted	0	Unrestricted	0.00	0.00	0.00	16.47

Data Entry - Stage Start and End

Resultant Stage

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
1	1	✓	1	A	113	30	37	1	7
	2	✓	2	B	35	55	20	1	7
	3	✓	3	C	60	84	24	1	7
	4	✓	4	D	89	96	7	1	7
	5	✓	5	E	101	108	7	1	5

Data Entry - Phase

Phase

Controller Stream	Phase	Phase	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type
1	A	A	7	300	2	3	Traffic
	B	B	7	300	2	3	Traffic
	C	C	7	300	2	3	Traffic
	D	D	7	300	2	3	Traffic
	E	E	5	7	0	0	Pedestrian

Data Entry - Traffic Stream

Traffic Stream

Arm	Traffic Stream	Auto length	Length (m)	Traffic model	Max queue storage (PCU)	Traffic type	Has Saturation Flow	Is signal controlled	Is give way	Saturation flow source	Saturation flow (PCU/hr)	Delay weighting multiplier (%)	Stop weighting multiplier (%)
A	1	✓	50.00	NetworkDefault	0.00	Normal	✓	✓		Sum of lanes	1800	100	100
B	1	✓	50.00	NetworkDefault	0.00	Normal	✓	✓		Sum of lanes	1800	100	100
C	1	✓	50.00	NetworkDefault	0.00	Normal	✓	✓		Sum of lanes	1800	100	100
D	1	✓	50.00	NetworkDefault	0.00	Normal	✓	✓		Sum of lanes	1800	100	100
Ax	1	✓	137.40	NetworkDefault	0.00	Normal						100	100
Bx	1	✓	140.18	NetworkDefault	0.00	Normal						100	100
Cx	1	✓	140.00	NetworkDefault	0.00	Normal						100	100
Dx	1	✓	137.24	NetworkDefault	0.00	Normal						100	100

Data entry - Link

Results - Pedestrian

Pedestrian Crossings: Pedestrian summary

Time Segment	Pedestrian crossing	Side	Calculated Flow Entering (Ped/hr)	Degree of saturation (%)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)
17:00-18:00	(ALL)	(ALL)	50	8	7	53.68	1.57

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Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (Veh)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	A	1	48	110	279	1800	37	35.15	7.58	87.16	38.68	2.81	41.49
	B	1	20	400	27	1800	7	55.50	0.86	9.95	5.91	0.32	6.23
	C	1	35	189	135	1800	24	42.25	3.88	44.61	22.50	1.44	23.94
	D	1	36	177	119	1800	20	45.92	3.54	40.70	21.55	1.32	22.87
	Ax	1	0	Unrestricted	207	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	Bx	1	0	Unrestricted	18	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	Cx	1	0	Unrestricted	228	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	Dx	1	0	Unrestricted	107	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Calculated sat flow (Veh/hr)	Calculated capacity (Veh/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))
17:00-18:00	A	1	279	279	0		1800	585	48		110	0.00	37
	B	1	27	27	0		1800	135	20		400	0.00	7
	C	1	135	135	0		1800	390	35		189	0.00	24
	D	1	119	119	0		1800	330	36		177	0.00	20
	Ax	1	207	207	0		Unrestricted	Unrestricted	0		Unrestricted	1.05	120
	Bx	1	18	18	0		Unrestricted	Unrestricted	0		Unrestricted	0.86	120
	Cx	1	228	228	0		Unrestricted	Unrestricted	0		Unrestricted	0.97	120
	Dx	1	107	107	0		Unrestricted	Unrestricted	0		Unrestricted	0.98	120

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-hr/hr)	Random plus oversat delay (Veh-hr/hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	A	1	6.00	35.15	2.51	0.22	38.68	80.42	217.92	6.46	2.81
	B	1	6.00	55.50	0.39	0.02	5.91	95.09	24.93	0.74	0.32
	C	1	6.00	42.25	1.49	0.09	22.50	85.19	112.28	2.73	1.44
	D	1	6.00	45.92	1.42	0.10	21.55	88.22	101.96	3.02	1.32
	Ax	1	16.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Bx	1	16.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Cx	1	16.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Dx	1	16.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (Veh)	Mean max queue (Veh)	Max queue storage (Veh)	Utilised storage (%)	Average storage excess queue (Veh)	Average limit excess queue (Veh)	Excess queue penalty (£ per hr)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))	Estimated blocking
17:00-18:00	A	1	0.00	7.58	8.70	87.16	0.00	0.00	0.00	0.00	0.00	0.00	
	B	1	0.00	0.86	8.70	9.95	0.00	0.00	0.00	7.00	0.00	7.00	
	C	1	0.00	3.88	8.70	44.61	0.00	0.00	0.00	0.00	0.00	0.00	
	D	1	0.00	3.54	8.70	40.70	0.00	0.00	0.00	0.00	0.00	0.00	
	Ax	1	0.00	0.00	23.90	0.00	0.00	0.00	0.00	55.00	0.00	55.00	
	Bx	1	0.00	0.00	24.38	0.00	0.00	0.00	0.00	116.00	0.00	116.00	
	Cx	1	0.00	0.00	24.35	0.00	0.00	0.00	0.00	50.00	0.00	50.00	
	Dx	1	0.00	0.00	23.87	0.00	0.00	0.00	0.00	65.00	0.00	65.00	

Traffic Stream Results: Journey times

Time Segment	Arm	Traffic Stream	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
17:00-18:00	A	1	13.95	3.19	4.37	41.15
	B	1	1.35	0.46	2.93	61.50
	C	1	6.75	1.81	3.73	48.25
	D	1	5.95	1.72	3.47	51.92
	Ax	1	28.44	0.95	30.00	16.49
	Bx	1	2.52	0.08	30.00	16.82
	Cx	1	31.92	1.06	30.00	16.80
	Dx	1	14.68	0.49	30.00	16.47

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	Mean Max Queue EoTS (Veh)	Max End of Green Queue EoTS (Veh)	Max End of Red Queue EoTS (Veh)	PCU Factor	Cost of traffic penalties (£ per hr)	Performance Index (£ per hr)
17:00-18:00	A	1	0.00	0.00	✓	0.00	7.58	0.22	6.49	1.00	0.00	41.49
	B	1	0.00	0.00	✓	0.00	0.86	0.02	0.86	1.00	0.00	6.23
	C	1	0.00	0.00	✓	0.00	3.88	0.09	3.62	1.00	0.00	23.94
	D	1	0.00	0.00	✓	0.00	3.54	0.10	3.34	1.00	0.00	22.87
	Ax	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00
	Bx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00
	Cx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00
	Dx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
17:00-18:00	(ALL)	(ALL)	8	50	11000	7	53.68	1.57	10.59	10.59

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))
17:00-18:00	(ALL)	(ALL)	50	50	0		11000	642	8		1183	0.00	7

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Uniform delay (Ped-hr/hr)	Random plus oversat delay (Ped-hr/hr)	Weighted cost of delay (£ per hr)
17:00-18:00	1	1	5.67	53.68	0.75	0.00	10.59
		2	5.67	53.68	0.75	0.00	10.59
	2	1	6.33	53.68	0.75	0.00	10.59
		2	6.33	53.68	0.75	0.00	10.59
	3	1	6.33	53.68	0.75	0.00	10.59
		2	6.33	53.68	0.75	0.00	10.59
	4	1	5.67	53.68	0.75	0.00	10.59
		2	5.67	53.68	0.75	0.00	10.59

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Average storage excess queue (Ped)	Average limit excess queue (Ped)	Excess queue penalty (£ per hr)
17:00-18:00	(ALL)	(ALL)	1.57	10.00	15.69	0.00	0.00	0.00

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Pedestrian Crossings: Journey times

Time Segment	Crossing	Side	Distance travelled (Ped-km/hr)	Time spent (Ped-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
17:00-18:00	1	1	0.40	0.82	0.49	59.34
		2	0.40	0.82	0.49	59.34
	2	1	0.45	0.83	0.54	60.01
		2	0.45	0.83	0.54	60.01
	3	1	0.45	0.83	0.54	60.01
		2	0.45	0.83	0.54	60.01
	4	1	0.40	0.82	0.49	59.34
		2	0.40	0.82	0.49	59.34

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Performance Index (£ per hr)
17:00-18:00	(ALL)	(ALL)	0.00	0.00	1.57	1.00	0.00	10.59

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
1	10/05/2019 10:49:55	10/05/2019 10:49:57	17:00	120	179.22	12.21	47.69	A/1	0	0	A/1	Dx/1	A/

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	48	0	1120	568	20.06	88.64	5.89	94.53

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
17:00-18:00	8	400	56	53.68	84.69	84.69

Network Results: Flows and signals

Time Segment	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))
17:00-18:00	1520	1520	0		48		110	624

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-hr/hr)	Random plus oversat delay (Veh-hr/hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	9.91	28.91	11.77	0.43	173.33	30.92	457.10	12.94	5.89

Network Results: Queues and blocking

Time Segment	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))
17:00-18:00	87.16	0.00	293.00	0.00	293.00

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
17:00-18:00	108.97	16.39	6.65

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	PCU Factor	Cost of traffic penalties (£ per hr)	Controller stream penalties (£ per hr)	Performance Index (£ per hr)
17:00-18:00	0.00	0.00	✓	0.00	1.00	0.00	0.00	179.22

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

		To							
		1	2	3	4	5	6	7	8
From	1	0.0	64.7	64.7	65.1	0.0	0.0	0.0	0.0
	2	68.7	0.0	68.4	68.7	0.0	0.0	0.0	0.0
	3	57.9	57.6	0.0	58.0	0.0	0.0	0.0	0.0
	4	78.3	78.0	78.0	0.0	0.0	0.0	0.0	0.0
	5	0.0	0.0	0.0	0.0	0.0	59.3	60.0	0.0
	6	0.0	0.0	0.0	0.0	59.3	0.0	0.0	60.0
	7	0.0	0.0	0.0	0.0	60.0	0.0	0.0	59.3
	8	0.0	0.0	0.0	0.0	0.0	60.0	59.3	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (Veh/hr)	Pedestrian calculated flow (Ped/hr)	Normal journey time (s)	Pedestrian journey time (s)	Calculated Total Flow (Veh/hr)	Avg journey time (s)
1	1	2	20		64.72		20	64.72
2	1	3	108		64.74		108	64.74
3	1	4	7		65.07		7	65.07
5	2	3	84		68.40		84	68.40
6	2	4	1		68.74		1	68.74
7	2	1	34		68.72		34	68.72
8	3	2	86		57.62		86	57.62
9	3	4	10		57.97		10	57.97
10	3	1	183		57.95		183	57.95
11	4	2	1		77.97		1	77.97
12	4	3	15		77.98		15	77.98
13	4	1	11		78.30		11	78.30
17	8	7		50		59.34	50	59.34
18	8	6		50		60.01	50	60.01
22	5	7		50		60.01	50	60.01
23	5	6		50		59.34	50	59.34
34	6	8		50		60.01	50	60.01
35	6	5		50		59.34	50	59.34
41	7	8		50		59.34	50	59.34
42	7	5		50		60.01	50	60.01

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Final Prediction Table

Traffic Stream Results

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QUEUES
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (Veh)
A	1	(untitled)	1	1	A	279	1800	37	0.00	48	110	41.15	35.15	80.42	7.58
B	1	(untitled)	1	1	D	27	1800	7	7.00	20	400	61.50	55.50	95.09	0.86
C	1	(untitled)	1	1	C	135	1800	24	0.00	35	189	48.25	42.25	85.19	3.88
D	1	(untitled)	1	1	B	119	1800	20	0.00	36	177	51.92	45.92	88.22	3.54
Ax	1	(untitled)				207	Unrestricted	120	55.00	0	Unrestricted	16.49	0.00	0.00	0.00
Bx	1	(untitled)				18	Unrestricted	120	116.00	0	Unrestricted	16.82	0.00	0.00	0.00
Cx	1	(untitled)				228	Unrestricted	120	50.00	0	Unrestricted	16.80	0.00	0.00	0.00
Dx	1	(untitled)				107	Unrestricted	120	65.00	0	Unrestricted	16.47	0.00	0.00	0.00

Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE			PER PED		QUEUES	WEIGHTS	PEN
Pedestrian	Side	Name	Traffic node	Controller stream	Phase	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Ped (s)	Mean max queue (Ped)	Delay weighting (%)	Co tra pen (£ p
1	1	(untitled)	1	1	E	50	11000	7	8	1183	59.34	53.68	1.57	100	0
	2	(untitled)	1	1	E	50	11000	7	8	1183	59.34	53.68	1.57	100	0
2	1	(untitled)	1	1	E	50	11000	7	8	1183	60.01	53.68	1.57	100	0
	2	(untitled)	1	1	E	50	11000	7	8	1183	60.01	53.68	1.57	100	0
3	1	(untitled)	1	1	E	50	11000	7	8	1183	60.01	53.68	1.57	100	0
	2	(untitled)	1	1	E	50	11000	7	8	1183	60.01	53.68	1.57	100	0
4	1	(untitled)	1	1	E	50	11000	7	8	1183	59.34	53.68	1.57	100	0
	2	(untitled)	1	1	E	50	11000	7	8	1183	59.34	53.68	1.57	100	0

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (Veh-hr/hr)	Random plus oversat delay (Veh-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	105.57	9.76	10.82	5.81	0.43	88.64	5.89	0.00	94.53
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	3.40	6.63	0.51	5.96	0.00	84.69	0.00	0.00	84.69
TOTAL	108.97	16.39	6.65	11.77	0.43	173.33	5.89	0.00	179.22

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

TRANSYT 15

Version: 15.5.0.6767
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Filename: Rathmullan Road - Local Road AM.t15
Path: M:\Projects\18\18-014 - Rathmullan Drogheda SHD Planning Application\Design\Civil\Traffic\Junction Modelling\Junction 1 - 21-11-2018 - Rathmullan Road-Local Road\Proposed Signalised Junction
Report generation date: 10/05/2019 10:44:07

»Network Diagrams
«A2 - 2023 (BASE + DEV + COMM PHASE 1) - AM : D2 - 2023 (BASE + DEV + COMM PHASE 1) - AM* :
»Summary
»Network Options
»Traffic Nodes
»Arms and Traffic Streams
»Pedestrian Crossings
»Local OD Matrix - Local Matrix: 1
»Signal Timings
»Results - Link
»Results - Traffic Stream
»Data Entry - Stage Start and End
»Data Entry - Phase
»Data Entry - Traffic Stream
»Data entry - Link
»Results - Pedestrian
»Traffic Stream Results
»Pedestrian Crossing Results
»Network Results
»Point to Point Journey Time
»Final Prediction Table

File summary

File description

File title	(untitled)
Location	
Site number	
UTCRegion	
Driving side	Left
Date	06/12/2011
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	DOMAIN\f.silva
Description	

Model and Results

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

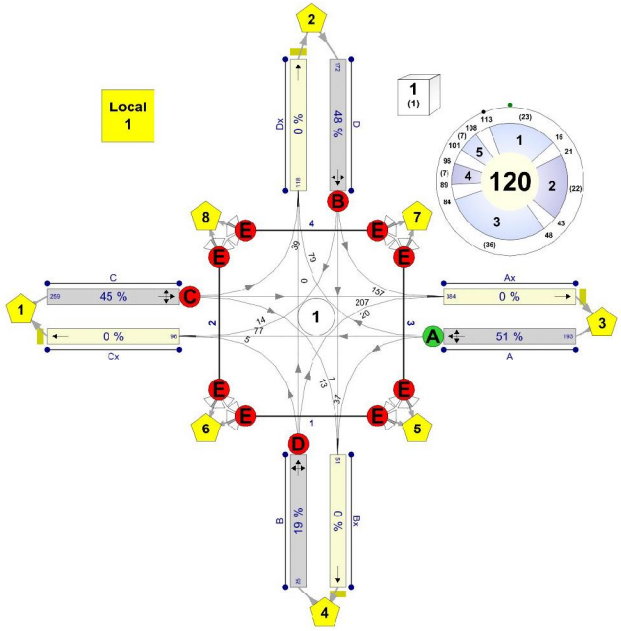
Units

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

Sorting

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

Network Diagrams



(untitled)
Diagram produced using TRANSYT 15.5.0.6767

A2 - 2023 (BASE + DEV + COMM PHASE 1) - AM
D2 - 2023 (BASE + DEV + COMM PHASE 1) - AM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
2	10/05/2019 10:41:58	10/05/2019 10:41:59	08:00	120	201.11	13.66	51.47	A/1	0	0	A/1	Dx/1	A/

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2023 (BASE + DEV + COMM PHASE 1) - AM		D2	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2023 (BASE + DEV + COMM PHASE 1) - AM				08:00	

Network Options

Network timings

Network cycle time (s)	Restrict to SCOOT cycle times	Time segment length (min)	Number of time segments	Modelled time period (min)
120		60	1	60

Signals options

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

Advanced

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

Traffic options

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

Advanced

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

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Normal Traffic parameters

Dispersion type	Dispersion coefficient
Default	35

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Bus	1.00	70	15	0.47	30	85

Tram parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Tram	1.00	0	0	0.47	100	100

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order
Hill Climb (Fast)	15, 40, -1, 15, 40, 1, -1, 1	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05		✓	1

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
1	(untitled)	

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
A	(untitled)		1
B	(untitled)		1
C	(untitled)		1
D	(untitled)		1
Ax	(untitled)		
Bx	(untitled)		
Cx	(untitled)		
Dx	(untitled)		

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
A	1	(untitled)		✓	50.00	✓	Sum of lanes	1800	✓		Normal	
B	1	(untitled)		✓	50.00	✓	Sum of lanes	1800	✓		Normal	
C	1	(untitled)		✓	50.00	✓	Sum of lanes	1800	✓		Normal	
D	1	(untitled)		✓	50.00	✓	Sum of lanes	1800	✓		Normal	
Ax	1	(untitled)		✓	137.40						Normal	
Bx	1	(untitled)		✓	140.18						Normal	
Cx	1	(untitled)		✓	140.00						Normal	
Dx	1	(untitled)		✓	137.24						Normal	

Lanes

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

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
(ALL)	1	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
(ALL)	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	120

Normal - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	1	100	100

Flows

Arm	Traffic Stream	Total Flow (Veh/hr)	Normal Flow (Veh/hr)
A	1	193	193
B	1	25	25
C	1	259	259
D	1	172	172
Ax	1	384	384
Bx	1	51	51
Cx	1	96	96
Dx	1	118	118

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled
A	1	1	A	
B	1	1	D	
C	1	1	C	
D	1	1	B	

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Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
(ALL)	1	6.00	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	1	1	C/1	Ax/1	16.49	30.00	✓	Straight	Straight Movement
Bx	1	1	A/1	Bx/1	16.82	30.00	✓	Nearside	40.00
Cx	1	1	A/1	Cx/1	16.80	30.00	✓	Straight	Straight Movement
Dx	1	1	C/1	Dx/1	16.47	30.00	✓	Nearside	40.00
Ax	1	2	B/1	Ax/1	16.49	30.00	✓	Offside	55.00
Bx	1	2	D/1	Bx/1	16.82	30.00	✓	Straight	Straight Movement
Cx	1	2	B/1	Cx/1	16.80	30.00	✓	Nearside	45.00
Dx	1	2	A/1	Dx/1	16.47	30.00	✓	Offside	55.00
Ax	1	3	D/1	Ax/1	16.49	30.00	✓	Nearside	40.00
Bx	1	3	C/1	Bx/1	16.82	30.00	✓	Offside	60.00
Cx	1	3	D/1	Cx/1	16.80	30.00	✓	Offside	55.00
Dx	1	3	B/1	Dx/1	16.47	30.00	✓	Straight	Straight Movement

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
1	(untitled)		1		Farside	7.00	4.67	5.40
2	(untitled)		1		Farside	8.00	5.33	5.40
3	(untitled)		1		Farside	8.00	5.33	5.40
4	(untitled)		1		Farside	7.00	4.67	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	E	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(ALL)	11000

Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	100	100		0.00		

Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1	(untitled)	✓	✓	Path Equalisation	✓		✓			✓	1.25		

Normal Input Flows (Veh/hr)

		To							
		1	2	3	4	5	6	7	8
From	1	0	39	207	13	0	0	0	0
	2	14	0	157	1	0	0	0	0
	3	77	79	0	37	0	0	0	0
	4	5	0	20	0	0	0	0	0
	5	0	0	0	0	0	0	0	0
	6	0	0	0	0	0	0	0	0
	7	0	0	0	0	0	0	0	0
	8	0	0	0	0	0	0	0	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows (Veh/hr)

		To							
		1	2	3	4	5	6	7	8
From	1	0	0	0	0	0	0	0	0
	2	0	0	0	0	0	0	0	0
	3	0	0	0	0	0	0	0	0
	4	0	0	0	0	0	0	0	0
	5	0	0	0	0	0	50	50	0
	6	0	0	0	0	50	0	0	50
	7	0	0	0	0	50	0	0	50
	8	0	0	0	0	0	50	50	0

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
1	1	(untitled)	C/1	Cx/1	#0000FF
	2	(untitled)	D/1	Dx/1	#FF0000
	3	(untitled)	A/1	Ax/1	#00FF00
	4	(untitled)	B/1	Bx/1	#FFFF00
	5	(untitled)	3:2E, 1:1E	3:2X, 1:1X	#FF00FF
	6	(untitled)	2:1E, 1:2E	2:1X, 1:2X	#008000
	7	(untitled)	4:2E, 3:1E	4:2X, 3:1X	#FFA500
	8	(untitled)	4:1E, 2:2E	4:1X, 2:2X	#00FFFF

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (Veh/hr)
1	1		1	2	C/1, Dx/1	Normal	39
	2		1	3	C/1, Ax/1	Normal	207
	3		1	4	C/1, Bx/1	Normal	13
	5		2	3	D/1, Ax/1	Normal	157
	6		2	4	D/1, Bx/1	Normal	1
	7		2	1	D/1, Cx/1	Normal	14
	8		3	2	A/1, Dx/1	Normal	79
	9		3	4	A/1, Bx/1	Normal	37
	10		3	1	A/1, Cx/1	Normal	77
	11		4	2	B/1, Dx/1	Normal	0
	12		4	3	B/1, Ax/1	Normal	20
	13		4	1	B/1, Cx/1	Normal	5

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Pedestrian Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Pedestrian calculated flow (Ped/hr)
1	17		8	7	4:1E, 4:2X	Normal	50
	18		8	6	2:2E, 2:1X	Normal	50
	22		5	7	3:2E, 3:1X	Normal	50
	23		5	6	1:1E, 1:2X	Normal	50
	34		6	8	2:1E, 2:2X	Normal	50
	35		6	5	1:2E, 1:1X	Normal	50
	41		7	8	4:2E, 4:1X	Normal	50
	42		7	5	3:1E, 3:2X	Normal	50

Signal Timings

Network Default: 120s cycle time; 120 steps

Controller Stream 1

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)
1	(untitled)		1	NetworkDefault	120

Controller Stream 1 - Properties

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
1	Unspecified						Relative

Controller Stream 1 - Optimisation

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
1	✓	✓	Offsets And Green Splits	✓	

Phases

Controller Stream	Phase	Name	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type	Blackout Time (s)
1	A	(untitled)	7	300	2	3	Traffic	
	B	(untitled)	7	300	2	3	Traffic	
	C	(untitled)	7	300	2	3	Traffic	
	D	(untitled)	7	300	2	3	Traffic	
	E	(untitled)	5	7	0	0	Pedestrian	0

Library Stages

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)
1	1	A	1
	2	B	1
	3	C	1
	4	D	1
	5	E	1

Stage Sequences

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends
1	1	(untitled)	Single	1, 2, 3, 4, 5	16, 43, 84, 96, 108

Intergreen Matrix for Controller Stream 1

		To				
		A	B	C	D	E
From	A		5	5	5	5
	B	5		5	5	5
	C	5	5		5	5
	D	5	5	5		5
	E	5	5	5	5	

Banned Stage transitions for Controller Stream 1

		To				
		1	2	3	4	5
From	1					
	2					
	3					
	4					
	5					

Interstage Matrix for Controller Stream 1

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

Resultant Stages

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
1	1	✓	1	A	113	16	23	1	7
	2	✓	2	B	21	43	22	1	7
	3	✓	3	C	48	84	36	1	7
	4	✓	4	D	89	96	7	1	7
	5	✓	5	E	101	108	7	1	5

Resultant Phase Green Periods

Controller Stream	Phase	Green period	Is base green period	Start time (s)	End time (s)	Duration (s)
1	A	1	✓	113	16	23
	B	1	✓	21	43	22
	C	1	✓	48	84	36
	D	1	✓	89	96	7
	E	1	✓	101	108	7

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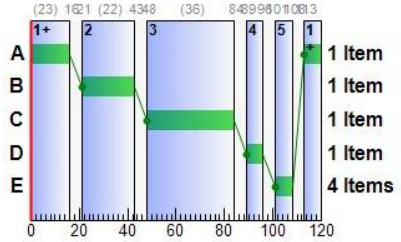
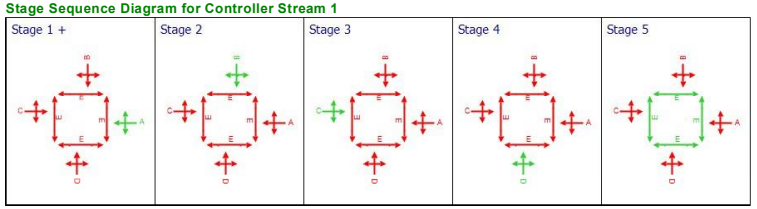
Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
A	1	1	1	A	113	16	23
B	1	1	1	D	89	96	7
C	1	1	1	C	48	84	36
D	1	1	1	B	21	43	22

Phase Timings Diagram for Controller Stream 1



Stage Sequence Diagram for Controller Stream 1



Resultant penalties

Time Segment	Controller stream	Phase min max penalty (£ per hr)	Intergreen broken penalty (£ per hr)	Stage constraint broken penalty (£ per hr)	Cost of controller stream penalties (£ per hr)
08:00-09:00	1	0.00	0.00	0.00	0.00

Results - Link

Results - Traffic Stream

Results - Traffic Stream: Vehicle summary

Time Segment	Arm	Traffic Stream	Name	Phase	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Calculated capacity (Veh/hr)	Degree of saturation (%)	Practical reserve capacity (%)	Mean Delay per Veh (s)	Mean max queue (Veh)	Utilised storage (%)	JourneyTime (s)
08:00-09:00	A	1	(untitled)	A	193	1800	23	375	51	94	47.18	5.95	68.46	53.18
	B	1	(untitled)	D	25	1800	7	135	19	440	55.15	0.80	9.19	61.15
	C	1	(untitled)	C	259	1800	36	570	45	120	35.35	7.02	80.77	41.35
	D	1	(untitled)	B	172	1800	22	360	48	109	47.00	5.28	60.74	53.00
	Ax	1	(untitled)		384	Unrestricted	120	Unrestricted	0	Unrestricted	0.00	0.00	0.00	16.49
	Bx	1	(untitled)		51	Unrestricted	120	Unrestricted	0	Unrestricted	0.00	0.00	0.00	16.82
	Cx	1	(untitled)		96	Unrestricted	120	Unrestricted	0	Unrestricted	0.00	0.00	0.00	16.80
	Dx	1	(untitled)		118	Unrestricted	120	Unrestricted	0	Unrestricted	0.00	0.00	0.00	16.47

Data Entry - Stage Start and End

Resultant Stage

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
1	1	✓	1	A	113	16	23	1	7
	2	✓	2	B	21	43	22	1	7
	3	✓	3	C	48	84	36	1	7
	4	✓	4	D	89	96	7	1	7
	5	✓	5	E	101	108	7	1	5

Data Entry - Phase

Phase

Controller Stream	Phase	Phase	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type
1	A	A	7	300	2	3	Traffic
	B	B	7	300	2	3	Traffic
	C	C	7	300	2	3	Traffic
	D	D	7	300	2	3	Traffic
	E	E	5	7	0	0	Pedestrian

Data Entry - Traffic Stream

Traffic Stream

Arm	Traffic Stream	Auto length	Length (m)	Traffic model	Max queue storage (PCU)	Traffic type	Has Saturation Flow	Is signal controlled	Is give way	Saturation flow source	Saturation flow (PCU/hr)	Delay weighting multiplier (%)	Stop weighting multiplier (%)
A	1	✓	50.00	NetworkDefault	0.00	Normal	✓	✓		Sum of lanes	1800	100	100
B	1	✓	50.00	NetworkDefault	0.00	Normal	✓	✓		Sum of lanes	1800	100	100
C	1	✓	50.00	NetworkDefault	0.00	Normal	✓	✓		Sum of lanes	1800	100	100
D	1	✓	50.00	NetworkDefault	0.00	Normal	✓	✓		Sum of lanes	1800	100	100
Ax	1	✓	137.40	NetworkDefault	0.00	Normal						100	100
Bx	1	✓	140.18	NetworkDefault	0.00	Normal						100	100
Cx	1	✓	140.00	NetworkDefault	0.00	Normal						100	100
Dx	1	✓	137.24	NetworkDefault	0.00	Normal						100	100

Data entry - Link

Results - Pedestrian

Pedestrian Crossings: Pedestrian summary

Time Segment	Pedestrian crossing	Side	Calculated Flow Entering (Ped/hr)	Degree of saturation (%)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)
08:00-09:00	(ALL)	(ALL)	50	8	7	53.68	1.57

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Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (Veh)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	A	1	51	94	193	1800	23	47.18	5.95	68.46	35.91	2.21	38.12
	B	1	19	440	25	1800	7	55.15	0.80	9.19	5.44	0.30	5.74
	C	1	45	120	259	1800	36	35.35	7.02	80.77	36.11	2.61	38.72
	D	1	48	109	172	1800	22	47.00	5.28	60.74	31.89	1.96	33.85
	Ax	1	0	Unrestricted	384	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	Bx	1	0	Unrestricted	51	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	Cx	1	0	Unrestricted	96	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	Dx	1	0	Unrestricted	118	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Calculated sat flow (Veh/hr)	Calculated capacity (Veh/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))
08:00-09:00	A	1	193	193	0		1800	375	51		94	0.00	23
	B	1	25	25	0		1800	135	19		440	0.00	7
	C	1	259	259	0		1800	570	45		120	0.00	36
	D	1	172	172	0		1800	360	48		109	0.00	22
	Ax	1	384	384	0		Unrestricted	Unrestricted	0		Unrestricted	0.91	120
	Bx	1	51	51	0		Unrestricted	Unrestricted	0		Unrestricted	1.03	120
	Cx	1	96	96	0		Unrestricted	Unrestricted	0		Unrestricted	1.13	120
	Dx	1	118	118	0		Unrestricted	Unrestricted	0		Unrestricted	1.02	120

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-hr/hr)	Random plus oversat delay (Veh-hr/hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	A	1	6.00	47.18	2.26	0.27	35.91	91.38	168.32	8.03	2.21
	B	1	6.00	55.15	0.36	0.02	5.44	94.85	23.09	0.63	0.30
	C	1	6.00	35.35	2.35	0.19	36.11	80.28	202.30	5.62	2.61
	D	1	6.00	47.00	2.03	0.22	31.89	90.77	149.67	6.45	1.96
	Ax	1	16.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Bx	1	16.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Cx	1	16.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Dx	1	16.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (Veh)	Mean max queue (Veh)	Max queue storage (Veh)	Utilised storage (%)	Average storage excess queue (Veh)	Average limit excess queue (Veh)	Excess queue penalty (£ per hr)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))	Estimated blocking
08:00-09:00	A	1	0.00	5.95	8.70	68.46	0.00	0.00	0.00	0.00	0.00	0.00	
	B	1	0.00	0.80	8.70	9.19	0.00	0.00	0.00	7.00	0.00	7.00	
	C	1	0.00	7.02	8.70	80.77	0.00	0.00	0.00	0.00	0.00	0.00	
	D	1	0.00	5.28	8.70	60.74	0.00	0.00	0.00	0.00	0.00	0.00	
	Ax	1	0.00	0.00	23.90	0.00	0.00	0.00	0.00	40.00	0.00	40.00	
	Bx	1	0.00	0.00	24.38	0.00	0.00	0.00	0.00	86.00	0.00	86.00	
	Cx	1	0.00	0.00	24.35	0.00	0.00	0.00	0.00	73.00	0.00	73.00	
	Dx	1	0.00	0.00	23.87	0.00	0.00	0.00	0.00	68.00	0.00	68.00	

Traffic Stream Results: Journey times

Time Segment	Arm	Traffic Stream	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	A	1	9.65	2.85	3.39	53.18
	B	1	1.25	0.42	2.94	61.15
	C	1	12.95	2.97	4.35	41.35
	D	1	8.60	2.53	3.40	53.00
	Ax	1	52.76	1.76	30.00	16.49
	Bx	1	7.15	0.24	30.00	16.82
	Cx	1	13.44	0.45	30.00	16.80
	Dx	1	16.19	0.54	30.00	16.47

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	Mean Max Queue EoTS (Veh)	Max End of Green Queue EoTS (Veh)	Max End of Red Queue EoTS (Veh)	PCU Factor	Cost of traffic penalties (£ per hr)	Performance Index (£ per hr)
08:00-09:00	A	1	0.00	0.00	✓	0.00	5.95	0.27	5.36	1.00	0.00	38.12
	B	1	0.00	0.00	✓	0.00	0.80	0.02	0.79	1.00	0.00	5.74
	C	1	0.00	0.00	✓	0.00	7.02	0.19	6.09	1.00	0.00	38.72
	D	1	0.00	0.00	✓	0.00	5.28	0.22	4.80	1.00	0.00	33.85
	Ax	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00
	Bx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00
	Cx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00
	Dx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	8	50	11000	7	53.68	1.57	10.59	10.59

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))
08:00-09:00	(ALL)	(ALL)	50	50	0		11000	642	8		1183	0.00	7

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Uniform delay (Ped-hr/hr)	Random plus oversat delay (Ped-hr/hr)	Weighted cost of delay (£ per hr)
08:00-09:00	1	1	5.67	53.68	0.75	0.00	10.59
		2	5.67	53.68	0.75	0.00	10.59
	2	1	6.33	53.68	0.75	0.00	10.59
		2	6.33	53.68	0.75	0.00	10.59
	3	1	6.33	53.68	0.75	0.00	10.59
		2	6.33	53.68	0.75	0.00	10.59
	4	1	5.67	53.68	0.75	0.00	10.59
		2	5.67	53.68	0.75	0.00	10.59

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Average storage excess queue (Ped)	Average limit excess queue (Ped)	Excess queue penalty (£ per hr)
08:00-09:00	(ALL)	(ALL)	1.57	10.00	15.69	0.00	0.00	0.00

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Pedestrian Crossings: Journey times

Time Segment	Crossing	Side	Distance travelled (Ped-km/hr)	Time spent (Ped-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	1	1	0.40	0.82	0.49	59.34
		2	0.40	0.82	0.49	59.34
	2	1	0.45	0.83	0.54	60.01
		2	0.45	0.83	0.54	60.01
	3	1	0.45	0.83	0.54	60.01
		2	0.45	0.83	0.54	60.01
	4	1	0.40	0.82	0.49	59.34
		2	0.40	0.82	0.49	59.34

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	0.00	1.57	1.00	0.00	10.59

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
2	10/05/2019 10:41:58	10/05/2019 10:41:59	08:00	120	201.11	13.66	51.47	A/1	0	0	A/1	Dx/1	A/

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	51	0	1298	568	21.36	109.35	7.07	116.43

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	8	400	56	53.68	84.69	84.69

Network Results: Flows and signals

Time Segment	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))
08:00-09:00	1698	1698	0		51		94	624

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-hr/hr)	Random plus oversat delay (Veh-hr/hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	10.03	28.97	12.97	0.70	194.04	33.22	543.38	20.73	7.07

Network Results: Queues and blocking

Time Segment	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))
08:00-09:00	80.77	0.00	274.00	0.00	274.00

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
08:00-09:00	125.39	18.40	6.82

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	PCU Factor	Cost of traffic penalties (£ per hr)	Controller stream penalties (£ per hr)	Performance Index (£ per hr)
08:00-09:00	0.00	0.00	✓	0.00	1.00	0.00	0.00	201.11

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

		To							
		1	2	3	4	5	6	7	8
From	1	0.0	57.8	57.8	58.2	0.0	0.0	0.0	0.0
	2	69.8	0.0	69.5	69.8	0.0	0.0	0.0	0.0
	3	70.0	69.6	0.0	70.0	0.0	0.0	0.0	0.0
	4	78.0	0.0	77.6	0.0	0.0	0.0	0.0	0.0
	5	0.0	0.0	0.0	0.0	0.0	59.3	60.0	0.0
	6	0.0	0.0	0.0	0.0	59.3	0.0	0.0	60.0
	7	0.0	0.0	0.0	0.0	60.0	0.0	0.0	59.3
	8	0.0	0.0	0.0	0.0	0.0	60.0	59.3	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (Veh/hr)	Pedestrian calculated flow (Ped/hr)	Normal journey time (s)	Pedestrian journey time (s)	Calculated Total Flow (Veh/hr)	Avg journey time (s)
1	1	2	39		57.82		39	57.82
2	1	3	207		57.84		207	57.84
3	1	4	13		58.17		13	58.17
5	2	3	157		69.49		157	69.49
6	2	4	1		69.82		1	69.82
7	2	1	14		69.80		14	69.80
8	3	2	79		69.64		79	69.64
9	3	4	37		70.00		37	70.00
10	3	1	77		69.98		77	69.98
11	4	2	0		0.00		0	0.00
12	4	3	20		77.64		20	77.64
13	4	1	5		77.95		5	77.95
17	8	7		50		59.34	50	59.34
18	8	6		50		60.01	50	60.01
22	5	7		50		60.01	50	60.01
23	5	6		50		59.34	50	59.34
34	6	8		50		60.01	50	60.01
35	6	5		50		59.34	50	59.34
41	7	8		50		59.34	50	59.34
42	7	5		50		60.01	50	60.01

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Final Prediction Table

Traffic Stream Results

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QUEUES
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (Veh)
A	1	(untitled)	1	1	A	193	1800	23	0.00	51	94	53.18	47.18	91.38	5.95
B	1	(untitled)	1	1	D	25	1800	7	7.00	19	440	61.15	55.15	94.85	0.80
C	1	(untitled)	1	1	C	259	1800	36	0.00	45	120	41.35	35.35	80.28	7.02
D	1	(untitled)	1	1	B	172	1800	22	0.00	48	109	53.00	47.00	90.77	5.28
Ax	1	(untitled)				384	Unrestricted	120	40.00	0	Unrestricted	16.49	0.00	0.00	0.00
Bx	1	(untitled)				51	Unrestricted	120	86.00	0	Unrestricted	16.82	0.00	0.00	0.00
Cx	1	(untitled)				96	Unrestricted	120	73.00	0	Unrestricted	16.80	0.00	0.00	0.00
Dx	1	(untitled)				118	Unrestricted	120	68.00	0	Unrestricted	16.47	0.00	0.00	0.00

Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE			PER PED		QUEUES	WEIGHTS	PEN
Pedestrian	Side	Name	Traffic node	Controller stream	Phase	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Ped (s)	Mean max queue (Ped)	Delay weighting (%)	Co tra pen (£ p
1	1	(untitled)	1	1	E	50	11000	7	8	1183	59.34	53.68	1.57	100	0
	2	(untitled)	1	1	E	50	11000	7	8	1183	59.34	53.68	1.57	100	0
2	1	(untitled)	1	1	E	50	11000	7	8	1183	60.01	53.68	1.57	100	0
	2	(untitled)	1	1	E	50	11000	7	8	1183	60.01	53.68	1.57	100	0
3	1	(untitled)	1	1	E	50	11000	7	8	1183	60.01	53.68	1.57	100	0
	2	(untitled)	1	1	E	50	11000	7	8	1183	60.01	53.68	1.57	100	0
4	1	(untitled)	1	1	E	50	11000	7	8	1183	59.34	53.68	1.57	100	0
	2	(untitled)	1	1	E	50	11000	7	8	1183	59.34	53.68	1.57	100	0

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (Veh-hr/hr)	Random plus oversat delay (Veh-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	121.99	11.77	10.37	7.00	0.70	109.35	7.07	0.00	116.43
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	3.40	6.63	0.51	5.96	0.00	84.69	0.00	0.00	84.69
TOTAL	125.39	18.40	6.82	12.97	0.70	194.04	7.07	0.00	201.11

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

TRANSYT 15

Version: 15.5.0.6767
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Filename: Rathmullan Road - Local Road PM.t15
Path: M:\Projects\18\18-014 - Rathmullan Drogheda SHD Planning Application\Design\Civil\Traffic\Junction Modelling\Junction 1 - 21-11-2018 - Rathmullan Road-Local Road\Proposed Signalised Junction
Report generation date: 10/05/2019 10:50:53

»Network Diagrams
«A2 - 2023 (BASE + DEV + COMM PHASE 1) - PM : D2 - 2023 (BASE + DEV + COMM PHASE 1) - PM* :
»Summary
»Network Options
»Traffic Nodes
»Arms and Traffic Streams
»Pedestrian Crossings
»Local OD Matrix - Local Matrix: 1
»Signal Timings
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File summary

File description

File title	(untitled)
Location	
Site number	
UTCRegion	
Driving side	Left
Date	06/12/2011
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	DOMAIN\f.silva
Description	

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Model and Results

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

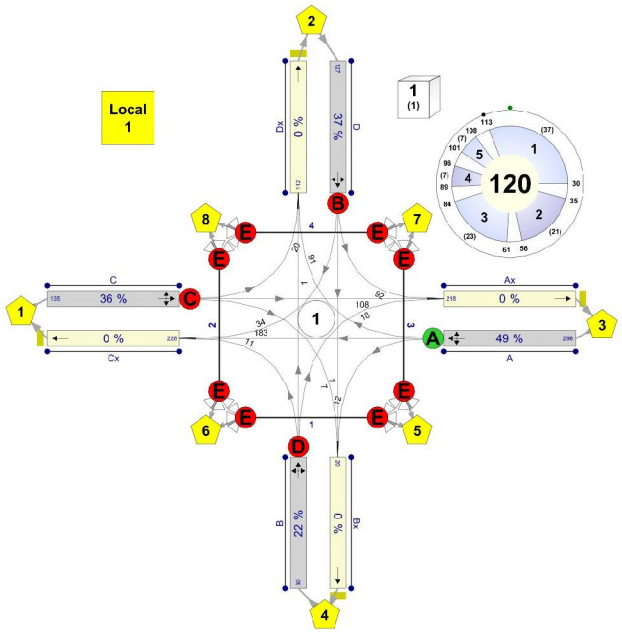
Units

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

Sorting

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

Network Diagrams



(untitled)
Diagram produced using TRANSYT 15.5.0.6767

A2 - 2023 (BASE + DEV + COMM PHASE 1) - PM
D2 - 2023 (BASE + DEV + COMM PHASE 1) - PM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
2	10/05/2019 10:49:43	10/05/2019 10:49:44	17:00	120	183.16	12.47	48.89	A/1	0	0	A/1	Dx/1	A/

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2023 (BASE + DEV + COMM PHASE 1) - PM		D2	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2023 (BASE + DEV + COMM PHASE 1) - PM				17:00	

Network Options

Network timings

Network cycle time (s)	Restrict to SCOOT cycle times	Time segment length (min)	Number of time segments	Modelled time period (min)
120		60	1	60

Signals options

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

Advanced

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

Traffic options

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

Advanced

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

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Normal Traffic parameters

Dispersion type	Dispersion coefficient
Default	35

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Bus	1.00	70	15	0.47	30	85

Tram parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Tram	1.00	0	0	0.47	100	100

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order
Hill Climb (Fast)	15, 40, -1, 15, 40, 1, -1, 1	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05		✓	1

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
1	(untitled)	

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
A	(untitled)		1
B	(untitled)		1
C	(untitled)		1
D	(untitled)		1
Ax	(untitled)		
Bx	(untitled)		
Cx	(untitled)		
Dx	(untitled)		

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
A	1	(untitled)		✓	50.00	✓	Sum of lanes	1800	✓		Normal	
B	1	(untitled)		✓	50.00	✓	Sum of lanes	1800	✓		Normal	
C	1	(untitled)		✓	50.00	✓	Sum of lanes	1800	✓		Normal	
D	1	(untitled)		✓	50.00	✓	Sum of lanes	1800	✓		Normal	
Ax	1	(untitled)		✓	137.40						Normal	
Bx	1	(untitled)		✓	140.18						Normal	
Cx	1	(untitled)		✓	140.00						Normal	
Dx	1	(untitled)		✓	137.24						Normal	

Lanes

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

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
(ALL)	1	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
(ALL)	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	120

Normal - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	1	100	100

Flows

Arm	Traffic Stream	Total Flow (Veh/hr)	Normal Flow (Veh/hr)
A	1	286	286
B	1	30	30
C	1	135	135
D	1	127	127
Ax	1	218	218
Bx	1	20	20
Cx	1	228	228
Dx	1	112	112

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled
A	1	1	A	
B	1	1	D	
C	1	1	C	
D	1	1	B	

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Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
(ALL)	1	6.00	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	1	1	C/1	Ax/1	16.49	30.00	✓	Straight	Straight Movement
Bx	1	1	A/1	Bx/1	16.82	30.00	✓	Nearside	40.00
Cx	1	1	A/1	Cx/1	16.80	30.00	✓	Straight	Straight Movement
Dx	1	1	C/1	Dx/1	16.47	30.00	✓	Nearside	40.00
Ax	1	2	B/1	Ax/1	16.49	30.00	✓	Offside	55.00
Bx	1	2	D/1	Bx/1	16.82	30.00	✓	Straight	Straight Movement
Cx	1	2	B/1	Cx/1	16.80	30.00	✓	Nearside	45.00
Dx	1	2	A/1	Dx/1	16.47	30.00	✓	Offside	55.00
Ax	1	3	D/1	Ax/1	16.49	30.00	✓	Nearside	40.00
Bx	1	3	C/1	Bx/1	16.82	30.00	✓	Offside	60.00
Cx	1	3	D/1	Cx/1	16.80	30.00	✓	Offside	55.00
Dx	1	3	B/1	Dx/1	16.47	30.00	✓	Straight	Straight Movement

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
1	(untitled)		1		Farside	7.00	4.67	5.40
2	(untitled)		1		Farside	8.00	5.33	5.40
3	(untitled)		1		Farside	8.00	5.33	5.40
4	(untitled)		1		Farside	7.00	4.67	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	E	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(ALL)	11000

Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	100	100		0.00		

Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1	(untitled)	✓	✓	Path Equalisation	✓		✓			✓	1.25		

Normal Input Flows (Veh/hr)

		To							
		1	2	3	4	5	6	7	8
From	1	0	20	108	7	0	0	0	0
	2	34	0	92	1	0	0	0	0
	3	183	91	0	12	0	0	0	0
	4	11	1	18	0	0	0	0	0
	5	0	0	0	0	0	0	0	0
	6	0	0	0	0	0	0	0	0
	7	0	0	0	0	0	0	0	0
	8	0	0	0	0	0	0	0	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows (Veh/hr)

		To							
		1	2	3	4	5	6	7	8
From	1	0	0	0	0	0	0	0	0
	2	0	0	0	0	0	0	0	0
	3	0	0	0	0	0	0	0	0
	4	0	0	0	0	0	0	0	0
	5	0	0	0	0	0	50	50	0
	6	0	0	0	0	50	0	0	50
	7	0	0	0	0	50	0	0	50
	8	0	0	0	0	0	50	50	0

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
1	1	(untitled)	C/1	Cx/1	#0000FF
	2	(untitled)	D/1	Dx/1	#FF0000
	3	(untitled)	A/1	Ax/1	#00FF00
	4	(untitled)	B/1	Bx/1	#FFFF00
	5	(untitled)	3:2E, 1:1E	3:2X, 1:1X	#FF00FF
	6	(untitled)	2:1E, 1:2E	2:1X, 1:2X	#008000
	7	(untitled)	4:2E, 3:1E	4:2X, 3:1X	#FFA500
	8	(untitled)	4:1E, 2:2E	4:1X, 2:2X	#00FFFF

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (Veh/hr)
1	1		1	2	C/1, Dx/1	Normal	20
	2		1	3	C/1, Ax/1	Normal	108
	3		1	4	C/1, Bx/1	Normal	7
	5		2	3	D/1, Ax/1	Normal	92
	6		2	4	D/1, Bx/1	Normal	1
	7		2	1	D/1, Cx/1	Normal	34
	8		3	2	A/1, Dx/1	Normal	91
	9		3	4	A/1, Bx/1	Normal	12
	10		3	1	A/1, Cx/1	Normal	183
	11		4	2	B/1, Dx/1	Normal	1
	12		4	3	B/1, Ax/1	Normal	18
	13		4	1	B/1, Cx/1	Normal	11

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Pedestrian Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Pedestrian calculated flow (Ped/hr)
1	17		8	7	4:1E, 4:2X	Normal	50
	18		8	6	2:2E, 2:1X	Normal	50
	22		5	7	3:2E, 3:1X	Normal	50
	23		5	6	1:1E, 1:2X	Normal	50
	34		6	8	2:1E, 2:2X	Normal	50
	35		6	5	1:2E, 1:1X	Normal	50
	41		7	8	4:2E, 4:1X	Normal	50
	42		7	5	3:1E, 3:2X	Normal	50

Signal Timings

Network Default: 120s cycle time; 120 steps

Controller Stream 1

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)
1	(untitled)		1	NetworkDefault	120

Controller Stream 1 - Properties

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
1	Unspecified						Relative

Controller Stream 1 - Optimisation

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
1	✓	✓	Offsets And Green Splits	✓	

Phases

Controller Stream	Phase	Name	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type	Blackout Time (s)
1	A	(untitled)	7	300	2	3	Traffic	
	B	(untitled)	7	300	2	3	Traffic	
	C	(untitled)	7	300	2	3	Traffic	
	D	(untitled)	7	300	2	3	Traffic	
	E	(untitled)	5	7	0	0	Pedestrian	0

Library Stages

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)
1	1	A	1
	2	B	1
	3	C	1
	4	D	1
	5	E	1

Stage Sequences

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends
1	1	(untitled)	Single	1, 2, 3, 4, 5	30, 56, 84, 96, 108

Intergreen Matrix for Controller Stream 1

		To				
		A	B	C	D	E
From	A		5	5	5	5
	B	5		5	5	5
	C	5	5		5	5
	D	5	5	5		5
	E	5	5	5	5	

Banned Stage transitions for Controller Stream 1

		To				
		1	2	3	4	5
From	1					
	2					
	3					
	4					
	5					

Interstage Matrix for Controller Stream 1

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

Resultant Stages

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
1	1	✓	1	A	113	30	37	1	7
	2	✓	2	B	35	56	21	1	7
	3	✓	3	C	61	84	23	1	7
	4	✓	4	D	89	96	7	1	7
	5	✓	5	E	101	108	7	1	5

Resultant Phase Green Periods

Controller Stream	Phase	Green period	Is base green period	Start time (s)	End time (s)	Duration (s)
1	A	1	✓	113	30	37
	B	1	✓	35	56	21
	C	1	✓	61	84	23
	D	1	✓	89	96	7
	E	1	✓	101	108	7

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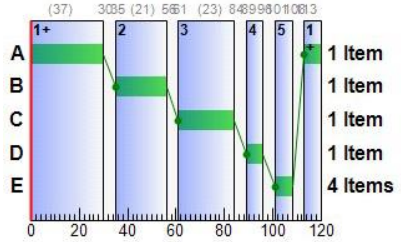
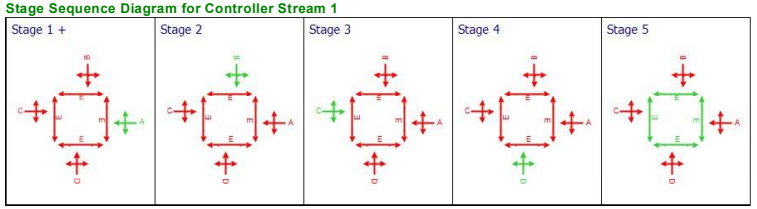
Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
A	1	1	1	A	113	30	37
B	1	1	1	D	89	96	7
C	1	1	1	C	61	84	23
D	1	1	1	B	35	56	21

Phase Timings Diagram for Controller Stream 1



Stage Sequence Diagram for Controller Stream 1



Resultant penalties

Time Segment	Controller stream	Phase min max penalty (£ per hr)	Intergreen broken penalty (£ per hr)	Stage constraint broken penalty (£ per hr)	Cost of controller stream penalties (£ per hr)
17:00-18:00	1	0.00	0.00	0.00	0.00

Results - Link

Results - Traffic Stream

Results - Traffic Stream: Vehicle summary

Time Segment	Arm	Traffic Stream	Name	Phase	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Calculated capacity (Veh/hr)	Degree of saturation (%)	Practical reserve capacity (%)	Mean Delay per Veh (s)	Mean max queue (Veh)	Utilised storage (%)	JourneyTime (s)
17:00-18:00	A	1	(untitled)	A	286	1800	37	585	49	105	35.44	7.86	90.38	41.44
	B	1	(untitled)	D	30	1800	7	135	22	350	56.02	0.96	11.10	62.02
	C	1	(untitled)	C	135	1800	23	375	36	178	43.35	3.93	45.15	49.35
	D	1	(untitled)	B	127	1800	21	345	37	172	45.22	3.78	43.42	51.22
	Ax	1	(untitled)		218	Unrestricted	120	Unrestricted	0	Unrestricted	0.00	0.00	0.00	16.49
	Bx	1	(untitled)		20	Unrestricted	120	Unrestricted	0	Unrestricted	0.00	0.00	0.00	16.82
	Cx	1	(untitled)		228	Unrestricted	120	Unrestricted	0	Unrestricted	0.00	0.00	0.00	16.80
	Dx	1	(untitled)		112	Unrestricted	120	Unrestricted	0	Unrestricted	0.00	0.00	0.00	16.47

Data Entry - Stage Start and End

Resultant Stage

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
1	1	✓	1	A	113	30	37	1	7
	2	✓	2	B	35	56	21	1	7
	3	✓	3	C	61	84	23	1	7
	4	✓	4	D	89	96	7	1	7
	5	✓	5	E	101	108	7	1	5

Data Entry - Phase

Phase

Controller Stream	Phase	Phase	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type
1	A	A	7	300	2	3	Traffic
	B	B	7	300	2	3	Traffic
	C	C	7	300	2	3	Traffic
	D	D	7	300	2	3	Traffic
	E	E	5	7	0	0	Pedestrian

Data Entry - Traffic Stream

Traffic Stream

Arm	Traffic Stream	Auto length	Length (m)	Traffic model	Max queue storage (PCU)	Traffic type	Has Saturation Flow	Is signal controlled	Is give way	Saturation flow source	Saturation flow (PCU/hr)	Delay weighting multiplier (%)	Stop weighting multiplier (%)
A	1	✓	50.00	NetworkDefault	0.00	Normal	✓	✓		Sum of lanes	1800	100	100
B	1	✓	50.00	NetworkDefault	0.00	Normal	✓	✓		Sum of lanes	1800	100	100
C	1	✓	50.00	NetworkDefault	0.00	Normal	✓	✓		Sum of lanes	1800	100	100
D	1	✓	50.00	NetworkDefault	0.00	Normal	✓	✓		Sum of lanes	1800	100	100
Ax	1	✓	137.40	NetworkDefault	0.00	Normal						100	100
Bx	1	✓	140.18	NetworkDefault	0.00	Normal						100	100
Cx	1	✓	140.00	NetworkDefault	0.00	Normal						100	100
Dx	1	✓	137.24	NetworkDefault	0.00	Normal						100	100

Data entry - Link

Results - Pedestrian

Pedestrian Crossings: Pedestrian summary

Time Segment	Pedestrian crossing	Side	Calculated Flow Entering (Ped/hr)	Degree of saturation (%)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)
17:00-18:00	(ALL)	(ALL)	50	8	7	53.68	1.57

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Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (Veh)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	A	1	49	105	286	1800	37	35.44	7.86	90.38	39.97	2.91	42.88
	B	1	22	350	30	1800	7	56.02	0.96	11.10	6.63	0.36	6.99
	C	1	36	178	135	1800	23	43.35	3.93	45.15	23.09	1.46	24.55
	D	1	37	172	127	1800	21	45.22	3.78	43.42	22.65	1.40	24.06
	Ax	1	0	Unrestricted	218	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	Bx	1	0	Unrestricted	20	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	Cx	1	0	Unrestricted	228	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	Dx	1	0	Unrestricted	112	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Calculated sat flow (Veh/hr)	Calculated capacity (Veh/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))
17:00-18:00	A	1	286	286	0		1800	585	49		105	0.00	37
	B	1	30	30	0		1800	135	22		350	0.00	7
	C	1	135	135	0		1800	375	36		178	0.00	23
	D	1	127	127	0		1800	345	37		172	0.00	21
	Ax	1	218	218	0		Unrestricted	Unrestricted	0		Unrestricted	1.04	120
	Bx	1	20	20	0		Unrestricted	Unrestricted	0		Unrestricted	0.87	120
	Cx	1	228	228	0		Unrestricted	Unrestricted	0		Unrestricted	0.96	120
	Dx	1	112	112	0		Unrestricted	Unrestricted	0		Unrestricted	0.99	120

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-hr/hr)	Random plus oversat delay (Veh-hr/hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	A	1	6.00	35.44	2.58	0.23	39.97	81.13	225.09	6.94	2.91
	B	1	6.00	56.02	0.44	0.03	6.63	95.48	27.70	0.94	0.36
	C	1	6.00	43.35	1.52	0.10	23.09	86.24	113.42	3.01	1.46
	D	1	6.00	45.22	1.49	0.11	22.65	88.12	108.73	3.18	1.40
	Ax	1	16.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Bx	1	16.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Cx	1	16.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Dx	1	16.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (Veh)	Mean max queue (Veh)	Max queue storage (Veh)	Utilised storage (%)	Average storage excess queue (Veh)	Average limit excess queue (Veh)	Excess queue penalty (£ per hr)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))	Estimated blocking
17:00-18:00	A	1	0.00	7.86	8.70	90.38	0.00	0.00	0.00	0.00	0.00	0.00	
	B	1	0.00	0.96	8.70	11.10	0.00	0.00	0.00	7.00	0.00	7.00	
	C	1	0.00	3.93	8.70	45.15	0.00	0.00	0.00	0.00	0.00	0.00	
	D	1	0.00	3.78	8.70	43.42	0.00	0.00	0.00	0.00	0.00	0.00	
	Ax	1	0.00	0.00	23.90	0.00	0.00	0.00	0.00	54.00	0.00	54.00	
	Bx	1	0.00	0.00	24.38	0.00	0.00	0.00	0.00	109.00	0.00	109.00	
	Cx	1	0.00	0.00	24.35	0.00	0.00	0.00	0.00	50.00	0.00	50.00	
	Dx	1	0.00	0.00	23.87	0.00	0.00	0.00	0.00	65.00	0.00	65.00	

Traffic Stream Results: Journey times

Time Segment	Arm	Traffic Stream	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
17:00-18:00	A	1	14.30	3.29	4.34	41.44
	B	1	1.50	0.52	2.90	62.02
	C	1	6.75	1.85	3.65	49.35
	D	1	6.35	1.81	3.51	51.22
	Ax	1	29.95	1.00	30.00	16.49
	Bx	1	2.80	0.09	30.00	16.82
	Cx	1	31.92	1.06	30.00	16.80
	Dx	1	15.37	0.51	30.00	16.47

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	Mean Max Queue EoTS (Veh)	Max End of Green Queue EoTS (Veh)	Max End of Red Queue EoTS (Veh)	PCU Factor	Cost of traffic penalties (£ per hr)	Performance Index (£ per hr)
17:00-18:00	A	1	0.00	0.00	✓	0.00	7.86	0.23	6.67	1.00	0.00	42.88
	B	1	0.00	0.00	✓	0.00	0.97	0.03	0.96	1.00	0.00	6.99
	C	1	0.00	0.00	✓	0.00	3.93	0.10	3.66	1.00	0.00	24.55
	D	1	0.00	0.00	✓	0.00	3.78	0.11	3.53	1.00	0.00	24.06
	Ax	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00
	Bx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00
	Cx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00
	Dx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
17:00-18:00	(ALL)	(ALL)	8	50	11000	7	53.68	1.57	10.59	10.59

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))
17:00-18:00	(ALL)	(ALL)	50	50	0		11000	642	8		1183	0.00	7

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Uniform delay (Ped-hr/hr)	Random plus oversat delay (Ped-hr/hr)	Weighted cost of delay (£ per hr)
17:00-18:00	1	1	5.67	53.68	0.75	0.00	10.59
		2	5.67	53.68	0.75	0.00	10.59
	2	1	6.33	53.68	0.75	0.00	10.59
		2	6.33	53.68	0.75	0.00	10.59
	3	1	6.33	53.68	0.75	0.00	10.59
		2	6.33	53.68	0.75	0.00	10.59
	4	1	5.67	53.68	0.75	0.00	10.59
		2	5.67	53.68	0.75	0.00	10.59

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Average storage excess queue (Ped)	Average limit excess queue (Ped)	Excess queue penalty (£ per hr)
17:00-18:00	(ALL)	(ALL)	1.57	10.00	15.69	0.00	0.00	0.00

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Pedestrian Crossings: Journey times

Time Segment	Crossing	Side	Distance travelled (Ped-km/hr)	Time spent (Ped-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
17:00-18:00	1	1	0.40	0.82	0.49	59.34
		2	0.40	0.82	0.49	59.34
	2	1	0.45	0.83	0.54	60.01
		2	0.45	0.83	0.54	60.01
	3	1	0.45	0.83	0.54	60.01
		2	0.45	0.83	0.54	60.01
	4	1	0.40	0.82	0.49	59.34
		2	0.40	0.82	0.49	59.34

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Performance Index (£ per hr)
17:00-18:00	(ALL)	(ALL)	0.00	0.00	1.57	1.00	0.00	10.59

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
2	10/05/2019 10:49:43	10/05/2019 10:49:44	17:00	120	183.16	12.47	48.89	A/1	0	0	A/1	Dx/1	A/

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	49	0	1156	568	20.25	92.34	6.13	98.47

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
17:00-18:00	8	400	56	53.68	84.69	84.69

Network Results: Flows and signals

Time Segment	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))
17:00-18:00	1556	1556	0		49		105	624

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-hr/hr)	Random plus oversat delay (Veh-hr/hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	9.94	28.84	11.99	0.47	177.03	31.43	474.94	14.07	6.13

Network Results: Queues and blocking

Time Segment	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))
17:00-18:00	90.38	0.00	285.00	0.00	285.00

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
17:00-18:00	112.35	16.77	6.70

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	PCU Factor	Cost of traffic penalties (£ per hr)	Controller stream penalties (£ per hr)	Performance Index (£ per hr)
17:00-18:00	0.00	0.00	✓	0.00	1.00	0.00	0.00	183.16

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

		To							
		1	2	3	4	5	6	7	8
From	1	0.0	65.8	65.8	66.2	0.0	0.0	0.0	0.0
	2	68.0	0.0	67.7	68.0	0.0	0.0	0.0	0.0
	3	58.2	57.9	0.0	58.3	0.0	0.0	0.0	0.0
	4	78.8	78.5	78.5	0.0	0.0	0.0	0.0	0.0
	5	0.0	0.0	0.0	0.0	0.0	59.3	60.0	0.0
	6	0.0	0.0	0.0	0.0	59.3	0.0	0.0	60.0
	7	0.0	0.0	0.0	0.0	60.0	0.0	0.0	59.3
	8	0.0	0.0	0.0	0.0	0.0	60.0	59.3	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (Veh/hr)	Pedestrian calculated flow (Ped/hr)	Normal journey time (s)	Pedestrian journey time (s)	Calculated Total Flow (Veh/hr)	Avg journey time (s)
1	1	2	20		65.82		20	65.82
2	1	3	108		65.84		108	65.84
3	1	4	7		66.18		7	66.18
5	2	3	92		67.71		92	67.71
6	2	4	1		68.04		1	68.04
7	2	1	34		68.02		34	68.02
8	3	2	91		57.90		91	57.90
9	3	4	12		58.26		12	58.26
10	3	1	183		58.24		183	58.24
11	4	2	1		78.49		1	78.49
12	4	3	18		78.51		18	78.51
13	4	1	11		78.82		11	78.82
17	8	7		50		59.34	50	59.34
18	8	6		50		60.01	50	60.01
22	5	7		50		60.01	50	60.01
23	5	6		50		59.34	50	59.34
34	6	8		50		60.01	50	60.01
35	6	5		50		59.34	50	59.34
41	7	8		50		59.34	50	59.34
42	7	5		50		60.01	50	60.01

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Final Prediction Table

Traffic Stream Results

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QUEUES
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (Veh)
A	1	(untitled)	1	1	A	286	1800	37	0.00	49	105	41.44	35.44	81.13	7.86
B	1	(untitled)	1	1	D	30	1800	7	7.00	22	350	62.02	56.02	95.48	0.96
C	1	(untitled)	1	1	C	135	1800	23	0.00	36	178	49.35	43.35	86.24	3.93
D	1	(untitled)	1	1	B	127	1800	21	0.00	37	172	51.22	45.22	88.12	3.78
Ax	1	(untitled)				218	Unrestricted	120	54.00	0	Unrestricted	16.49	0.00	0.00	0.00
Bx	1	(untitled)				20	Unrestricted	120	109.00	0	Unrestricted	16.82	0.00	0.00	0.00
Cx	1	(untitled)				228	Unrestricted	120	50.00	0	Unrestricted	16.80	0.00	0.00	0.00
Dx	1	(untitled)				112	Unrestricted	120	65.00	0	Unrestricted	16.47	0.00	0.00	0.00

Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE			PER PED		QUEUES	WEIGHTS	PEN
Pedestrian	Side	Name	Traffic node	Controller stream	Phase	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Ped (s)	Mean max queue (Ped)	Delay weighting (%)	Co tra pen (£ p
1	1	(untitled)	1	1	E	50	11000	7	8	1183	59.34	53.68	1.57	100	0
	2	(untitled)	1	1	E	50	11000	7	8	1183	59.34	53.68	1.57	100	0
2	1	(untitled)	1	1	E	50	11000	7	8	1183	60.01	53.68	1.57	100	0
	2	(untitled)	1	1	E	50	11000	7	8	1183	60.01	53.68	1.57	100	0
3	1	(untitled)	1	1	E	50	11000	7	8	1183	60.01	53.68	1.57	100	0
	2	(untitled)	1	1	E	50	11000	7	8	1183	60.01	53.68	1.57	100	0
4	1	(untitled)	1	1	E	50	11000	7	8	1183	59.34	53.68	1.57	100	0
	2	(untitled)	1	1	E	50	11000	7	8	1183	59.34	53.68	1.57	100	0

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (Veh-hr/hr)	Random plus oversat delay (Veh-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	108.95	10.13	10.75	6.03	0.47	92.34	6.13	0.00	98.47
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	3.40	6.63	0.51	5.96	0.00	84.69	0.00	0.00	84.69
TOTAL	112.35	16.77	6.70	11.99	0.47	177.03	6.13	0.00	183.16

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

TRANSYT 15

Version: 15.5.0.6767
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Filename: Rathmullan Road - Local Road AM.t15
Path: M:\Projects\18\18-014 - Rathmullan Drogheda SHD Planning Application\Design\Civil\Traffic\Junction Modelling\Junction 1 - 21-11-2018 - Rathmullan Road-Local Road\Proposed Signalised Junction
Report generation date: 10/05/2019 10:46:21

»Network Diagrams
«A3 - 2028 (BASE + DEV) - AM : D3 - 2028 (BASE + DEV) - AM* :
»Summary
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»Pedestrian Crossings
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»Data entry - Link
»Results - Pedestrian
»Traffic Stream Results
»Pedestrian Crossing Results
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»Final Prediction Table

File summary

File description

File title	(untitled)
Location	
Site number	
UTCRegion	
Driving side	Left
Date	06/12/2011
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	DOMAIN\f.silva
Description	

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Model and Results

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

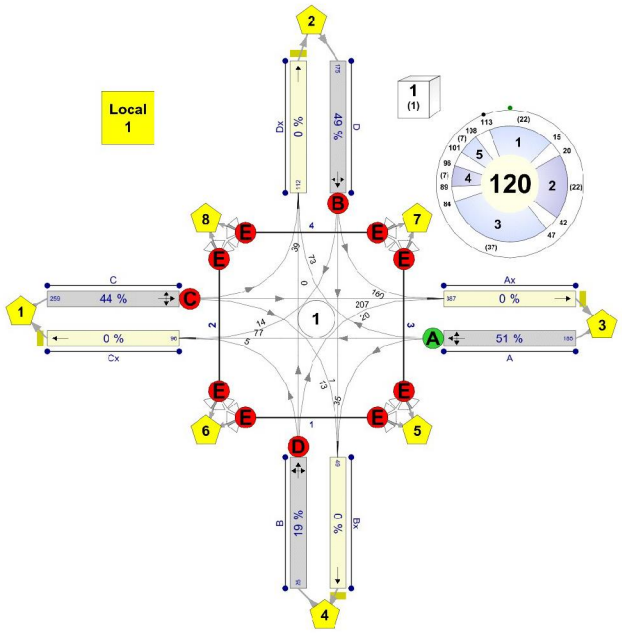
Units

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

Sorting

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

Network Diagrams



(untitled)
Diagram produced using TRANSYT 15.5.0.6767

A3 - 2028 (BASE + DEV) - AM
D3 - 2028 (BASE + 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)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
3	10/05/2019 10:42:00	10/05/2019 10:42:01	08:00	120	199.90	13.58	51.39	A/1	0	0	A/1	Dx/1	A/

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2028 (BASE + DEV) - AM		D3	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2028 (BASE + DEV) - AM				08:00	

Network Options

Network timings

Network cycle time (s)	Restrict to SCOOT cycle times	Time segment length (min)	Number of time segments	Modelled time period (min)
120		60	1	60

Signals options

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

Advanced

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

Traffic options

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

Advanced

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

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Normal Traffic parameters

Dispersion type	Dispersion coefficient
Default	35

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Bus	1.00	70	15	0.47	30	85

Tram parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Tram	1.00	0	0	0.47	100	100

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order
Hill Climb (Fast)	15, 40, -1, 15, 40, 1, -1, 1	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05		✓	1

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
1	(untitled)	

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
A	(untitled)		1
B	(untitled)		1
C	(untitled)		1
D	(untitled)		1
Ax	(untitled)		
Bx	(untitled)		
Cx	(untitled)		
Dx	(untitled)		

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
A	1	(untitled)		✓	50.00	✓	Sum of lanes	1800	✓		Normal	
B	1	(untitled)		✓	50.00	✓	Sum of lanes	1800	✓		Normal	
C	1	(untitled)		✓	50.00	✓	Sum of lanes	1800	✓		Normal	
D	1	(untitled)		✓	50.00	✓	Sum of lanes	1800	✓		Normal	
Ax	1	(untitled)		✓	137.40						Normal	
Bx	1	(untitled)		✓	140.18						Normal	
Cx	1	(untitled)		✓	140.00						Normal	
Dx	1	(untitled)		✓	137.24						Normal	

Lanes

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

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
(ALL)	1	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
(ALL)	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	120

Normal - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	1	100	100

Flows

Arm	Traffic Stream	Total Flow (Veh/hr)	Normal Flow (Veh/hr)
A	1	185	185
B	1	25	25
C	1	259	259
D	1	175	175
Ax	1	387	387
Bx	1	49	49
Cx	1	96	96
Dx	1	112	112

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled
A	1	1	A	
B	1	1	D	
C	1	1	C	
D	1	1	B	

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Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
(ALL)	1	6.00	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	1	1	C/1	Ax/1	16.49	30.00	✓	Straight	Straight Movement
Bx	1	1	A/1	Bx/1	16.82	30.00	✓	Nearside	40.00
Cx	1	1	A/1	Cx/1	16.80	30.00	✓	Straight	Straight Movement
Dx	1	1	C/1	Dx/1	16.47	30.00	✓	Nearside	40.00
Ax	1	2	B/1	Ax/1	16.49	30.00	✓	Offside	55.00
Bx	1	2	D/1	Bx/1	16.82	30.00	✓	Straight	Straight Movement
Cx	1	2	B/1	Cx/1	16.80	30.00	✓	Nearside	45.00
Dx	1	2	A/1	Dx/1	16.47	30.00	✓	Offside	55.00
Ax	1	3	D/1	Ax/1	16.49	30.00	✓	Nearside	40.00
Bx	1	3	C/1	Bx/1	16.82	30.00	✓	Offside	60.00
Cx	1	3	D/1	Cx/1	16.80	30.00	✓	Offside	55.00
Dx	1	3	B/1	Dx/1	16.47	30.00	✓	Straight	Straight Movement

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
1	(untitled)		1		Farside	7.00	4.67	5.40
2	(untitled)		1		Farside	8.00	5.33	5.40
3	(untitled)		1		Farside	8.00	5.33	5.40
4	(untitled)		1		Farside	7.00	4.67	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	E	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(ALL)	11000

Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	100	100		0.00		

Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1	(untitled)	✓	✓	Path Equalisation	✓		✓			✓	1.25		

Normal Input Flows (Veh/hr)

		To							
		1	2	3	4	5	6	7	8
From	1	0	39	207	13	0	0	0	0
	2	14	0	160	1	0	0	0	0
	3	77	73	0	35	0	0	0	0
	4	5	0	20	0	0	0	0	0
	5	0	0	0	0	0	0	0	0
	6	0	0	0	0	0	0	0	0
	7	0	0	0	0	0	0	0	0
	8	0	0	0	0	0	0	0	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows (Veh/hr)

		To							
		1	2	3	4	5	6	7	8
From	1	0	0	0	0	0	0	0	0
	2	0	0	0	0	0	0	0	0
	3	0	0	0	0	0	0	0	0
	4	0	0	0	0	0	0	0	0
	5	0	0	0	0	0	50	50	0
	6	0	0	0	0	50	0	0	50
	7	0	0	0	0	50	0	0	50
	8	0	0	0	0	0	50	50	0

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
1	1	(untitled)	C/1	Cx/1	#0000FF
	2	(untitled)	D/1	Dx/1	#FF0000
	3	(untitled)	A/1	Ax/1	#00FF00
	4	(untitled)	B/1	Bx/1	#FFFF00
	5	(untitled)	3:2E, 1:1E	3:2X, 1:1X	#FF00FF
	6	(untitled)	2:1E, 1:2E	2:1X, 1:2X	#008000
	7	(untitled)	4:2E, 3:1E	4:2X, 3:1X	#FFA500
	8	(untitled)	4:1E, 2:2E	4:1X, 2:2X	#00FFFF

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (Veh/hr)
1	1		1	2	C/1, Dx/1	Normal	39
	2		1	3	C/1, Ax/1	Normal	207
	3		1	4	C/1, Bx/1	Normal	13
	5		2	3	D/1, Ax/1	Normal	160
	6		2	4	D/1, Bx/1	Normal	1
	7		2	1	D/1, Cx/1	Normal	14
	8		3	2	A/1, Dx/1	Normal	73
	9		3	4	A/1, Bx/1	Normal	35
	10		3	1	A/1, Cx/1	Normal	77
	11		4	2	B/1, Dx/1	Normal	0
	12		4	3	B/1, Ax/1	Normal	20
	13		4	1	B/1, Cx/1	Normal	5

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Pedestrian Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Pedestrian calculated flow (Ped/hr)
1	17		8	7	4:1E, 4:2X	Normal	50
	18		8	6	2:2E, 2:1X	Normal	50
	22		5	7	3:2E, 3:1X	Normal	50
	23		5	6	1:1E, 1:2X	Normal	50
	34		6	8	2:1E, 2:2X	Normal	50
	35		6	5	1:2E, 1:1X	Normal	50
	41		7	8	4:2E, 4:1X	Normal	50
	42		7	5	3:1E, 3:2X	Normal	50

Signal Timings

Network Default: 120s cycle time; 120 steps

Controller Stream 1

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)
1	(untitled)		1	NetworkDefault	120

Controller Stream 1 - Properties

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
1	Unspecified						Relative

Controller Stream 1 - Optimisation

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
1	✓	✓	Offsets And Green Splits	✓	

Phases

Controller Stream	Phase	Name	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type	Blackout Time (s)
1	A	(untitled)	7	300	2	3	Traffic	
	B	(untitled)	7	300	2	3	Traffic	
	C	(untitled)	7	300	2	3	Traffic	
	D	(untitled)	7	300	2	3	Traffic	
	E	(untitled)	5	7	0	0	Pedestrian	0

Library Stages

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)
1	1	A	1
	2	B	1
	3	C	1
	4	D	1
	5	E	1

Stage Sequences

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends
1	1	(untitled)	Single	1, 2, 3, 4, 5	15, 42, 84, 96, 108

Intergreen Matrix for Controller Stream 1

		To				
		A	B	C	D	E
From	A		5	5	5	5
	B	5		5	5	5
	C	5	5		5	5
	D	5	5	5		5
	E	5	5	5	5	

Banned Stage transitions for Controller Stream 1

		To				
		1	2	3	4	5
From	1					
	2					
	3					
	4					
	5					

Interstage Matrix for Controller Stream 1

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

Resultant Stages

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
1	1	✓	1	A	113	15	22	1	7
	2	✓	2	B	20	42	22	1	7
	3	✓	3	C	47	84	37	1	7
	4	✓	4	D	89	96	7	1	7
	5	✓	5	E	101	108	7	1	5

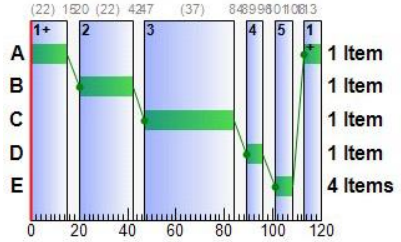
Resultant Phase Green Periods

Controller Stream	Phase	Green period	Is base green period	Start time (s)	End time (s)	Duration (s)
1	A	1	✓	113	15	22
	B	1	✓	20	42	22
	C	1	✓	47	84	37
	D	1	✓	89	96	7
	E	1	✓	101	108	7

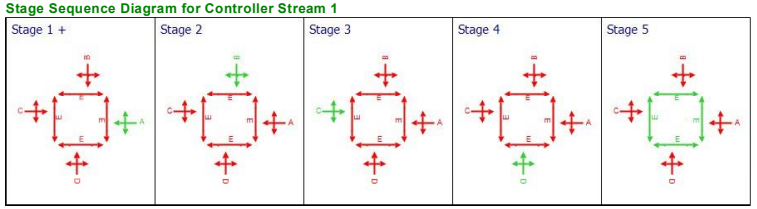
Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
A	1	1	1	A	113	15	22
B	1	1	1	D	89	96	7
C	1	1	1	C	47	84	37
D	1	1	1	B	20	42	22

Phase Timings Diagram for Controller Stream 1



Stage Sequence Diagram for Controller Stream 1



Resultant penalties

Time Segment	Controller stream	Phase min max penalty (£ per hr)	Intergreen broken penalty (£ per hr)	Stage constraint broken penalty (£ per hr)	Cost of controller stream penalties (£ per hr)
08:00-09:00	1	0.00	0.00	0.00	0.00

Results - Link

Results - Traffic Stream

Results - Traffic Stream: Vehicle summary

Time Segment	Arm	Traffic Stream	Name	Phase	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Calculated capacity (Veh/hr)	Degree of saturation (%)	Practical reserve capacity (%)	Mean Delay per Veh (s)	Mean max queue (Veh)	Utilised storage (%)	JourneyTime (s)
08:00-09:00	A	1	(untitled)	A	185	1800	22	360	51	95	48.04	5.72	65.74	54.04
	B	1	(untitled)	D	25	1800	7	135	19	440	55.15	0.80	9.19	61.15
	C	1	(untitled)	C	259	1800	37	585	44	126	34.37	6.94	79.79	40.37
	D	1	(untitled)	B	175	1800	22	360	49	106	47.24	5.38	61.88	53.24
	Ax	1	(untitled)		387	Unrestricted	120	Unrestricted	0	Unrestricted	0.00	0.00	0.00	16.49
	Bx	1	(untitled)		49	Unrestricted	120	Unrestricted	0	Unrestricted	0.00	0.00	0.00	16.82
	Cx	1	(untitled)		96	Unrestricted	120	Unrestricted	0	Unrestricted	0.00	0.00	0.00	16.80
	Dx	1	(untitled)		112	Unrestricted	120	Unrestricted	0	Unrestricted	0.00	0.00	0.00	16.47

Data Entry - Stage Start and End

Resultant Stage

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
1	1	✓	1	A	113	15	22	1	7
	2	✓	2	B	20	42	22	1	7
	3	✓	3	C	47	84	37	1	7
	4	✓	4	D	89	96	7	1	7
	5	✓	5	E	101	108	7	1	5

Data Entry - Phase

Phase

Controller Stream	Phase	Phase	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type
1	A	A	7	300	2	3	Traffic
	B	B	7	300	2	3	Traffic
	C	C	7	300	2	3	Traffic
	D	D	7	300	2	3	Traffic
	E	E	5	7	0	0	Pedestrian

Data Entry - Traffic Stream

Traffic Stream

Arm	Traffic Stream	Auto length	Length (m)	Traffic model	Max queue storage (PCU)	Traffic type	Has Saturation Flow	Is signal controlled	Is give way	Saturation flow source	Saturation flow (PCU/hr)	Delay weighting multiplier (%)	Stop weighting multiplier (%)
A	1	✓	50.00	NetworkDefault	0.00	Normal	✓	✓		Sum of lanes	1800	100	100
B	1	✓	50.00	NetworkDefault	0.00	Normal	✓	✓		Sum of lanes	1800	100	100
C	1	✓	50.00	NetworkDefault	0.00	Normal	✓	✓		Sum of lanes	1800	100	100
D	1	✓	50.00	NetworkDefault	0.00	Normal	✓	✓		Sum of lanes	1800	100	100
Ax	1	✓	137.40	NetworkDefault	0.00	Normal						100	100
Bx	1	✓	140.18	NetworkDefault	0.00	Normal						100	100
Cx	1	✓	140.00	NetworkDefault	0.00	Normal						100	100
Dx	1	✓	137.24	NetworkDefault	0.00	Normal						100	100

Data entry - Link

Results - Pedestrian

Pedestrian Crossings: Pedestrian summary

Time Segment	Pedestrian crossing	Side	Calculated Flow Entering (Ped/hr)	Degree of saturation (%)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)
08:00-09:00	(ALL)	(ALL)	50	8	7	53.68	1.57

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Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (Veh)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	A	1	51	95	185	1800	22	48.04	5.72	65.74	35.05	2.13	37.18
	B	1	19	440	25	1800	7	55.15	0.80	9.19	5.44	0.30	5.74
	C	1	44	126	259	1800	37	34.37	6.94	79.79	35.12	2.57	37.69
	D	1	49	106	175	1800	22	47.24	5.38	61.88	32.61	2.00	34.61
	Ax	1	0	Unrestricted	387	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	Bx	1	0	Unrestricted	49	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	Cx	1	0	Unrestricted	96	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	Dx	1	0	Unrestricted	112	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Calculated sat flow (Veh/hr)	Calculated capacity (Veh/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))
08:00-09:00	A	1	185	185	0		1800	360	51		95	0.00	22
	B	1	25	25	0		1800	135	19		440	0.00	7
	C	1	259	259	0		1800	585	44		126	0.00	37
	D	1	175	175	0		1800	360	49		106	0.00	22
	Ax	1	387	387	0		Unrestricted	Unrestricted	0		Unrestricted	0.90	120
	Bx	1	49	49	0		Unrestricted	Unrestricted	0		Unrestricted	1.03	120
	Cx	1	96	96	0		Unrestricted	Unrestricted	0		Unrestricted	1.14	120
	Dx	1	112	112	0		Unrestricted	Unrestricted	0		Unrestricted	1.02	120

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-hr/hr)	Random plus oversat delay (Veh-hr/hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	A	1	6.00	48.04	2.20	0.27	35.05	91.66	161.59	7.99	2.13
	B	1	6.00	55.15	0.36	0.02	5.44	94.85	23.09	0.63	0.30
	C	1	6.00	34.37	2.30	0.18	35.12	79.25	200.02	5.23	2.57
	D	1	6.00	47.24	2.07	0.23	32.61	91.07	152.60	6.78	2.00
	Ax	1	16.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Bx	1	16.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Cx	1	16.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Dx	1	16.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (Veh)	Mean max queue (Veh)	Max queue storage (Veh)	Utilised storage (%)	Average storage excess queue (Veh)	Average limit excess queue (Veh)	Excess queue penalty (£ per hr)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))	Estimated blocking
08:00-09:00	A	1	0.00	5.72	8.70	65.74	0.00	0.00	0.00	0.00	0.00	0.00	
	B	1	0.00	0.80	8.70	9.19	0.00	0.00	0.00	7.00	0.00	7.00	
	C	1	0.00	6.94	8.70	79.79	0.00	0.00	0.00	0.00	0.00	0.00	
	D	1	0.00	5.38	8.70	61.88	0.00	0.00	0.00	0.00	0.00	0.00	
	Ax	1	0.00	0.00	23.90	0.00	0.00	0.00	0.00	39.00	0.00	39.00	
	Bx	1	0.00	0.00	24.38	0.00	0.00	0.00	0.00	88.00	0.00	88.00	
	Cx	1	0.00	0.00	24.35	0.00	0.00	0.00	0.00	74.00	0.00	74.00	
	Dx	1	0.00	0.00	23.87	0.00	0.00	0.00	0.00	69.00	0.00	69.00	

Traffic Stream Results: Journey times

Time Segment	Arm	Traffic Stream	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	A	1	9.25	2.78	3.33	54.04
	B	1	1.25	0.42	2.94	61.15
	C	1	12.95	2.90	4.46	40.37
	D	1	8.75	2.59	3.38	53.24
	Ax	1	53.17	1.77	30.00	16.49
	Bx	1	6.87	0.23	30.00	16.82
	Cx	1	13.44	0.45	30.00	16.80
	Dx	1	15.37	0.51	30.00	16.47

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	Mean Max Queue EoTS (Veh)	Max End of Green Queue EoTS (Veh)	Max End of Red Queue EoTS (Veh)	PCU Factor	Cost of traffic penalties (£ per hr)	Performance Index (£ per hr)
08:00-09:00	A	1	0.00	0.00	✓	0.00	5.72	0.27	5.20	1.00	0.00	37.18
	B	1	0.00	0.00	✓	0.00	0.80	0.02	0.79	1.00	0.00	5.74
	C	1	0.00	0.00	✓	0.00	6.94	0.18	6.00	1.00	0.00	37.69
	D	1	0.00	0.00	✓	0.00	5.38	0.23	4.90	1.00	0.00	34.61
	Ax	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00
	Bx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00
	Cx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00
	Dx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	8	50	11000	7	53.68	1.57	10.59	10.59

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))
08:00-09:00	(ALL)	(ALL)	50	50	0		11000	642	8		1183	0.00	7

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Uniform delay (Ped-hr/hr)	Random plus oversat delay (Ped-hr/hr)	Weighted cost of delay (£ per hr)
08:00-09:00	1	1	5.67	53.68	0.75	0.00	10.59
		2	5.67	53.68	0.75	0.00	10.59
	2	1	6.33	53.68	0.75	0.00	10.59
		2	6.33	53.68	0.75	0.00	10.59
	3	1	6.33	53.68	0.75	0.00	10.59
		2	6.33	53.68	0.75	0.00	10.59
	4	1	5.67	53.68	0.75	0.00	10.59
		2	5.67	53.68	0.75	0.00	10.59

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Average storage excess queue (Ped)	Average limit excess queue (Ped)	Excess queue penalty (£ per hr)
08:00-09:00	(ALL)	(ALL)	1.57	10.00	15.69	0.00	0.00	0.00

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Pedestrian Crossings: Journey times

Time Segment	Crossing	Side	Distance travelled (Ped-km/hr)	Time spent (Ped-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	1	1	0.40	0.82	0.49	59.34
		2	0.40	0.82	0.49	59.34
	2	1	0.45	0.83	0.54	60.01
		2	0.45	0.83	0.54	60.01
	3	1	0.45	0.83	0.54	60.01
		2	0.45	0.83	0.54	60.01
	4	1	0.40	0.82	0.49	59.34
		2	0.40	0.82	0.49	59.34

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	0.00	1.57	1.00	0.00	10.59

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
3	10/05/2019 10:42:00	10/05/2019 10:42:01	08:00	120	199.90	13.58	51.39	A/1	0	0	A/1	Dx/1	A/

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	51	0	1288	568	21.30	108.22	7.00	115.21

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	8	400	56	53.68	84.69	84.69

Network Results: Flows and signals

Time Segment	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))
08:00-09:00	1688	1688	0		51		95	624

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-hr/hr)	Random plus oversat delay (Veh-hr/hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	10.03	28.97	12.89	0.69	192.90	33.05	537.30	20.62	7.00

Network Results: Queues and blocking

Time Segment	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))
08:00-09:00	79.79	0.00	277.00	0.00	277.00

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
08:00-09:00	124.45	18.29	6.81

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	PCU Factor	Cost of traffic penalties (£ per hr)	Controller stream penalties (£ per hr)	Performance Index (£ per hr)
08:00-09:00	0.00	0.00	✓	0.00	1.00	0.00	0.00	199.90

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

		To							
		1	2	3	4	5	6	7	8
From	1	0.0	56.8	56.9	57.2	0.0	0.0	0.0	0.0
	2	70.0	0.0	69.7	70.1	0.0	0.0	0.0	0.0
	3	70.8	70.5	0.0	70.9	0.0	0.0	0.0	0.0
	4	78.0	0.0	77.6	0.0	0.0	0.0	0.0	0.0
	5	0.0	0.0	0.0	0.0	0.0	59.3	60.0	0.0
	6	0.0	0.0	0.0	0.0	59.3	0.0	0.0	60.0
	7	0.0	0.0	0.0	0.0	60.0	0.0	0.0	59.3
	8	0.0	0.0	0.0	0.0	0.0	60.0	59.3	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (Veh/hr)	Pedestrian calculated flow (Ped/hr)	Normal journey time (s)	Pedestrian journey time (s)	Calculated Total Flow (Veh/hr)	Avg journey time (s)
1	1	2	39		56.84		39	56.84
2	1	3	207		56.86		207	56.86
3	1	4	13		57.20		13	57.20
5	2	3	160		69.73		160	69.73
6	2	4	1		70.06		1	70.06
7	2	1	14		70.04		14	70.04
8	3	2	73		70.51		73	70.51
9	3	4	35		70.86		35	70.86
10	3	1	77		70.84		77	70.84
11	4	2	0		0.00		0	0.00
12	4	3	20		77.64		20	77.64
13	4	1	5		77.95		5	77.95
17	8	7		50		59.34	50	59.34
18	8	6		50		60.01	50	60.01
22	5	7		50		60.01	50	60.01
23	5	6		50		59.34	50	59.34
34	6	8		50		60.01	50	60.01
35	6	5		50		59.34	50	59.34
41	7	8		50		59.34	50	59.34
42	7	5		50		60.01	50	60.01

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Final Prediction Table

Traffic Stream Results

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QUEUES
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (Veh)
A	1	(untitled)	1	1	A	185	1800	22	0.00	51	95	54.04	48.04	91.66	5.72
B	1	(untitled)	1	1	D	25	1800	7	7.00	19	440	61.15	55.15	94.85	0.80
C	1	(untitled)	1	1	C	259	1800	37	0.00	44	126	40.37	34.37	79.25	6.94
D	1	(untitled)	1	1	B	175	1800	22	0.00	49	106	53.24	47.24	91.07	5.38
Ax	1	(untitled)				387	Unrestricted	120	39.00	0	Unrestricted	16.49	0.00	0.00	0.00
Bx	1	(untitled)				49	Unrestricted	120	88.00	0	Unrestricted	16.82	0.00	0.00	0.00
Cx	1	(untitled)				96	Unrestricted	120	74.00	0	Unrestricted	16.80	0.00	0.00	0.00
Dx	1	(untitled)				112	Unrestricted	120	69.00	0	Unrestricted	16.47	0.00	0.00	0.00

Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE			PER PED		QUEUES	WEIGHTS	PEN
Pedestrian	Side	Name	Traffic node	Controller stream	Phase	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Ped (s)	Mean max queue (Ped)	Delay weighting (%)	Co tra pen (£ p
1	1	(untitled)	1	1	E	50	11000	7	8	1183	59.34	53.68	1.57	100	0
	2	(untitled)	1	1	E	50	11000	7	8	1183	59.34	53.68	1.57	100	0
2	1	(untitled)	1	1	E	50	11000	7	8	1183	60.01	53.68	1.57	100	0
	2	(untitled)	1	1	E	50	11000	7	8	1183	60.01	53.68	1.57	100	0
3	1	(untitled)	1	1	E	50	11000	7	8	1183	60.01	53.68	1.57	100	0
	2	(untitled)	1	1	E	50	11000	7	8	1183	60.01	53.68	1.57	100	0
4	1	(untitled)	1	1	E	50	11000	7	8	1183	59.34	53.68	1.57	100	0
	2	(untitled)	1	1	E	50	11000	7	8	1183	59.34	53.68	1.57	100	0

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (Veh-hr/hr)	Random plus oversat delay (Veh-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	121.05	11.66	10.39	6.93	0.69	108.22	7.00	0.00	115.21
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	3.40	6.63	0.51	5.96	0.00	84.69	0.00	0.00	84.69
TOTAL	124.45	18.29	6.81	12.89	0.69	192.90	7.00	0.00	199.90

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

TRANSYT 15

Version: 15.5.0.6767
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Filename: Rathmullan Road - Local Road PM.t15
Path: M:\Projects\18\18-014 - Rathmullan Drogheda SHD Planning Application\Design\Civil\Traffic\Junction Modelling\Junction 1 - 21-11-2018 - Rathmullan Road-Local Road\Proposed Signalised Junction
Report generation date: 10/05/2019 10:51:41

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«A3 - 2028 (BASE + DEV) - PM : D3 - 2028 (BASE + DEV) - PM* :
»Summary
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»Pedestrian Crossing Results
»Network Results
»Point to Point Journey Time
»Final Prediction Table

File summary

File description

File title	(untitled)
Location	
Site number	
UTCRegion	
Driving side	Left
Date	06/12/2011
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	DOMAIN\f.silva
Description	

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Model and Results

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

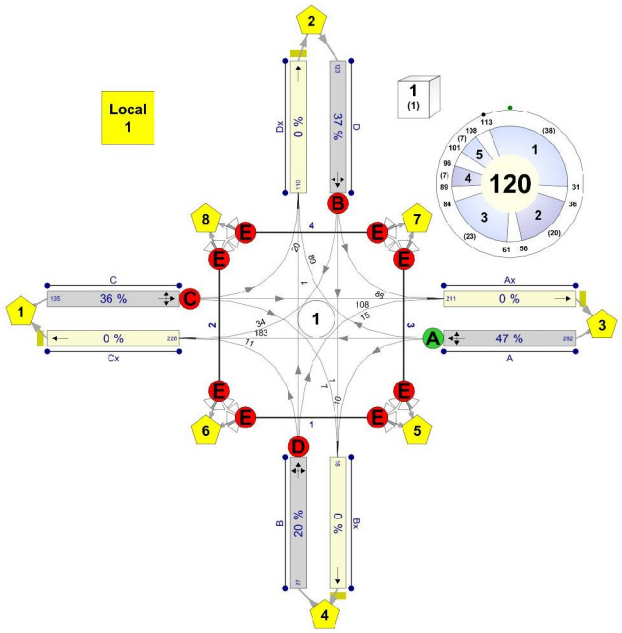
Units

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

Sorting

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

Network Diagrams



(untitled)
Diagram produced using TRANSYT 15.5.0.6767

A3 - 2028 (BASE + DEV) - PM
D3 - 2028 (BASE + 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)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
3	10/05/2019 10:49:44	10/05/2019 10:49:45	17:00	120	180.18	12.27	47.00	A/1	0	0	A/1	Dx/1	A/

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2028 (BASE + DEV) - PM		D3	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2028 (BASE + DEV) - PM				17:00	

Network Options

Network timings

Network cycle time (s)	Restrict to SCOOT cycle times	Time segment length (min)	Number of time segments	Modelled time period (min)
120		60	1	60

Signals options

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

Advanced

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

Traffic options

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

Advanced

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

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Normal Traffic parameters

Dispersion type	Dispersion coefficient
Default	35

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Bus	1.00	70	15	0.47	30	85

Tram parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Tram	1.00	0	0	0.47	100	100

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order
Hill Climb (Fast)	15, 40, -1, 15, 40, 1, -1, 1	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05		✓	1

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
1	(untitled)	

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
A	(untitled)		1
B	(untitled)		1
C	(untitled)		1
D	(untitled)		1
Ax	(untitled)		
Bx	(untitled)		
Cx	(untitled)		
Dx	(untitled)		

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
A	1	(untitled)		✓	50.00	✓	Sum of lanes	1800	✓		Normal	
B	1	(untitled)		✓	50.00	✓	Sum of lanes	1800	✓		Normal	
C	1	(untitled)		✓	50.00	✓	Sum of lanes	1800	✓		Normal	
D	1	(untitled)		✓	50.00	✓	Sum of lanes	1800	✓		Normal	
Ax	1	(untitled)		✓	137.40						Normal	
Bx	1	(untitled)		✓	140.18						Normal	
Cx	1	(untitled)		✓	140.00						Normal	
Dx	1	(untitled)		✓	137.24						Normal	

Lanes

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

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
(ALL)	1	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
(ALL)	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	120

Normal - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	1	100	100

Flows

Arm	Traffic Stream	Total Flow (Veh/hr)	Normal Flow (Veh/hr)
A	1	282	282
B	1	27	27
C	1	135	135
D	1	123	123
Ax	1	211	211
Bx	1	18	18
Cx	1	228	228
Dx	1	110	110

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled
A	1	1	A	
B	1	1	D	
C	1	1	C	
D	1	1	B	

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Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
(ALL)	1	6.00	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	1	1	C/1	Ax/1	16.49	30.00	✓	Straight	Straight Movement
Bx	1	1	A/1	Bx/1	16.82	30.00	✓	Nearside	40.00
Cx	1	1	A/1	Cx/1	16.80	30.00	✓	Straight	Straight Movement
Dx	1	1	C/1	Dx/1	16.47	30.00	✓	Nearside	40.00
Ax	1	2	B/1	Ax/1	16.49	30.00	✓	Offside	55.00
Bx	1	2	D/1	Bx/1	16.82	30.00	✓	Straight	Straight Movement
Cx	1	2	B/1	Cx/1	16.80	30.00	✓	Nearside	45.00
Dx	1	2	A/1	Dx/1	16.47	30.00	✓	Offside	55.00
Ax	1	3	D/1	Ax/1	16.49	30.00	✓	Nearside	40.00
Bx	1	3	C/1	Bx/1	16.82	30.00	✓	Offside	60.00
Cx	1	3	D/1	Cx/1	16.80	30.00	✓	Offside	55.00
Dx	1	3	B/1	Dx/1	16.47	30.00	✓	Straight	Straight Movement

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
1	(untitled)		1		Farside	7.00	4.67	5.40
2	(untitled)		1		Farside	8.00	5.33	5.40
3	(untitled)		1		Farside	8.00	5.33	5.40
4	(untitled)		1		Farside	7.00	4.67	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	E	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(ALL)	11000

Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	100	100		0.00		

Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1	(untitled)	✓	✓	Path Equalisation	✓		✓			✓	1.25		

Normal Input Flows (Veh/hr)

		To							
		1	2	3	4	5	6	7	8
From	1	0	20	108	7	0	0	0	0
	2	34	0	88	1	0	0	0	0
	3	183	89	0	10	0	0	0	0
	4	11	1	15	0	0	0	0	0
	5	0	0	0	0	0	0	0	0
	6	0	0	0	0	0	0	0	0
	7	0	0	0	0	0	0	0	0
	8	0	0	0	0	0	0	0	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows (Veh/hr)

		To							
		1	2	3	4	5	6	7	8
From	1	0	0	0	0	0	0	0	0
	2	0	0	0	0	0	0	0	0
	3	0	0	0	0	0	0	0	0
	4	0	0	0	0	0	0	0	0
	5	0	0	0	0	0	50	50	0
	6	0	0	0	0	50	0	0	50
	7	0	0	0	0	50	0	0	50
	8	0	0	0	0	0	50	50	0

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
1	1	(untitled)	C/1	Cx/1	#0000FF
	2	(untitled)	D/1	Dx/1	#FF0000
	3	(untitled)	A/1	Ax/1	#00FF00
	4	(untitled)	B/1	Bx/1	#FFFF00
	5	(untitled)	3:2E, 1:1E	3:2X, 1:1X	#FF00FF
	6	(untitled)	2:1E, 1:2E	2:1X, 1:2X	#008000
	7	(untitled)	4:2E, 3:1E	4:2X, 3:1X	#FFA500
	8	(untitled)	4:1E, 2:2E	4:1X, 2:2X	#00FFFF

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (Veh/hr)
1	1		1	2	C/1, Dx/1	Normal	20
	2		1	3	C/1, Ax/1	Normal	108
	3		1	4	C/1, Bx/1	Normal	7
	5		2	3	D/1, Ax/1	Normal	88
	6		2	4	D/1, Bx/1	Normal	1
	7		2	1	D/1, Cx/1	Normal	34
	8		3	2	A/1, Dx/1	Normal	89
	9		3	4	A/1, Bx/1	Normal	10
	10		3	1	A/1, Cx/1	Normal	183
	11		4	2	B/1, Dx/1	Normal	1
	12		4	3	B/1, Ax/1	Normal	15
	13		4	1	B/1, Cx/1	Normal	11

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Pedestrian Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Pedestrian calculated flow (Ped/hr)
1	17		8	7	4:1E, 4:2X	Normal	50
	18		8	6	2:2E, 2:1X	Normal	50
	22		5	7	3:2E, 3:1X	Normal	50
	23		5	6	1:1E, 1:2X	Normal	50
	34		6	8	2:1E, 2:2X	Normal	50
	35		6	5	1:2E, 1:1X	Normal	50
	41		7	8	4:2E, 4:1X	Normal	50
	42		7	5	3:1E, 3:2X	Normal	50

Signal Timings

Network Default: 120s cycle time; 120 steps

Controller Stream 1

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)
1	(untitled)		1	NetworkDefault	120

Controller Stream 1 - Properties

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
1	Unspecified						Relative

Controller Stream 1 - Optimisation

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
1	✓	✓	Offsets And Green Splits	✓	

Phases

Controller Stream	Phase	Name	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type	Blackout Time (s)
1	A	(untitled)	7	300	2	3	Traffic	
	B	(untitled)	7	300	2	3	Traffic	
	C	(untitled)	7	300	2	3	Traffic	
	D	(untitled)	7	300	2	3	Traffic	
	E	(untitled)	5	7	0	0	Pedestrian	0

Library Stages

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)
1	1	A	1
	2	B	1
	3	C	1
	4	D	1
	5	E	1

Stage Sequences

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends
1	1	(untitled)	Single	1, 2, 3, 4, 5	31, 56, 84, 96, 108

Intergreen Matrix for Controller Stream 1

		To				
		A	B	C	D	E
From	A		5	5	5	5
	B	5		5	5	5
	C	5	5		5	5
	D	5	5	5		5
	E	5	5	5	5	

Banned Stage transitions for Controller Stream 1

		To				
		1	2	3	4	5
From	1					
	2					
	3					
	4					
	5					

Interstage Matrix for Controller Stream 1

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

Resultant Stages

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
1	1	✓	1	A	113	31	38	1	7
	2	✓	2	B	36	56	20	1	7
	3	✓	3	C	61	84	23	1	7
	4	✓	4	D	89	96	7	1	7
	5	✓	5	E	101	108	7	1	5

Resultant Phase Green Periods

Controller Stream	Phase	Green period	Is base green period	Start time (s)	End time (s)	Duration (s)
1	A	1	✓	113	31	38
	B	1	✓	36	56	20
	C	1	✓	61	84	23
	D	1	✓	89	96	7
	E	1	✓	101	108	7

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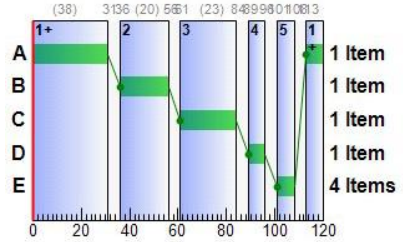
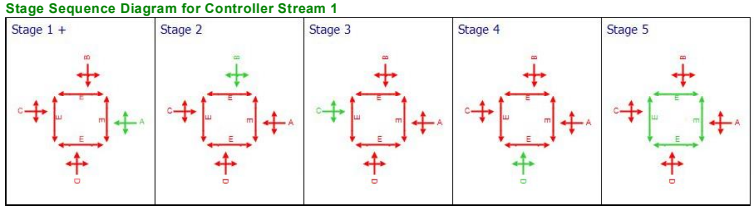
Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
A	1	1	1	A	113	31	38
B	1	1	1	D	89	96	7
C	1	1	1	C	61	84	23
D	1	1	1	B	36	56	20

Phase Timings Diagram for Controller Stream 1



Stage Sequence Diagram for Controller Stream 1



Resultant penalties

Time Segment	Controller stream	Phase min max penalty (£ per hr)	Intergreen broken penalty (£ per hr)	Stage constraint broken penalty (£ per hr)	Cost of controller stream penalties (£ per hr)
17:00-18:00	1	0.00	0.00	0.00	0.00

Results - Link

Results - Traffic Stream

Results - Traffic Stream: Vehicle summary

Time Segment	Arm	Traffic Stream	Name	Phase	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Calculated capacity (Veh/hr)	Degree of saturation (%)	Practical reserve capacity (%)	Mean Delay per Veh (s)	Mean max queue (Veh)	Utilised storage (%)	JourneyTime (s)
17:00-18:00	A	1	(untitled)	A	282	1800	38	600	47	113	34.27	7.57	87.06	40.27
	B	1	(untitled)	D	27	1800	7	135	20	400	55.50	0.86	9.95	61.50
	C	1	(untitled)	C	135	1800	23	375	36	178	43.35	3.93	45.15	49.35
	D	1	(untitled)	B	123	1800	20	330	37	168	46.19	3.70	42.52	52.19
	Ax	1	(untitled)		211	Unrestricted	120	Unrestricted	0	Unrestricted	0.00	0.00	0.00	16.49
	Bx	1	(untitled)		18	Unrestricted	120	Unrestricted	0	Unrestricted	0.00	0.00	0.00	16.82
	Cx	1	(untitled)		228	Unrestricted	120	Unrestricted	0	Unrestricted	0.00	0.00	0.00	16.80
	Dx	1	(untitled)		110	Unrestricted	120	Unrestricted	0	Unrestricted	0.00	0.00	0.00	16.47

Data Entry - Stage Start and End

Resultant Stage

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
1	1	✓	1	A	113	31	38	1	7
	2	✓	2	B	36	56	20	1	7
	3	✓	3	C	61	84	23	1	7
	4	✓	4	D	89	96	7	1	7
	5	✓	5	E	101	108	7	1	5

Data Entry - Phase

Phase

Controller Stream	Phase	Phase	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type
1	A	A	7	300	2	3	Traffic
	B	B	7	300	2	3	Traffic
	C	C	7	300	2	3	Traffic
	D	D	7	300	2	3	Traffic
	E	E	5	7	0	0	Pedestrian

Data Entry - Traffic Stream

Traffic Stream

Arm	Traffic Stream	Auto length	Length (m)	Traffic model	Max queue storage (PCU)	Traffic type	Has Saturation Flow	Is signal controlled	Is give way	Saturation flow source	Saturation flow (PCU/hr)	Delay weighting multiplier (%)	Stop weighting multiplier (%)
A	1	✓	50.00	NetworkDefault	0.00	Normal	✓	✓		Sum of lanes	1800	100	100
B	1	✓	50.00	NetworkDefault	0.00	Normal	✓	✓		Sum of lanes	1800	100	100
C	1	✓	50.00	NetworkDefault	0.00	Normal	✓	✓		Sum of lanes	1800	100	100
D	1	✓	50.00	NetworkDefault	0.00	Normal	✓	✓		Sum of lanes	1800	100	100
Ax	1	✓	137.40	NetworkDefault	0.00	Normal						100	100
Bx	1	✓	140.18	NetworkDefault	0.00	Normal						100	100
Cx	1	✓	140.00	NetworkDefault	0.00	Normal						100	100
Dx	1	✓	137.24	NetworkDefault	0.00	Normal						100	100

Data entry - Link

Results - Pedestrian

Pedestrian Crossings: Pedestrian summary

Time Segment	Pedestrian crossing	Side	Calculated Flow Entering (Ped/hr)	Degree of saturation (%)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)
17:00-18:00	(ALL)	(ALL)	50	8	7	53.68	1.57

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Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (Veh)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	A	1	47	113	282	1800	38	34.27	7.57	87.06	38.12	2.81	40.93
	B	1	20	400	27	1800	7	55.50	0.86	9.95	5.91	0.32	6.23
	C	1	36	178	135	1800	23	43.35	3.93	45.15	23.09	1.46	24.55
	D	1	37	168	123	1800	20	46.19	3.70	42.52	22.41	1.37	23.78
	Ax	1	0	Unrestricted	211	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	Bx	1	0	Unrestricted	18	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	Cx	1	0	Unrestricted	228	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	Dx	1	0	Unrestricted	110	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Calculated sat flow (Veh/hr)	Calculated capacity (Veh/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))
17:00-18:00	A	1	282	282	0		1800	600	47		113	0.00	38
	B	1	27	27	0		1800	135	20		400	0.00	7
	C	1	135	135	0		1800	375	36		178	0.00	23
	D	1	123	123	0		1800	330	37		168	0.00	20
	Ax	1	211	211	0		Unrestricted	Unrestricted	0		Unrestricted	1.06	120
	Bx	1	18	18	0		Unrestricted	Unrestricted	0		Unrestricted	0.86	120
	Cx	1	228	228	0		Unrestricted	Unrestricted	0		Unrestricted	0.95	120
	Dx	1	110	110	0		Unrestricted	Unrestricted	0		Unrestricted	0.97	120

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-hr/hr)	Random plus oversat delay (Veh-hr/hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	A	1	6.00	34.27	2.48	0.21	38.12	79.47	217.91	6.19	2.81
	B	1	6.00	55.50	0.39	0.02	5.91	95.09	24.93	0.74	0.32
	C	1	6.00	43.35	1.52	0.10	23.09	86.24	113.42	3.01	1.46
	D	1	6.00	46.19	1.47	0.11	22.41	88.99	106.18	3.28	1.37
	Ax	1	16.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Bx	1	16.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Cx	1	16.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Dx	1	16.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (Veh)	Mean max queue (Veh)	Max queue storage (Veh)	Utilised storage (%)	Average storage excess queue (Veh)	Average limit excess queue (Veh)	Excess queue penalty (£ per hr)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))	Estimated blocking
17:00-18:00	A	1	0.00	7.57	8.70	87.06	0.00	0.00	0.00	0.00	0.00	0.00	
	B	1	0.00	0.86	8.70	9.95	0.00	0.00	0.00	7.00	0.00	7.00	
	C	1	0.00	3.93	8.70	45.15	0.00	0.00	0.00	0.00	0.00	0.00	
	D	1	0.00	3.70	8.70	42.52	0.00	0.00	0.00	0.00	0.00	0.00	
	Ax	1	0.00	0.00	23.90	0.00	0.00	0.00	0.00	56.00	0.00	56.00	
	Bx	1	0.00	0.00	24.38	0.00	0.00	0.00	0.00	117.00	0.00	117.00	
	Cx	1	0.00	0.00	24.35	0.00	0.00	0.00	0.00	49.00	0.00	49.00	
	Dx	1	0.00	0.00	23.87	0.00	0.00	0.00	0.00	64.00	0.00	64.00	

Traffic Stream Results: Journey times

Time Segment	Arm	Traffic Stream	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
17:00-18:00	A	1	14.10	3.15	4.47	40.27
	B	1	1.35	0.46	2.93	61.50
	C	1	6.75	1.85	3.65	49.35
	D	1	6.15	1.78	3.45	52.19
	Ax	1	28.99	0.97	30.00	16.49
	Bx	1	2.52	0.08	30.00	16.82
	Cx	1	31.92	1.06	30.00	16.80
	Dx	1	15.10	0.50	30.00	16.47

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	Mean Max Queue EoTS (Veh)	Max End of Green Queue EoTS (Veh)	Max End of Red Queue EoTS (Veh)	PCU Factor	Cost of traffic penalties (£ per hr)	Performance Index (£ per hr)
17:00-18:00	A	1	0.00	0.00	✓	0.00	7.57	0.21	6.47	1.00	0.00	40.93
	B	1	0.00	0.00	✓	0.00	0.86	0.02	0.86	1.00	0.00	6.23
	C	1	0.00	0.00	✓	0.00	3.93	0.10	3.66	1.00	0.00	24.55
	D	1	0.00	0.00	✓	0.00	3.70	0.11	3.46	1.00	0.00	23.78
	Ax	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00
	Bx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00
	Cx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00
	Dx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
17:00-18:00	(ALL)	(ALL)	8	50	11000	7	53.68	1.57	10.59	10.59

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))
17:00-18:00	(ALL)	(ALL)	50	50	0		11000	642	8		1183	0.00	7

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Uniform delay (Ped-hr/hr)	Random plus oversat delay (Ped-hr/hr)	Weighted cost of delay (£ per hr)
17:00-18:00	1	1	5.67	53.68	0.75	0.00	10.59
		2	5.67	53.68	0.75	0.00	10.59
	2	1	6.33	53.68	0.75	0.00	10.59
		2	6.33	53.68	0.75	0.00	10.59
	3	1	6.33	53.68	0.75	0.00	10.59
		2	6.33	53.68	0.75	0.00	10.59
	4	1	5.67	53.68	0.75	0.00	10.59
		2	5.67	53.68	0.75	0.00	10.59

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Average storage excess queue (Ped)	Average limit excess queue (Ped)	Excess queue penalty (£ per hr)
17:00-18:00	(ALL)	(ALL)	1.57	10.00	15.69	0.00	0.00	0.00

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Pedestrian Crossings: Journey times

Time Segment	Crossing	Side	Distance travelled (Ped-km/hr)	Time spent (Ped-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
17:00-18:00	1	1	0.40	0.82	0.49	59.34
		2	0.40	0.82	0.49	59.34
	2	1	0.45	0.83	0.54	60.01
		2	0.45	0.83	0.54	60.01
	3	1	0.45	0.83	0.54	60.01
		2	0.45	0.83	0.54	60.01
	4	1	0.40	0.82	0.49	59.34
		2	0.40	0.82	0.49	59.34

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Performance Index (£ per hr)
17:00-18:00	(ALL)	(ALL)	0.00	0.00	1.57	1.00	0.00	10.59

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
3	10/05/2019 10:49:44	10/05/2019 10:49:45	17:00	120	180.18	12.27	47.00	A/1	0	0	A/1	Dx/1	A/

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	47	0	1134	568	20.01	89.53	5.96	95.49

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
17:00-18:00	8	400	56	53.68	84.69	84.69

Network Results: Flows and signals

Time Segment	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))
17:00-18:00	1534	1534	0		47		113	624

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-hr/hr)	Random plus oversat delay (Veh-hr/hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	9.93	28.79	11.83	0.44	174.21	31.01	462.44	13.23	5.96

Network Results: Queues and blocking

Time Segment	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))
17:00-18:00	87.06	0.00	293.00	0.00	293.00

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
17:00-18:00	110.28	16.50	6.68

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	PCU Factor	Cost of traffic penalties (£ per hr)	Controller stream penalties (£ per hr)	Performance Index (£ per hr)
17:00-18:00	0.00	0.00	✓	0.00	1.00	0.00	0.00	180.18

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

		To							
		1	2	3	4	5	6	7	8
From	1	0.0	65.8	65.8	66.2	0.0	0.0	0.0	0.0
	2	69.0	0.0	68.7	69.0	0.0	0.0	0.0	0.0
	3	57.1	56.7	0.0	57.1	0.0	0.0	0.0	0.0
	4	78.3	78.0	78.0	0.0	0.0	0.0	0.0	0.0
	5	0.0	0.0	0.0	0.0	0.0	59.3	60.0	0.0
	6	0.0	0.0	0.0	0.0	59.3	0.0	0.0	60.0
	7	0.0	0.0	0.0	0.0	60.0	0.0	0.0	59.3
	8	0.0	0.0	0.0	0.0	0.0	60.0	59.3	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (Veh/hr)	Pedestrian calculated flow (Ped/hr)	Normal journey time (s)	Pedestrian journey time (s)	Calculated Total Flow (Veh/hr)	Avg journey time (s)
1	1	2	20		65.82		20	65.82
2	1	3	108		65.84		108	65.84
3	1	4	7		66.18		7	66.18
5	2	3	88		68.67		88	68.67
6	2	4	1		69.01		1	69.01
7	2	1	34		68.99		34	68.99
8	3	2	89		56.74		89	56.74
9	3	4	10		57.09		10	57.09
10	3	1	183		57.07		183	57.07
11	4	2	1		77.97		1	77.97
12	4	3	15		77.98		15	77.98
13	4	1	11		78.30		11	78.30
17	8	7		50		59.34	50	59.34
18	8	6		50		60.01	50	60.01
22	5	7		50		60.01	50	60.01
23	5	6		50		59.34	50	59.34
34	6	8		50		60.01	50	60.01
35	6	5		50		59.34	50	59.34
41	7	8		50		59.34	50	59.34
42	7	5		50		60.01	50	60.01

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Final Prediction Table

Traffic Stream Results

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QUEUES
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (Veh)
A	1	(untitled)	1	1	A	282	1800	38	0.00	47	113	40.27	34.27	79.47	7.57
B	1	(untitled)	1	1	D	27	1800	7	7.00	20	400	61.50	55.50	95.09	0.86
C	1	(untitled)	1	1	C	135	1800	23	0.00	36	178	49.35	43.35	86.24	3.93
D	1	(untitled)	1	1	B	123	1800	20	0.00	37	168	52.19	46.19	88.99	3.70
Ax	1	(untitled)				211	Unrestricted	120	56.00	0	Unrestricted	16.49	0.00	0.00	0.00
Bx	1	(untitled)				18	Unrestricted	120	117.00	0	Unrestricted	16.82	0.00	0.00	0.00
Cx	1	(untitled)				228	Unrestricted	120	49.00	0	Unrestricted	16.80	0.00	0.00	0.00
Dx	1	(untitled)				110	Unrestricted	120	64.00	0	Unrestricted	16.47	0.00	0.00	0.00

Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE			PER PED		QUEUES	WEIGHTS	PEN
Pedestrian	Side	Name	Traffic node	Controller stream	Phase	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Ped (s)	Mean max queue (Ped)	Delay weighting (%)	Co tra pen (£ p
1	1	(untitled)	1	1	E	50	11000	7	8	1183	59.34	53.68	1.57	100	0
	2	(untitled)	1	1	E	50	11000	7	8	1183	59.34	53.68	1.57	100	0
2	1	(untitled)	1	1	E	50	11000	7	8	1183	60.01	53.68	1.57	100	0
	2	(untitled)	1	1	E	50	11000	7	8	1183	60.01	53.68	1.57	100	0
3	1	(untitled)	1	1	E	50	11000	7	8	1183	60.01	53.68	1.57	100	0
	2	(untitled)	1	1	E	50	11000	7	8	1183	60.01	53.68	1.57	100	0
4	1	(untitled)	1	1	E	50	11000	7	8	1183	59.34	53.68	1.57	100	0
	2	(untitled)	1	1	E	50	11000	7	8	1183	59.34	53.68	1.57	100	0

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (Veh-hr/hr)	Random plus oversat delay (Veh-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	106.88	9.87	10.83	5.86	0.44	89.53	5.96	0.00	95.49
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	3.40	6.63	0.51	5.96	0.00	84.69	0.00	0.00	84.69
TOTAL	110.28	16.50	6.68	11.83	0.44	174.21	5.96	0.00	180.18

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

TRANSYT 15

Version: 15.5.0.6767
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Filename: Rathmullan Road - Local Road AM.t15
Path: M:\Projects\18\18-014 - Rathmullan Drogheda SHD Planning Application\Design\Civil\Traffic\Junction Modelling\Junction 1 - 21-11-2018 - Rathmullan Road-Local Road\Proposed Signalised Junction
Report generation date: 10/05/2019 10:47:09

»Network Diagrams
«A4 - 2028 (BASE + DEV + COMM PHASES 1 AND 2) - AM : D4 - 2028 (BASE + DEV + COMM PHASES 1 AND 2) - AM* :
»Summary
»Network Options
»Traffic Nodes
»Arms and Traffic Streams
»Pedestrian Crossings
»Local OD Matrix - Local Matrix: 1
»Signal Timings
»Results - Link
»Results - Traffic Stream
»Data Entry - Stage Start and End
»Data Entry - Phase
»Data Entry - Traffic Stream
»Data entry - Link
»Results - Pedestrian
»Traffic Stream Results
»Pedestrian Crossing Results
»Network Results
»Point to Point Journey Time
»Final Prediction Table

File summary

File description

File title	(untitled)
Location	
Site number	
UTCRegion	
Driving side	Left
Date	06/12/2011
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	DOMAIN\f.silva
Description	

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Model and Results

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

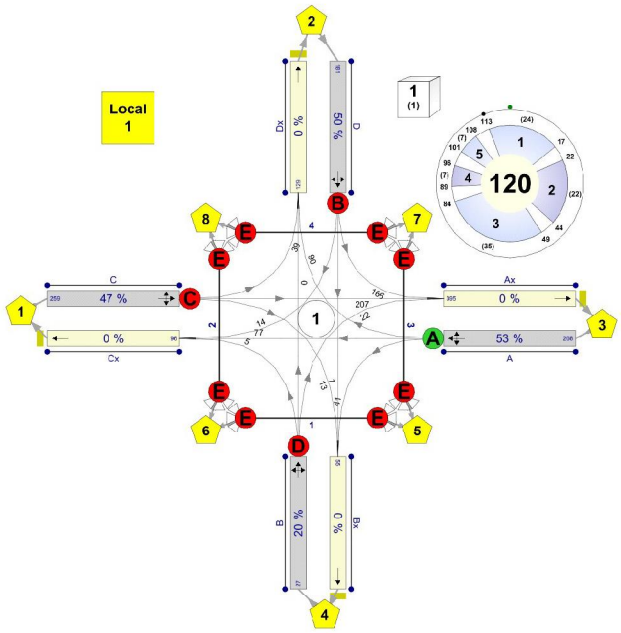
Units

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

Sorting

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

Network Diagrams



(untitled)
Diagram produced using TRANSYT 15.5.0.6767

A4 - 2028 (BASE + DEV + COMM PHASES 1 AND 2) - AM
D4 - 2028 (BASE + DEV + COMM PHASES 1 AND 2) - AM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
4	10/05/2019 10:42:01	10/05/2019 10:42:02	08:00	120	207.67	14.10	53.33	A/1	0	0	A/1	Dx/1	A/

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2028 (BASE + DEV + COMM PHASES 1 AND 2) - AM		D4	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2028 (BASE + DEV + COMM PHASES 1 AND 2) - AM				08:00	

Network Options

Network timings

Network cycle time (s)	Restrict to SCOOT cycle times	Time segment length (min)	Number of time segments	Modelled time period (min)
120		60	1	60

Signals options

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

Advanced

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

Traffic options

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

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Advanced

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

Normal Traffic parameters

Dispersion type	Dispersion coefficient
Default	35

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Bus	1.00	70	15	0.47	30	85

Tram parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Tram	1.00	0	0	0.47	100	100

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order
Hill Climb (Fast)	15, 40, -1, 15, 40, 1, -1, 1	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05		✓	1

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
1	(untitled)	

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
A	(untitled)		1
B	(untitled)		1
C	(untitled)		1
D	(untitled)		1
Ax	(untitled)		
Bx	(untitled)		
Cx	(untitled)		
Dx	(untitled)		

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
A	1	(untitled)		✓	50.00	✓	Sum of lanes	1800	✓		Normal	
B	1	(untitled)		✓	50.00	✓	Sum of lanes	1800	✓		Normal	
C	1	(untitled)		✓	50.00	✓	Sum of lanes	1800	✓		Normal	
D	1	(untitled)		✓	50.00	✓	Sum of lanes	1800	✓		Normal	
Ax	1	(untitled)		✓	137.40						Normal	
Bx	1	(untitled)		✓	140.18						Normal	
Cx	1	(untitled)		✓	140.00						Normal	
Dx	1	(untitled)		✓	137.24						Normal	

Lanes

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

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
(ALL)	1	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
(ALL)	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	120

Normal - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	1	100	100

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Flows

Arm	Traffic Stream	Total Flow (Veh/hr)	Normal Flow (Veh/hr)
A	1	208	208
B	1	27	27
C	1	259	259
D	1	181	181
Ax	1	395	395
Bx	1	55	55
Cx	1	96	96
Dx	1	129	129

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled
A	1	1	A	
B	1	1	D	
C	1	1	C	
D	1	1	B	

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
(ALL)	1	6.00	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	1	1	C/1	Ax/1	16.49	30.00	✓	Straight	Straight Movement
Bx	1	1	A/1	Bx/1	16.82	30.00	✓	Nearside	40.00
Cx	1	1	A/1	Cx/1	16.80	30.00	✓	Straight	Straight Movement
Dx	1	1	C/1	Dx/1	16.47	30.00	✓	Nearside	40.00
Ax	1	2	B/1	Ax/1	16.49	30.00	✓	Offside	55.00
Bx	1	2	D/1	Bx/1	16.82	30.00	✓	Straight	Straight Movement
Cx	1	2	B/1	Cx/1	16.80	30.00	✓	Nearside	45.00
Dx	1	2	A/1	Dx/1	16.47	30.00	✓	Offside	55.00
Ax	1	3	D/1	Ax/1	16.49	30.00	✓	Nearside	40.00
Bx	1	3	C/1	Bx/1	16.82	30.00	✓	Offside	60.00
Cx	1	3	D/1	Cx/1	16.80	30.00	✓	Offside	55.00
Dx	1	3	B/1	Dx/1	16.47	30.00	✓	Straight	Straight Movement

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
1	(untitled)		1		Farside	7.00	4.67	5.40
2	(untitled)		1		Farside	8.00	5.33	5.40
3	(untitled)		1		Farside	8.00	5.33	5.40
4	(untitled)		1		Farside	7.00	4.67	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	E	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(ALL)	11000

Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	100	100		0.00		

Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1	(untitled)	✓	✓	Path Equalisation	✓		✓			✓	1.25		

Normal Input Flows (Veh/hr)

		To							
		1	2	3	4	5	6	7	8
From	1	0	39	207	13	0	0	0	0
	2	14	0	166	1	0	0	0	0
	3	77	90	0	41	0	0	0	0
	4	5	0	22	0	0	0	0	0
	5	0	0	0	0	0	0	0	0
	6	0	0	0	0	0	0	0	0
	7	0	0	0	0	0	0	0	0
	8	0	0	0	0	0	0	0	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows (Veh/hr)

		To							
		1	2	3	4	5	6	7	8
From	1	0	0	0	0	0	0	0	0
	2	0	0	0	0	0	0	0	0
	3	0	0	0	0	0	0	0	0
	4	0	0	0	0	0	0	0	0
	5	0	0	0	0	0	50	50	0
	6	0	0	0	0	50	0	0	50
	7	0	0	0	0	50	0	0	50
	8	0	0	0	0	0	50	50	0

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
1	1	(untitled)	C/1	Cx/1	#0000FF
	2	(untitled)	D/1	Dx/1	#FF0000
	3	(untitled)	A/1	Ax/1	#00FF00
	4	(untitled)	B/1	Bx/1	#FFFF00
	5	(untitled)	3:2E, 1:1E	3:2X, 1:1X	#FF00FF
	6	(untitled)	2:1E, 1:2E	2:1X, 1:2X	#008000
	7	(untitled)	4:2E, 3:1E	4:2X, 3:1X	#FFA500
	8	(untitled)	4:1E, 2:2E	4:1X, 2:2X	#00FFFF

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Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (Veh/hr)
1	1		1	2	C/1, Dx/1	Normal	39
	2		1	3	C/1, Ax/1	Normal	207
	3		1	4	C/1, Bx/1	Normal	13
	5		2	3	D/1, Ax/1	Normal	166
	6		2	4	D/1, Bx/1	Normal	1
	7		2	1	D/1, Cx/1	Normal	14
	8		3	2	A/1, Dx/1	Normal	90
	9		3	4	A/1, Bx/1	Normal	41
	10		3	1	A/1, Cx/1	Normal	77
	11		4	2	B/1, Dx/1	Normal	0
	12		4	3	B/1, Ax/1	Normal	22
	13		4	1	B/1, Cx/1	Normal	5

Pedestrian Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Pedestrian calculated flow (Ped/hr)
1	17		8	7	4:1E, 4:2X	Normal	50
	18		8	6	2:2E, 2:1X	Normal	50
	22		5	7	3:2E, 3:1X	Normal	50
	23		5	6	1:1E, 1:2X	Normal	50
	34		6	8	2:1E, 2:2X	Normal	50
	35		6	5	1:2E, 1:1X	Normal	50
	41		7	8	4:2E, 4:1X	Normal	50
	42		7	5	3:1E, 3:2X	Normal	50

Signal Timings

Network Default: 120s cycle time; 120 steps

Controller Stream 1

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)
1	(untitled)		1	NetworkDefault	120

Controller Stream 1 - Properties

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
1	Unspecified						Relative

Controller Stream 1 - Optimisation

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
1	✓	✓	Offsets And Green Splits	✓	

Phases

Controller Stream	Phase	Name	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type	Blackout Time (s)
1	A	(untitled)	7	300	2	3	Traffic	
	B	(untitled)	7	300	2	3	Traffic	
	C	(untitled)	7	300	2	3	Traffic	
	D	(untitled)	7	300	2	3	Traffic	
	E	(untitled)	5	7	0	0	Pedestrian	0

Library Stages

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)
1	1	A	1
	2	B	1
	3	C	1
	4	D	1
	5	E	1

Stage Sequences

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends
1	1	(untitled)	Single	1, 2, 3, 4, 5	17, 44, 84, 96, 108

Intergreen Matrix for Controller Stream 1

		To				
		A	B	C	D	E
From	A		5	5	5	5
	B	5		5	5	5
	C	5	5		5	5
	D	5	5	5		5
	E	5	5	5	5	

Banned Stage transitions for Controller Stream 1

		To				
		1	2	3	4	5
From	1					
	2					
	3					
	4					
	5					

Interstage Matrix for Controller Stream 1

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

Resultant Stages

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
1	1	✓	1	A	113	17	24	1	7
	2	✓	2	B	22	44	22	1	7
	3	✓	3	C	49	84	35	1	7
	4	✓	4	D	89	96	7	1	7
	5	✓	5	E	101	108	7	1	5

Resultant Phase Green Periods

Controller Stream	Phase	Green period	Is base green period	Start time (s)	End time (s)	Duration (s)
1	A	1	✓	113	17	24
	B	1	✓	22	44	22
	C	1	✓	49	84	35
	D	1	✓	89	96	7
	E	1	✓	101	108	7

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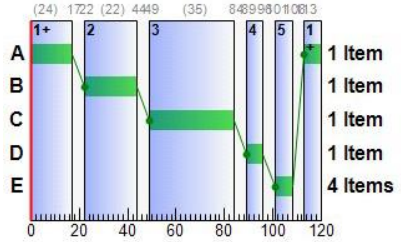
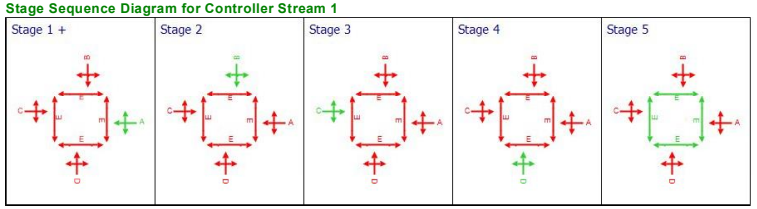
Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
A	1	1	1	A	113	17	24
B	1	1	1	D	89	96	7
C	1	1	1	C	49	84	35
D	1	1	1	B	22	44	22

Phase Timings Diagram for Controller Stream 1



Stage Sequence Diagram for Controller Stream 1



Resultant penalties

Time Segment	Controller stream	Phase min max penalty (£ per hr)	Intergreen broken penalty (£ per hr)	Stage constraint broken penalty (£ per hr)	Cost of controller stream penalties (£ per hr)
08:00-09:00	1	0.00	0.00	0.00	0.00

Results - Link

Results - Traffic Stream

Results - Traffic Stream: Vehicle summary

Time Segment	Arm	Traffic Stream	Name	Phase	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Calculated capacity (Veh/hr)	Degree of saturation (%)	Practical reserve capacity (%)	Mean Delay per Veh (s)	Mean max queue (Veh)	Utilised storage (%)	JourneyTime (s)
08:00-09:00	A	1	(untitled)	A	208	1800	24	390	53	88	46.86	6.43	73.90	52.86
	B	1	(untitled)	D	27	1800	7	135	20	400	55.50	0.86	9.95	61.50
	C	1	(untitled)	C	259	1800	35	555	47	114	36.35	7.11	81.76	42.35
	D	1	(untitled)	B	181	1800	22	360	50	99	47.71	5.58	64.19	53.71
	Ax	1	(untitled)		395	Unrestricted	120	Unrestricted	0	Unrestricted	0.00	0.00	0.00	16.49
	Bx	1	(untitled)		55	Unrestricted	120	Unrestricted	0	Unrestricted	0.00	0.00	0.00	16.82
	Cx	1	(untitled)		96	Unrestricted	120	Unrestricted	0	Unrestricted	0.00	0.00	0.00	16.80
	Dx	1	(untitled)		129	Unrestricted	120	Unrestricted	0	Unrestricted	0.00	0.00	0.00	16.47

Data Entry - Stage Start and End

Resultant Stage

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
1	1	✓	1	A	113	17	24	1	7
	2	✓	2	B	22	44	22	1	7
	3	✓	3	C	49	84	35	1	7
	4	✓	4	D	89	96	7	1	7
	5	✓	5	E	101	108	7	1	5

Data Entry - Phase

Phase

Controller Stream	Phase	Phase	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type
1	A	A	7	300	2	3	Traffic
	B	B	7	300	2	3	Traffic
	C	C	7	300	2	3	Traffic
	D	D	7	300	2	3	Traffic
	E	E	5	7	0	0	Pedestrian

Data Entry - Traffic Stream

Traffic Stream

Arm	Traffic Stream	Auto length	Length (m)	Traffic model	Max queue storage (PCU)	Traffic type	Has Saturation Flow	Is signal controlled	Is give way	Saturation flow source	Saturation flow (PCU/hr)	Delay weighting multiplier (%)	Stop weighting multiplier (%)
A	1	✓	50.00	NetworkDefault	0.00	Normal	✓	✓		Sum of lanes	1800	100	100
B	1	✓	50.00	NetworkDefault	0.00	Normal	✓	✓		Sum of lanes	1800	100	100
C	1	✓	50.00	NetworkDefault	0.00	Normal	✓	✓		Sum of lanes	1800	100	100
D	1	✓	50.00	NetworkDefault	0.00	Normal	✓	✓		Sum of lanes	1800	100	100
Ax	1	✓	137.40	NetworkDefault	0.00	Normal						100	100
Bx	1	✓	140.18	NetworkDefault	0.00	Normal						100	100
Cx	1	✓	140.00	NetworkDefault	0.00	Normal						100	100
Dx	1	✓	137.24	NetworkDefault	0.00	Normal						100	100

Data entry - Link

Results - Pedestrian

Pedestrian Crossings: Pedestrian summary

Time Segment	Pedestrian crossing	Side	Calculated Flow Entering (Ped/hr)	Degree of saturation (%)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)
08:00-09:00	(ALL)	(ALL)	50	8	7	53.68	1.57

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Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (Veh)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	A	1	53	88	208	1800	24	46.86	6.43	73.90	38.45	2.38	40.83
	B	1	20	400	27	1800	7	55.50	0.86	9.95	5.91	0.32	6.23
	C	1	47	114	259	1800	35	36.35	7.11	81.76	37.14	2.64	39.78
	D	1	50	99	181	1800	22	47.71	5.58	64.19	34.07	2.08	36.14
	Ax	1	0	Unrestricted	395	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	Bx	1	0	Unrestricted	55	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	Cx	1	0	Unrestricted	96	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	Dx	1	0	Unrestricted	129	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Calculated sat flow (Veh/hr)	Calculated capacity (Veh/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))
08:00-09:00	A	1	208	208	0		1800	390	53		88	0.00	24
	B	1	27	27	0		1800	135	20		400	0.00	7
	C	1	259	259	0		1800	555	47		114	0.00	35
	D	1	181	181	0		1800	360	50		99	0.00	22
	Ax	1	395	395	0		Unrestricted	Unrestricted	0		Unrestricted	0.91	120
	Bx	1	55	55	0		Unrestricted	Unrestricted	0		Unrestricted	1.03	120
	Cx	1	96	96	0		Unrestricted	Unrestricted	0		Unrestricted	1.11	120
	Dx	1	129	129	0		Unrestricted	Unrestricted	0		Unrestricted	1.03	120

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-hr/hr)	Random plus oversat delay (Veh-hr/hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	A	1	6.00	46.86	2.41	0.30	38.45	91.43	181.21	8.96	2.38
	B	1	6.00	55.50	0.39	0.02	5.91	95.09	24.93	0.74	0.32
	C	1	6.00	36.35	2.41	0.20	37.14	81.31	204.54	6.06	2.64
	D	1	6.00	47.71	2.15	0.25	34.07	91.46	158.06	7.48	2.08
	Ax	1	16.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Bx	1	16.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Cx	1	16.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Dx	1	16.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (Veh)	Mean max queue (Veh)	Max queue storage (Veh)	Utilised storage (%)	Average storage excess queue (Veh)	Average limit excess queue (Veh)	Excess queue penalty (£ per hr)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))	Estimated blocking
08:00-09:00	A	1	0.00	6.43	8.70	73.90	0.00	0.00	0.00	0.00	0.00	0.00	
	B	1	0.00	0.86	8.70	9.95	0.00	0.00	0.00	7.00	0.00	7.00	
	C	1	0.00	7.11	8.70	81.76	0.00	0.00	0.00	0.00	0.00	0.00	
	D	1	0.00	5.58	8.70	64.19	0.00	0.00	0.00	0.00	0.00	0.00	
	Ax	1	0.00	0.00	23.90	0.00	0.00	0.00	0.00	40.00	0.00	40.00	
	Bx	1	0.00	0.00	24.38	0.00	0.00	0.00	0.00	83.00	0.00	83.00	
	Cx	1	0.00	0.00	24.35	0.00	0.00	0.00	0.00	73.00	0.00	73.00	
	Dx	1	0.00	0.00	23.87	0.00	0.00	0.00	0.00	66.00	0.00	66.00	

Traffic Stream Results: Journey times

Time Segment	Arm	Traffic Stream	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	A	1	10.40	3.05	3.41	52.86
	B	1	1.35	0.46	2.93	61.50
	C	1	12.95	3.05	4.25	42.35
	D	1	9.05	2.70	3.35	53.71
	Ax	1	54.27	1.81	30.00	16.49
	Bx	1	7.71	0.26	30.00	16.82
	Cx	1	13.44	0.45	30.00	16.80
	Dx	1	17.70	0.59	30.00	16.47

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	Mean Max Queue EoTS (Veh)	Max End of Green Queue EoTS (Veh)	Max End of Red Queue EoTS (Veh)	PCU Factor	Cost of traffic penalties (£ per hr)	Performance Index (£ per hr)
08:00-09:00	A	1	0.00	0.00	✓	0.00	6.43	0.30	5.73	1.00	0.00	40.83
	B	1	0.00	0.00	✓	0.00	0.86	0.02	0.86	1.00	0.00	6.23
	C	1	0.00	0.00	✓	0.00	7.11	0.20	6.18	1.00	0.00	39.78
	D	1	0.00	0.00	✓	0.00	5.58	0.25	5.08	1.00	0.00	36.14
	Ax	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00
	Bx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00
	Cx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00
	Dx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	8	50	11000	7	53.68	1.57	10.59	10.59

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))
08:00-09:00	(ALL)	(ALL)	50	50	0		11000	642	8		1183	0.00	7

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Uniform delay (Ped-hr/hr)	Random plus oversat delay (Ped-hr/hr)	Weighted cost of delay (£ per hr)
08:00-09:00	1	1	5.67	53.68	0.75	0.00	10.59
		2	5.67	53.68	0.75	0.00	10.59
	2	1	6.33	53.68	0.75	0.00	10.59
		2	6.33	53.68	0.75	0.00	10.59
	3	1	6.33	53.68	0.75	0.00	10.59
		2	6.33	53.68	0.75	0.00	10.59
	4	1	5.67	53.68	0.75	0.00	10.59
		2	5.67	53.68	0.75	0.00	10.59

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Average storage excess queue (Ped)	Average limit excess queue (Ped)	Excess queue penalty (£ per hr)
08:00-09:00	(ALL)	(ALL)	1.57	10.00	15.69	0.00	0.00	0.00

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Pedestrian Crossings: Journey times

Time Segment	Crossing	Side	Distance travelled (Ped-km/hr)	Time spent (Ped-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	1	1	0.40	0.82	0.49	59.34
		2	0.40	0.82	0.49	59.34
	2	1	0.45	0.83	0.54	60.01
		2	0.45	0.83	0.54	60.01
	3	1	0.45	0.83	0.54	60.01
		2	0.45	0.83	0.54	60.01
	4	1	0.40	0.82	0.49	59.34
		2	0.40	0.82	0.49	59.34

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	0.00	1.57	1.00	0.00	10.59

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
4	10/05/2019 10:42:01	10/05/2019 10:42:02	08:00	120	207.67	14.10	53.33	A/1	0	0	A/1	Dx/1	A/

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	53	0	1350	568	21.70	115.56	7.42	122.98

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	8	400	56	53.68	84.69	84.69

Network Results: Flows and signals

Time Segment	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))
08:00-09:00	1750	1750	0		53		88	624

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-hr/hr)	Random plus oversat delay (Veh-hr/hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	10.07	29.01	13.32	0.78	200.25	33.83	568.74	23.25	7.42

Network Results: Queues and blocking

Time Segment	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))
08:00-09:00	81.76	0.00	269.00	0.00	269.00

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
08:00-09:00	130.28	19.00	6.86

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	PCU Factor	Cost of traffic penalties (£ per hr)	Controller stream penalties (£ per hr)	Performance Index (£ per hr)
08:00-09:00	0.00	0.00	✓	0.00	1.00	0.00	0.00	207.67

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

		To							
		1	2	3	4	5	6	7	8
From	1	0.0	58.8	58.8	59.2	0.0	0.0	0.0	0.0
	2	70.5	0.0	70.2	70.5	0.0	0.0	0.0	0.0
	3	69.7	69.3	0.0	69.7	0.0	0.0	0.0	0.0
	4	78.3	0.0	78.0	0.0	0.0	0.0	0.0	0.0
	5	0.0	0.0	0.0	0.0	0.0	59.3	60.0	0.0
	6	0.0	0.0	0.0	0.0	59.3	0.0	0.0	60.0
	7	0.0	0.0	0.0	0.0	60.0	0.0	0.0	59.3
	8	0.0	0.0	0.0	0.0	0.0	60.0	59.3	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (Veh/hr)	Pedestrian calculated flow (Ped/hr)	Normal journey time (s)	Pedestrian journey time (s)	Calculated Total Flow (Veh/hr)	Avg journey time (s)
1	1	2	39		58.82		39	58.82
2	1	3	207		58.84		207	58.84
3	1	4	13		59.18		13	59.18
5	2	3	166		70.20		166	70.20
6	2	4	1		70.54		1	70.54
7	2	1	14		70.51		14	70.51
8	3	2	90		69.33		90	69.33
9	3	4	41		69.68		41	69.68
10	3	1	77		69.66		77	69.66
11	4	2	0		0.00		0	0.00
12	4	3	22		77.98		22	77.98
13	4	1	5		78.30		5	78.30
17	8	7		50		59.34	50	59.34
18	8	6		50		60.01	50	60.01
22	5	7		50		60.01	50	60.01
23	5	6		50		59.34	50	59.34
34	6	8		50		60.01	50	60.01
35	6	5		50		59.34	50	59.34
41	7	8		50		59.34	50	59.34
42	7	5		50		60.01	50	60.01

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Final Prediction Table

Traffic Stream Results

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QUEUES
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (Veh)
A	1	(untitled)	1	1	A	208	1800	24	0.00	53	88	52.86	46.86	91.43	6.43
B	1	(untitled)	1	1	D	27	1800	7	7.00	20	400	61.50	55.50	95.09	0.86
C	1	(untitled)	1	1	C	259	1800	35	0.00	47	114	42.35	36.35	81.31	7.11
D	1	(untitled)	1	1	B	181	1800	22	0.00	50	99	53.71	47.71	91.46	5.58
Ax	1	(untitled)				395	Unrestricted	120	40.00	0	Unrestricted	16.49	0.00	0.00	0.00
Bx	1	(untitled)				55	Unrestricted	120	83.00	0	Unrestricted	16.82	0.00	0.00	0.00
Cx	1	(untitled)				96	Unrestricted	120	73.00	0	Unrestricted	16.80	0.00	0.00	0.00
Dx	1	(untitled)				129	Unrestricted	120	66.00	0	Unrestricted	16.47	0.00	0.00	0.00

Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE			PER PED		QUEUES	WEIGHTS	PEN
Pedestrian	Side	Name	Traffic node	Controller stream	Phase	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Ped (s)	Mean max queue (Ped)	Delay weighting (%)	Co tra pen (£ p
1	1	(untitled)	1	1	E	50	11000	7	8	1183	59.34	53.68	1.57	100	0
	2	(untitled)	1	1	E	50	11000	7	8	1183	59.34	53.68	1.57	100	0
2	1	(untitled)	1	1	E	50	11000	7	8	1183	60.01	53.68	1.57	100	0
	2	(untitled)	1	1	E	50	11000	7	8	1183	60.01	53.68	1.57	100	0
3	1	(untitled)	1	1	E	50	11000	7	8	1183	60.01	53.68	1.57	100	0
	2	(untitled)	1	1	E	50	11000	7	8	1183	60.01	53.68	1.57	100	0
4	1	(untitled)	1	1	E	50	11000	7	8	1183	59.34	53.68	1.57	100	0
	2	(untitled)	1	1	E	50	11000	7	8	1183	59.34	53.68	1.57	100	0

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (Veh-hr/hr)	Random plus oversat delay (Veh-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	126.88	12.37	10.26	7.36	0.78	115.56	7.42	0.00	122.98
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	3.40	6.63	0.51	5.96	0.00	84.69	0.00	0.00	84.69
TOTAL	130.28	19.00	6.86	13.32	0.78	200.25	7.42	0.00	207.67

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

TRANSYT 15

Version: 15.5.0.6767
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Filename: Rathmullan Road - Local Road PM.t15
Path: M:\Projects\18\18-014 - Rathmullan Drogheda SHD Planning Application\Design\Civil\Traffic\Junction Modelling\Junction 1 - 21-11-2018 - Rathmullan Road-Local Road\Proposed Signalised Junction
Report generation date: 10/05/2019 10:52:35

»Network Diagrams
«A4 - 2028 (BASE + DEV + COMM PHASES 1 AND 2) - PM : D4 - 2028 (BASE + DEV + COMM PHASES 1 AND 2) - PM* :
»Summary
»Network Options
»Traffic Nodes
»Arms and Traffic Streams
»Pedestrian Crossings
»Local OD Matrix - Local Matrix: 1
»Signal Timings
»Results - Link
»Results - Traffic Stream
»Data Entry - Stage Start and End
»Data Entry - Phase
»Data Entry - Traffic Stream
»Data entry - Link
»Results - Pedestrian
»Traffic Stream Results
»Pedestrian Crossing Results
»Network Results
»Point to Point Journey Time
»Final Prediction Table

File summary

File description

File title	(untitled)
Location	
Site number	
UTCRegion	
Driving side	Left
Date	06/12/2011
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	DOMAIN\f.silva
Description	

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Model and Results

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

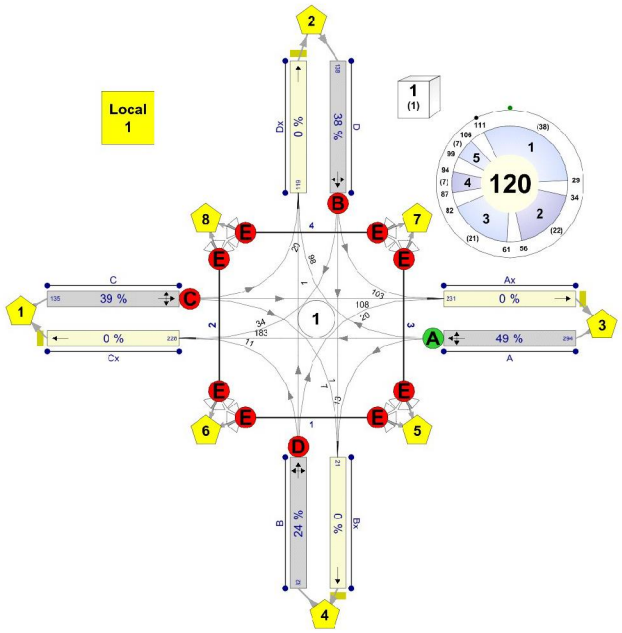
Units

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

Sorting

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

Network Diagrams



(untitled)
Diagram produced using TRANSYT 15.5.0.6767

A4 - 2028 (BASE + DEV + COMM PHASES 1 AND 2) - PM
D4 - 2028 (BASE + DEV + COMM PHASES 1 AND 2) - PM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
4	10/05/2019 10:49:46	10/05/2019 10:49:47	17:00	120	187.13	12.73	49.00	A/1	0	0	A/1	Dx/1	A/

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2028 (BASE + DEV + COMM PHASES 1 AND 2) - PM		D4	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2028 (BASE + DEV + COMM PHASES 1 AND 2) - PM				17:00	

Network Options

Network timings

Network cycle time (s)	Restrict to SCOOT cycle times	Time segment length (min)	Number of time segments	Modelled time period (min)
120		60	1	60

Signals options

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

Advanced

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

Traffic options

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

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Advanced

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

Normal Traffic parameters

Dispersion type	Dispersion coefficient
Default	35

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Bus	1.00	70	15	0.47	30	85

Tram parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Tram	1.00	0	0	0.47	100	100

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order
Hill Climb (Fast)	15, 40, -1, 15, 40, 1, -1, 1	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05		✓	1

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
1	(untitled)	

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
A	(untitled)		1
B	(untitled)		1
C	(untitled)		1
D	(untitled)		1
Ax	(untitled)		
Bx	(untitled)		
Cx	(untitled)		
Dx	(untitled)		

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
A	1	(untitled)		✓	50.00	✓	Sum of lanes	1800	✓		Normal	
B	1	(untitled)		✓	50.00	✓	Sum of lanes	1800	✓		Normal	
C	1	(untitled)		✓	50.00	✓	Sum of lanes	1800	✓		Normal	
D	1	(untitled)		✓	50.00	✓	Sum of lanes	1800	✓		Normal	
Ax	1	(untitled)		✓	137.40						Normal	
Bx	1	(untitled)		✓	140.18						Normal	
Cx	1	(untitled)		✓	140.00						Normal	
Dx	1	(untitled)		✓	137.24						Normal	

Lanes

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

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
(ALL)	1	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
(ALL)	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	120

Normal - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	1	100	100

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Flows

Arm	Traffic Stream	Total Flow (Veh/hr)	Normal Flow (Veh/hr)
A	1	294	294
B	1	32	32
C	1	135	135
D	1	138	138
Ax	1	231	231
Bx	1	21	21
Cx	1	228	228
Dx	1	119	119

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled
A	1	1	A	
B	1	1	D	
C	1	1	C	
D	1	1	B	

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
(ALL)	1	6.00	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	1	1	C/1	Ax/1	16.49	30.00	✓	Straight	Straight Movement
Bx	1	1	A/1	Bx/1	16.82	30.00	✓	Nearside	40.00
Cx	1	1	A/1	Cx/1	16.80	30.00	✓	Straight	Straight Movement
Dx	1	1	C/1	Dx/1	16.47	30.00	✓	Nearside	40.00
Ax	1	2	B/1	Ax/1	16.49	30.00	✓	Offside	55.00
Bx	1	2	D/1	Bx/1	16.82	30.00	✓	Straight	Straight Movement
Cx	1	2	B/1	Cx/1	16.80	30.00	✓	Nearside	45.00
Dx	1	2	A/1	Dx/1	16.47	30.00	✓	Offside	55.00
Ax	1	3	D/1	Ax/1	16.49	30.00	✓	Nearside	40.00
Bx	1	3	C/1	Bx/1	16.82	30.00	✓	Offside	60.00
Cx	1	3	D/1	Cx/1	16.80	30.00	✓	Offside	55.00
Dx	1	3	B/1	Dx/1	16.47	30.00	✓	Straight	Straight Movement

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
1	(untitled)		1		Farside	7.00	4.67	5.40
2	(untitled)		1		Farside	8.00	5.33	5.40
3	(untitled)		1		Farside	8.00	5.33	5.40
4	(untitled)		1		Farside	7.00	4.67	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	E	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(ALL)	11000

Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	100	100		0.00		

Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1	(untitled)	✓	✓	Path Equalisation	✓		✓			✓	1.25		

Normal Input Flows (Veh/hr)

		To							
		1	2	3	4	5	6	7	8
From	1	0	20	108	7	0	0	0	0
	2	34	0	103	1	0	0	0	0
	3	183	98	0	13	0	0	0	0
	4	11	1	20	0	0	0	0	0
	5	0	0	0	0	0	0	0	0
	6	0	0	0	0	0	0	0	0
	7	0	0	0	0	0	0	0	0
	8	0	0	0	0	0	0	0	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows (Veh/hr)

		To							
		1	2	3	4	5	6	7	8
From	1	0	0	0	0	0	0	0	0
	2	0	0	0	0	0	0	0	0
	3	0	0	0	0	0	0	0	0
	4	0	0	0	0	0	0	0	0
	5	0	0	0	0	0	50	50	0
	6	0	0	0	0	50	0	0	50
	7	0	0	0	0	50	0	0	50
	8	0	0	0	0	0	50	50	0

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
1	1	(untitled)	C/1	Cx/1	#0000FF
	2	(untitled)	D/1	Dx/1	#FF0000
	3	(untitled)	A/1	Ax/1	#00FF00
	4	(untitled)	B/1	Bx/1	#FFFF00
	5	(untitled)	3:2E, 1:1E	3:2X, 1:1X	#FF00FF
	6	(untitled)	2:1E, 1:2E	2:1X, 1:2X	#008000
	7	(untitled)	4:2E, 3:1E	4:2X, 3:1X	#FFA500
	8	(untitled)	4:1E, 2:2E	4:1X, 2:2X	#00FFFF

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Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (Veh/hr)
1	1		1	2	C/1, Dx/1	Normal	20
	2		1	3	C/1, Ax/1	Normal	108
	3		1	4	C/1, Bx/1	Normal	7
	5		2	3	D/1, Ax/1	Normal	103
	6		2	4	D/1, Bx/1	Normal	1
	7		2	1	D/1, Cx/1	Normal	34
	8		3	2	A/1, Dx/1	Normal	98
	9		3	4	A/1, Bx/1	Normal	13
	10		3	1	A/1, Cx/1	Normal	183
	11		4	2	B/1, Dx/1	Normal	1
	12		4	3	B/1, Ax/1	Normal	20
	13		4	1	B/1, Cx/1	Normal	11

Pedestrian Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Pedestrian calculated flow (Ped/hr)
1	17		8	7	4:1E, 4:2X	Normal	50
	18		8	6	2:2E, 2:1X	Normal	50
	22		5	7	3:2E, 3:1X	Normal	50
	23		5	6	1:1E, 1:2X	Normal	50
	34		6	8	2:1E, 2:2X	Normal	50
	35		6	5	1:2E, 1:1X	Normal	50
	41		7	8	4:2E, 4:1X	Normal	50
	42		7	5	3:1E, 3:2X	Normal	50

Signal Timings

Network Default: 120s cycle time; 120 steps

Controller Stream 1

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)
1	(untitled)		1	NetworkDefault	120

Controller Stream 1 - Properties

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
1	Unspecified						Relative

Controller Stream 1 - Optimisation

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
1	✓	✓	Offsets And Green Splits	✓	

Phases

Controller Stream	Phase	Name	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type	Blackout Time (s)
1	A	(untitled)	7	300	2	3	Traffic	
	B	(untitled)	7	300	2	3	Traffic	
	C	(untitled)	7	300	2	3	Traffic	
	D	(untitled)	7	300	2	3	Traffic	
	E	(untitled)	5	7	0	0	Pedestrian	0

Library Stages

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)
1	1	A	1
	2	B	1
	3	C	1
	4	D	1
	5	E	1

Stage Sequences

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends
1	1	(untitled)	Single	1, 2, 3, 4, 5	29, 56, 82, 94, 106

Intergreen Matrix for Controller Stream 1

		To				
		A	B	C	D	E
From	A		5	5	5	5
	B	5		5	5	5
	C	5	5		5	5
	D	5	5	5		5
	E	5	5	5	5	

Banned Stage transitions for Controller Stream 1

		To				
		1	2	3	4	5
From	1					
	2					
	3					
	4					
	5					

Interstage Matrix for Controller Stream 1

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

Resultant Stages

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
1	1	✓	1	A	111	29	38	1	7
	2	✓	2	B	34	56	22	1	7
	3	✓	3	C	61	82	21	1	7
	4	✓	4	D	87	94	7	1	7
	5	✓	5	E	99	106	7	1	5

Resultant Phase Green Periods

Controller Stream	Phase	Green period	Is base green period	Start time (s)	End time (s)	Duration (s)
1	A	1	✓	111	29	38
	B	1	✓	34	56	22
	C	1	✓	61	82	21
	D	1	✓	87	94	7
	E	1	✓	99	106	7

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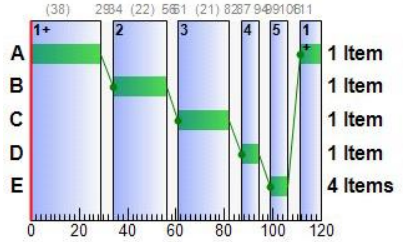
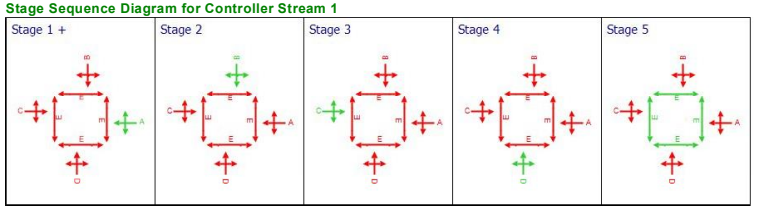
Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
A	1	1	1	A	111	29	38
B	1	1	1	D	87	94	7
C	1	1	1	C	61	82	21
D	1	1	1	B	34	56	22

Phase Timings Diagram for Controller Stream 1



Stage Sequence Diagram for Controller Stream 1



Resultant penalties

Time Segment	Controller stream	Phase min max penalty (£ per hr)	Intergreen broken penalty (£ per hr)	Stage constraint broken penalty (£ per hr)	Cost of controller stream penalties (£ per hr)
17:00-18:00	1	0.00	0.00	0.00	0.00

Results - Link

Results - Traffic Stream

Results - Traffic Stream: Vehicle summary

Time Segment	Arm	Traffic Stream	Name	Phase	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Calculated capacity (Veh/hr)	Degree of saturation (%)	Practical reserve capacity (%)	Mean Delay per Veh (s)	Mean max queue (Veh)	Utilised storage (%)	JourneyTime (s)
17:00-18:00	A	1	(untitled)	A	294	1800	38	600	49	104	34.75	7.99	91.92	40.75
	B	1	(untitled)	D	32	1800	7	135	24	322	56.39	1.04	11.97	62.39
	C	1	(untitled)	C	135	1800	21	345	39	156	45.73	4.03	46.29	51.73
	D	1	(untitled)	B	138	1800	22	360	38	161	44.68	4.07	46.77	50.68
	Ax	1	(untitled)		231	Unrestricted	120	Unrestricted	0	Unrestricted	0.00	0.00	0.00	16.49
	Bx	1	(untitled)		21	Unrestricted	120	Unrestricted	0	Unrestricted	0.00	0.00	0.00	16.82
	Cx	1	(untitled)		228	Unrestricted	120	Unrestricted	0	Unrestricted	0.00	0.00	0.00	16.80
	Dx	1	(untitled)		119	Unrestricted	120	Unrestricted	0	Unrestricted	0.00	0.00	0.00	16.47

Data Entry - Stage Start and End

Resultant Stage

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
1	1	✓	1	A	111	29	38	1	7
	2	✓	2	B	34	56	22	1	7
	3	✓	3	C	61	82	21	1	7
	4	✓	4	D	87	94	7	1	7
	5	✓	5	E	99	106	7	1	5

Data Entry - Phase

Phase

Controller Stream	Phase	Phase	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type
1	A	A	7	300	2	3	Traffic
	B	B	7	300	2	3	Traffic
	C	C	7	300	2	3	Traffic
	D	D	7	300	2	3	Traffic
	E	E	5	7	0	0	Pedestrian

Data Entry - Traffic Stream

Traffic Stream

Arm	Traffic Stream	Auto length	Length (m)	Traffic model	Max queue storage (PCU)	Traffic type	Has Saturation Flow	Is signal controlled	Is give way	Saturation flow source	Saturation flow (PCU/hr)	Delay weighting multiplier (%)	Stop weighting multiplier (%)
A	1	✓	50.00	NetworkDefault	0.00	Normal	✓	✓		Sum of lanes	1800	100	100
B	1	✓	50.00	NetworkDefault	0.00	Normal	✓	✓		Sum of lanes	1800	100	100
C	1	✓	50.00	NetworkDefault	0.00	Normal	✓	✓		Sum of lanes	1800	100	100
D	1	✓	50.00	NetworkDefault	0.00	Normal	✓	✓		Sum of lanes	1800	100	100
Ax	1	✓	137.40	NetworkDefault	0.00	Normal						100	100
Bx	1	✓	140.18	NetworkDefault	0.00	Normal						100	100
Cx	1	✓	140.00	NetworkDefault	0.00	Normal						100	100
Dx	1	✓	137.24	NetworkDefault	0.00	Normal						100	100

Data entry - Link

Results - Pedestrian

Pedestrian Crossings: Pedestrian summary

Time Segment	Pedestrian crossing	Side	Calculated Flow Entering (Ped/hr)	Degree of saturation (%)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)
17:00-18:00	(ALL)	(ALL)	50	8	7	53.68	1.57

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Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (Veh)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	A	1	49	104	294	1800	38	34.75	7.99	91.92	40.29	2.96	43.26
	B	1	24	322	32	1800	7	56.39	1.04	11.97	7.12	0.39	7.50
	C	1	39	156	135	1800	21	45.73	4.03	46.29	24.35	1.50	25.85
	D	1	38	161	138	1800	22	44.68	4.07	46.77	24.32	1.51	25.84
	Ax	1	0	Unrestricted	231	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	Bx	1	0	Unrestricted	21	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	Cx	1	0	Unrestricted	228	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	Dx	1	0	Unrestricted	119	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Calculated sat flow (Veh/hr)	Calculated capacity (Veh/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))
17:00-18:00	A	1	294	294	0		1800	600	49		104	0.00	38
	B	1	32	32	0		1800	135	24		322	0.00	7
	C	1	135	135	0		1800	345	39		156	0.00	21
	D	1	138	138	0		1800	360	38		161	0.00	22
	Ax	1	231	231	0		Unrestricted	Unrestricted	0		Unrestricted	1.04	120
	Bx	1	21	21	0		Unrestricted	Unrestricted	0		Unrestricted	0.88	120
	Cx	1	228	228	0		Unrestricted	Unrestricted	0		Unrestricted	0.94	120
	Dx	1	119	119	0		Unrestricted	Unrestricted	0		Unrestricted	0.99	120

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-hr/hr)	Random plus oversat delay (Veh-hr/hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	A	1	6.00	34.75	2.60	0.23	40.29	80.41	229.41	6.99	2.96
	B	1	6.00	56.39	0.46	0.04	7.12	95.98	29.62	1.09	0.39
	C	1	6.00	45.73	1.59	0.13	24.35	88.44	115.67	3.73	1.50
	D	1	6.00	44.68	1.59	0.12	24.32	87.41	117.09	3.54	1.51
	Ax	1	16.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Bx	1	16.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Cx	1	16.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Dx	1	16.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (Veh)	Mean max queue (Veh)	Max queue storage (Veh)	Utilised storage (%)	Average storage excess queue (Veh)	Average limit excess queue (Veh)	Excess queue penalty (£ per hr)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))	Estimated blocking
17:00-18:00	A	1	0.00	7.99	8.70	91.92	0.00	0.00	0.00	0.00	0.00	0.00	
	B	1	0.00	1.04	8.70	11.97	0.00	0.00	0.00	7.00	0.00	7.00	
	C	1	0.00	4.03	8.70	46.29	0.00	0.00	0.00	0.00	0.00	0.00	
	D	1	0.00	4.07	8.70	46.77	0.00	0.00	0.00	0.00	0.00	0.00	
	Ax	1	0.00	0.00	23.90	0.00	0.00	0.00	0.00	55.00	0.00	55.00	
	Bx	1	0.00	0.00	24.38	0.00	0.00	0.00	0.00	106.00	0.00	106.00	
	Cx	1	0.00	0.00	24.35	0.00	0.00	0.00	0.00	48.00	0.00	48.00	
	Dx	1	0.00	0.00	23.87	0.00	0.00	0.00	0.00	64.00	0.00	64.00	

Traffic Stream Results: Journey times

Time Segment	Arm	Traffic Stream	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
17:00-18:00	A	1	14.70	3.33	4.42	40.75
	B	1	1.60	0.55	2.89	62.39
	C	1	6.75	1.94	3.48	51.73
	D	1	6.90	1.94	3.55	50.68
	Ax	1	31.74	1.06	30.00	16.49
	Bx	1	2.94	0.10	30.00	16.82
	Cx	1	31.92	1.06	30.00	16.80
	Dx	1	16.33	0.54	30.00	16.47

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	Mean Max Queue EoTS (Veh)	Max End of Green Queue EoTS (Veh)	Max End of Red Queue EoTS (Veh)	PCU Factor	Cost of traffic penalties (£ per hr)	Performance Index (£ per hr)
17:00-18:00	A	1	0.00	0.00	✓	0.00	7.99	0.23	6.77	1.00	0.00	43.26
	B	1	0.00	0.00	✓	0.00	1.04	0.04	1.02	1.00	0.00	7.50
	C	1	0.00	0.00	✓	0.00	4.03	0.13	3.76	1.00	0.00	25.85
	D	1	0.00	0.00	✓	0.00	4.07	0.12	3.80	1.00	0.00	25.84
	Ax	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00
	Bx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00
	Cx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00
	Dx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
17:00-18:00	(ALL)	(ALL)	8	50	11000	7	53.68	1.57	10.59	10.59

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))
17:00-18:00	(ALL)	(ALL)	50	50	0		11000	642	8		1183	0.00	7

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Uniform delay (Ped-hr/hr)	Random plus oversat delay (Ped-hr/hr)	Weighted cost of delay (£ per hr)
17:00-18:00	1	1	5.67	53.68	0.75	0.00	10.59
		2	5.67	53.68	0.75	0.00	10.59
	2	1	6.33	53.68	0.75	0.00	10.59
		2	6.33	53.68	0.75	0.00	10.59
	3	1	6.33	53.68	0.75	0.00	10.59
		2	6.33	53.68	0.75	0.00	10.59
	4	1	5.67	53.68	0.75	0.00	10.59
		2	5.67	53.68	0.75	0.00	10.59

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Average storage excess queue (Ped)	Average limit excess queue (Ped)	Excess queue penalty (£ per hr)
17:00-18:00	(ALL)	(ALL)	1.57	10.00	15.69	0.00	0.00	0.00

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Pedestrian Crossings: Journey times

Time Segment	Crossing	Side	Distance travelled (Ped-km/hr)	Time spent (Ped-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
17:00-18:00	1	1	0.40	0.82	0.49	59.34
		2	0.40	0.82	0.49	59.34
	2	1	0.45	0.83	0.54	60.01
		2	0.45	0.83	0.54	60.01
	3	1	0.45	0.83	0.54	60.01
		2	0.45	0.83	0.54	60.01
	4	1	0.40	0.82	0.49	59.34
		2	0.40	0.82	0.49	59.34

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Performance Index (£ per hr)
17:00-18:00	(ALL)	(ALL)	0.00	0.00	1.57	1.00	0.00	10.59

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
4	10/05/2019 10:49:46	10/05/2019 10:49:47	17:00	120	187.13	12.73	49.00	A/1	0	0	A/1	Dx/1	A/

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	49	0	1198	568	20.33	96.08	6.36	102.44

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
17:00-18:00	8	400	56	53.68	84.69	84.69

Network Results: Flows and signals

Time Segment	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))
17:00-18:00	1598	1598	0		49		104	624

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-hr/hr)	Random plus oversat delay (Veh-hr/hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	9.98	28.68	12.22	0.51	180.77	31.74	491.79	15.34	6.36

Network Results: Queues and blocking

Time Segment	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))
17:00-18:00	91.92	0.00	280.00	0.00	280.00

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
17:00-18:00	116.28	17.16	6.78

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	PCU Factor	Cost of traffic penalties (£ per hr)	Controller stream penalties (£ per hr)	Performance Index (£ per hr)
17:00-18:00	0.00	0.00	✓	0.00	1.00	0.00	0.00	187.13

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

		To							
		1	2	3	4	5	6	7	8
From	1	0.0	68.2	68.2	68.5	0.0	0.0	0.0	0.0
	2	67.5	0.0	67.2	67.5	0.0	0.0	0.0	0.0
	3	57.5	57.2	0.0	57.6	0.0	0.0	0.0	0.0
	4	79.2	78.9	78.9	0.0	0.0	0.0	0.0	0.0
	5	0.0	0.0	0.0	0.0	0.0	59.3	60.0	0.0
	6	0.0	0.0	0.0	0.0	59.3	0.0	0.0	60.0
	7	0.0	0.0	0.0	0.0	60.0	0.0	0.0	59.3
	8	0.0	0.0	0.0	0.0	0.0	60.0	59.3	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (Veh/hr)	Pedestrian calculated flow (Ped/hr)	Normal journey time (s)	Pedestrian journey time (s)	Calculated Total Flow (Veh/hr)	Avg journey time (s)
1	1	2	20		68.20		20	68.20
2	1	3	108		68.21		108	68.21
3	1	4	7		68.55		7	68.55
5	2	3	103		67.17		103	67.17
6	2	4	1		67.51		1	67.51
7	2	1	34		67.48		34	67.48
8	3	2	98		57.21		98	57.21
9	3	4	13		57.57		13	57.57
10	3	1	183		57.55		183	57.55
11	4	2	1		78.86		1	78.86
12	4	3	20		78.88		20	78.88
13	4	1	11		79.19		11	79.19
17	8	7		50		59.34	50	59.34
18	8	6		50		60.01	50	60.01
22	5	7		50		60.01	50	60.01
23	5	6		50		59.34	50	59.34
34	6	8		50		60.01	50	60.01
35	6	5		50		59.34	50	59.34
41	7	8		50		59.34	50	59.34
42	7	5		50		60.01	50	60.01

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Final Prediction Table

Traffic Stream Results

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QUEUES
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (Veh)
A	1	(untitled)	1	1	A	294	1800	38	0.00	49	104	40.75	34.75	80.41	7.99
B	1	(untitled)	1	1	D	32	1800	7	7.00	24	322	62.39	56.39	95.98	1.04
C	1	(untitled)	1	1	C	135	1800	21	0.00	39	156	51.73	45.73	88.44	4.03
D	1	(untitled)	1	1	B	138	1800	22	0.00	38	161	50.68	44.68	87.41	4.07
Ax	1	(untitled)				231	Unrestricted	120	55.00	0	Unrestricted	16.49	0.00	0.00	0.00
Bx	1	(untitled)				21	Unrestricted	120	106.00	0	Unrestricted	16.82	0.00	0.00	0.00
Cx	1	(untitled)				228	Unrestricted	120	48.00	0	Unrestricted	16.80	0.00	0.00	0.00
Dx	1	(untitled)				119	Unrestricted	120	64.00	0	Unrestricted	16.47	0.00	0.00	0.00

Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE			PER PED		QUEUES	WEIGHTS	PEN
Pedestrian	Side	Name	Traffic node	Controller stream	Phase	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Ped (s)	Mean max queue (Ped)	Delay weighting (%)	Co tra pen (£ p
1	1	(untitled)	1	1	E	50	11000	7	8	1183	59.34	53.68	1.57	100	0
	2	(untitled)	1	1	E	50	11000	7	8	1183	59.34	53.68	1.57	100	0
2	1	(untitled)	1	1	E	50	11000	7	8	1183	60.01	53.68	1.57	100	0
	2	(untitled)	1	1	E	50	11000	7	8	1183	60.01	53.68	1.57	100	0
3	1	(untitled)	1	1	E	50	11000	7	8	1183	60.01	53.68	1.57	100	0
	2	(untitled)	1	1	E	50	11000	7	8	1183	60.01	53.68	1.57	100	0
4	1	(untitled)	1	1	E	50	11000	7	8	1183	59.34	53.68	1.57	100	0
	2	(untitled)	1	1	E	50	11000	7	8	1183	59.34	53.68	1.57	100	0

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (Veh-hr/hr)	Random plus oversat delay (Veh-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	112.88	10.53	10.72	6.25	0.51	96.08	6.36	0.00	102.44
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	3.40	6.63	0.51	5.96	0.00	84.69	0.00	0.00	84.69
TOTAL	116.28	17.16	6.78	12.22	0.51	180.77	6.36	0.00	187.13

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

TRANSYT 15

Version: 15.5.0.6767
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Filename: Rathmullan Road - Local Road AM.t15
Path: M:\Projects\18\18-014 - Rathmullan Drogheda SHD Planning Application\Design\Civil\Traffic\Junction Modelling\Junction 1 - 21-11-2018 - Rathmullan Road-Local Road\Proposed Signalised Junction
Report generation date: 10/05/2019 10:47:59

»Network Diagrams
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»Point to Point Journey Time
»Final Prediction Table

File summary

File description

File title	(untitled)
Location	
Site number	
UTCRegion	
Driving side	Left
Date	06/12/2011
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	DOMAIN\f.silva
Description	

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Model and Results

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

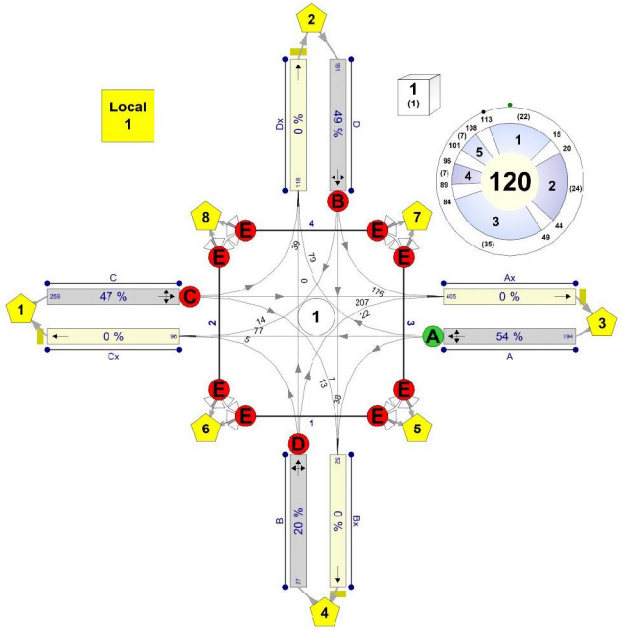
Units

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

Sorting

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

Network Diagrams



(untitled)
Diagram produced using TRANSYT 15.5.0.6767

A5 - 2038 (BASE + DEV) - AM
D5 - 2038 (BASE + 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)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
5	10/05/2019 10:42:03	10/05/2019 10:42:04	08:00	120	206.82	14.05	53.89	A/1	0	0	A/1	Dx/1	A/

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2038 (BASE + DEV) - AM		D5	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2038 (BASE + DEV) - AM				08:00	

Network Options

Network timings

Network cycle time (s)	Restrict to SCOOT cycle times	Time segment length (min)	Number of time segments	Modelled time period (min)
120		60	1	60

Signals options

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

Advanced

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

Traffic options

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

Advanced

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

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Normal Traffic parameters

Dispersion type	Dispersion coefficient
Default	35

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Bus	1.00	70	15	0.47	30	85

Tram parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Tram	1.00	0	0	0.47	100	100

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order
Hill Climb (Fast)	15, 40, -1, 15, 40, 1, -1, 1	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05		✓	1

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
1	(untitled)	

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
A	(untitled)		1
B	(untitled)		1
C	(untitled)		1
D	(untitled)		1
Ax	(untitled)		
Bx	(untitled)		
Cx	(untitled)		
Dx	(untitled)		

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
A	1	(untitled)		✓	50.00	✓	Sum of lanes	1800	✓		Normal	
B	1	(untitled)		✓	50.00	✓	Sum of lanes	1800	✓		Normal	
C	1	(untitled)		✓	50.00	✓	Sum of lanes	1800	✓		Normal	
D	1	(untitled)		✓	50.00	✓	Sum of lanes	1800	✓		Normal	
Ax	1	(untitled)		✓	137.40						Normal	
Bx	1	(untitled)		✓	140.18						Normal	
Cx	1	(untitled)		✓	140.00						Normal	
Dx	1	(untitled)		✓	137.24						Normal	

Lanes

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

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
(ALL)	1	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
(ALL)	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	120

Normal - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	1	100	100

Flows

Arm	Traffic Stream	Total Flow (Veh/hr)	Normal Flow (Veh/hr)
A	1	194	194
B	1	27	27
C	1	259	259
D	1	191	191
Ax	1	405	405
Bx	1	52	52
Cx	1	96	96
Dx	1	118	118

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled
A	1	1	A	
B	1	1	D	
C	1	1	C	
D	1	1	B	

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Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
(ALL)	1	6.00	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	1	1	C/1	Ax/1	16.49	30.00	✓	Straight	Straight Movement
Bx	1	1	A/1	Bx/1	16.82	30.00	✓	Nearside	40.00
Cx	1	1	A/1	Cx/1	16.80	30.00	✓	Straight	Straight Movement
Dx	1	1	C/1	Dx/1	16.47	30.00	✓	Nearside	40.00
Ax	1	2	B/1	Ax/1	16.49	30.00	✓	Offside	55.00
Bx	1	2	D/1	Bx/1	16.82	30.00	✓	Straight	Straight Movement
Cx	1	2	B/1	Cx/1	16.80	30.00	✓	Nearside	45.00
Dx	1	2	A/1	Dx/1	16.47	30.00	✓	Offside	55.00
Ax	1	3	D/1	Ax/1	16.49	30.00	✓	Nearside	40.00
Bx	1	3	C/1	Bx/1	16.82	30.00	✓	Offside	60.00
Cx	1	3	D/1	Cx/1	16.80	30.00	✓	Offside	55.00
Dx	1	3	B/1	Dx/1	16.47	30.00	✓	Straight	Straight Movement

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
1	(untitled)		1		Farside	7.00	4.67	5.40
2	(untitled)		1		Farside	8.00	5.33	5.40
3	(untitled)		1		Farside	8.00	5.33	5.40
4	(untitled)		1		Farside	7.00	4.67	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	E	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(ALL)	11000

Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	100	100		0.00		

Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1	(untitled)	✓	✓	Path Equalisation	✓		✓			✓	1.25		

Normal Input Flows (Veh/hr)

		To							
		1	2	3	4	5	6	7	8
From	1	0	39	207	13	0	0	0	0
	2	14	0	176	1	0	0	0	0
	3	77	79	0	38	0	0	0	0
	4	5	0	22	0	0	0	0	0
	5	0	0	0	0	0	0	0	0
	6	0	0	0	0	0	0	0	0
	7	0	0	0	0	0	0	0	0
	8	0	0	0	0	0	0	0	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows (Veh/hr)

		To							
		1	2	3	4	5	6	7	8
From	1	0	0	0	0	0	0	0	0
	2	0	0	0	0	0	0	0	0
	3	0	0	0	0	0	0	0	0
	4	0	0	0	0	0	0	0	0
	5	0	0	0	0	0	50	50	0
	6	0	0	0	0	50	0	0	50
	7	0	0	0	0	50	0	0	50
	8	0	0	0	0	0	50	50	0

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
1	1	(untitled)	C/1	Cx/1	#0000FF
	2	(untitled)	D/1	Dx/1	#FF0000
	3	(untitled)	A/1	Ax/1	#00FF00
	4	(untitled)	B/1	Bx/1	#FFFF00
	5	(untitled)	3:2E, 1:1E	3:2X, 1:1X	#FF00FF
	6	(untitled)	2:1E, 1:2E	2:1X, 1:2X	#008000
	7	(untitled)	4:2E, 3:1E	4:2X, 3:1X	#FFA500
	8	(untitled)	4:1E, 2:2E	4:1X, 2:2X	#00FFFF

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (Veh/hr)
1	1		1	2	C/1, Dx/1	Normal	39
	2		1	3	C/1, Ax/1	Normal	207
	3		1	4	C/1, Bx/1	Normal	13
	5		2	3	D/1, Ax/1	Normal	176
	6		2	4	D/1, Bx/1	Normal	1
	7		2	1	D/1, Cx/1	Normal	14
	8		3	2	A/1, Dx/1	Normal	79
	9		3	4	A/1, Bx/1	Normal	38
	10		3	1	A/1, Cx/1	Normal	77
	11		4	2	B/1, Dx/1	Normal	0
	12		4	3	B/1, Ax/1	Normal	22
	13		4	1	B/1, Cx/1	Normal	5

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Pedestrian Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Pedestrian calculated flow (Ped/hr)
1	17		8	7	4:1E, 4:2X	Normal	50
	18		8	6	2:2E, 2:1X	Normal	50
	22		5	7	3:2E, 3:1X	Normal	50
	23		5	6	1:1E, 1:2X	Normal	50
	34		6	8	2:1E, 2:2X	Normal	50
	35		6	5	1:2E, 1:1X	Normal	50
	41		7	8	4:2E, 4:1X	Normal	50
	42		7	5	3:1E, 3:2X	Normal	50

Signal Timings

Network Default: 120s cycle time; 120 steps

Controller Stream 1

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)
1	(untitled)		1	NetworkDefault	120

Controller Stream 1 - Properties

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
1	Unspecified						Relative

Controller Stream 1 - Optimisation

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
1	✓	✓	Offsets And Green Splits	✓	

Phases

Controller Stream	Phase	Name	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type	Blackout Time (s)
1	A	(untitled)	7	300	2	3	Traffic	
	B	(untitled)	7	300	2	3	Traffic	
	C	(untitled)	7	300	2	3	Traffic	
	D	(untitled)	7	300	2	3	Traffic	
	E	(untitled)	5	7	0	0	Pedestrian	0

Library Stages

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)
1	1	A	1
	2	B	1
	3	C	1
	4	D	1
	5	E	1

Stage Sequences

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends
1	1	(untitled)	Single	1, 2, 3, 4, 5	15, 44, 84, 96, 108

Intergreen Matrix for Controller Stream 1

		To				
		A	B	C	D	E
From	A		5	5	5	5
	B	5		5	5	5
	C	5	5		5	5
	D	5	5	5		5
	E	5	5	5	5	

Banned Stage transitions for Controller Stream 1

		To				
		1	2	3	4	5
From	1					
	2					
	3					
	4					
	5					

Interstage Matrix for Controller Stream 1

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

Resultant Stages

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
1	1	✓	1	A	113	15	22	1	7
	2	✓	2	B	20	44	24	1	7
	3	✓	3	C	49	84	35	1	7
	4	✓	4	D	89	96	7	1	7
	5	✓	5	E	101	108	7	1	5

Resultant Phase Green Periods

Controller Stream	Phase	Green period	Is base green period	Start time (s)	End time (s)	Duration (s)
1	A	1	✓	113	15	22
	B	1	✓	20	44	24
	C	1	✓	49	84	35
	D	1	✓	89	96	7
	E	1	✓	101	108	7

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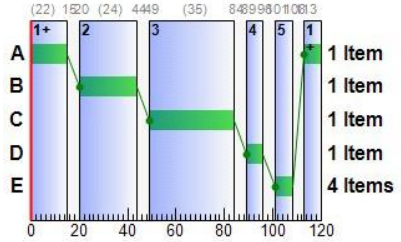
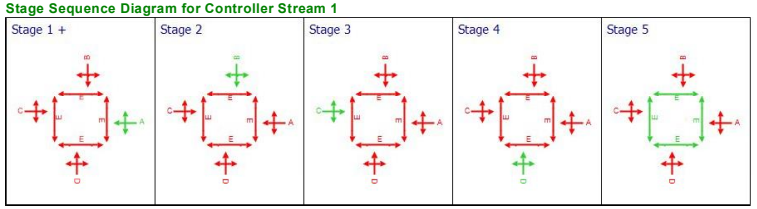
Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
A	1	1	1	A	113	15	22
B	1	1	1	D	89	96	7
C	1	1	1	C	49	84	35
D	1	1	1	B	20	44	24

Phase Timings Diagram for Controller Stream 1



Stage Sequence Diagram for Controller Stream 1



Resultant penalties

Time Segment	Controller stream	Phase min max penalty (£ per hr)	Intergreen broken penalty (£ per hr)	Stage constraint broken penalty (£ per hr)	Cost of controller stream penalties (£ per hr)
08:00-09:00	1	0.00	0.00	0.00	0.00

Results - Link

Results - Traffic Stream

Results - Traffic Stream: Vehicle summary

Time Segment	Arm	Traffic Stream	Name	Phase	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Calculated capacity (Veh/hr)	Degree of saturation (%)	Practical reserve capacity (%)	Mean Delay per Veh (s)	Mean max queue (Veh)	Utilised storage (%)	JourneyTime (s)
08:00-09:00	A	1	(untitled)	A	194	1800	22	360	54	86	48.83	6.08	69.89	54.83
	B	1	(untitled)	D	27	1800	7	135	20	400	55.50	0.86	9.95	61.50
	C	1	(untitled)	C	259	1800	35	555	47	114	36.35	7.11	81.76	42.35
	D	1	(untitled)	B	191	1800	24	390	49	104	45.59	5.80	66.75	51.59
	Ax	1	(untitled)		405	Unrestricted	120	Unrestricted	0	Unrestricted	0.00	0.00	0.00	16.49
	Bx	1	(untitled)		52	Unrestricted	120	Unrestricted	0	Unrestricted	0.00	0.00	0.00	16.82
	Cx	1	(untitled)		96	Unrestricted	120	Unrestricted	0	Unrestricted	0.00	0.00	0.00	16.80
	Dx	1	(untitled)		118	Unrestricted	120	Unrestricted	0	Unrestricted	0.00	0.00	0.00	16.47

Data Entry - Stage Start and End

Resultant Stage

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
1	1	✓	1	A	113	15	22	1	7
	2	✓	2	B	20	44	24	1	7
	3	✓	3	C	49	84	35	1	7
	4	✓	4	D	89	96	7	1	7
	5	✓	5	E	101	108	7	1	5

Data Entry - Phase

Phase

Controller Stream	Phase	Phase	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type
1	A	A	7	300	2	3	Traffic
	B	B	7	300	2	3	Traffic
	C	C	7	300	2	3	Traffic
	D	D	7	300	2	3	Traffic
	E	E	5	7	0	0	Pedestrian

Data Entry - Traffic Stream

Traffic Stream

Arm	Traffic Stream	Auto length	Length (m)	Traffic model	Max queue storage (PCU)	Traffic type	Has Saturation Flow	Is signal controlled	Is give way	Saturation flow source	Saturation flow (PCU/hr)	Delay weighting multiplier (%)	Stop weighting multiplier (%)
A	1	✓	50.00	NetworkDefault	0.00	Normal	✓	✓		Sum of lanes	1800	100	100
B	1	✓	50.00	NetworkDefault	0.00	Normal	✓	✓		Sum of lanes	1800	100	100
C	1	✓	50.00	NetworkDefault	0.00	Normal	✓	✓		Sum of lanes	1800	100	100
D	1	✓	50.00	NetworkDefault	0.00	Normal	✓	✓		Sum of lanes	1800	100	100
Ax	1	✓	137.40	NetworkDefault	0.00	Normal						100	100
Bx	1	✓	140.18	NetworkDefault	0.00	Normal						100	100
Cx	1	✓	140.00	NetworkDefault	0.00	Normal						100	100
Dx	1	✓	137.24	NetworkDefault	0.00	Normal						100	100

Data entry - Link

Results - Pedestrian

Pedestrian Crossings: Pedestrian summary

Time Segment	Pedestrian crossing	Side	Calculated Flow Entering (Ped/hr)	Degree of saturation (%)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)
08:00-09:00	(ALL)	(ALL)	50	8	7	53.68	1.57

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Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (Veh)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	A	1	54	86	194	1800	22	48.83	6.08	69.89	37.37	2.26	39.63
	B	1	20	400	27	1800	7	55.50	0.86	9.95	5.91	0.32	6.23
	C	1	47	114	259	1800	35	36.35	7.11	81.76	37.14	2.64	39.78
	D	1	49	104	191	1800	24	45.59	5.80	66.75	34.35	2.15	36.50
	Ax	1	0	Unrestricted	405	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	Bx	1	0	Unrestricted	52	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	Cx	1	0	Unrestricted	96	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	Dx	1	0	Unrestricted	118	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Calculated sat flow (Veh/hr)	Calculated capacity (Veh/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))
08:00-09:00	A	1	194	194	0		1800	360	54		86	0.00	22
	B	1	27	27	0		1800	135	20		400	0.00	7
	C	1	259	259	0		1800	555	47		114	0.00	35
	D	1	191	191	0		1800	390	49		104	0.00	24
	Ax	1	405	405	0		Unrestricted	Unrestricted	0		Unrestricted	0.89	120
	Bx	1	52	52	0		Unrestricted	Unrestricted	0		Unrestricted	1.04	120
	Cx	1	96	96	0		Unrestricted	Unrestricted	0		Unrestricted	1.13	120
	Dx	1	118	118	0		Unrestricted	Unrestricted	0		Unrestricted	1.04	120

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-hr/hr)	Random plus oversat delay (Veh-hr/hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	A	1	6.00	48.83	2.32	0.31	37.37	92.88	170.95	9.24	2.26
	B	1	6.00	55.50	0.39	0.02	5.91	95.09	24.93	0.74	0.32
	C	1	6.00	36.35	2.41	0.20	37.14	81.31	204.54	6.06	2.64
	D	1	6.00	45.59	2.19	0.23	34.35	89.81	164.61	6.94	2.15
	Ax	1	16.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Bx	1	16.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Cx	1	16.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Dx	1	16.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (Veh)	Mean max queue (Veh)	Max queue storage (Veh)	Utilised storage (%)	Average storage excess queue (Veh)	Average limit excess queue (Veh)	Excess queue penalty (£ per hr)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))	Estimated blocking
08:00-09:00	A	1	0.00	6.08	8.70	69.89	0.00	0.00	0.00	0.00	0.00	0.00	
	B	1	0.00	0.86	8.70	9.95	0.00	0.00	0.00	7.00	0.00	7.00	
	C	1	0.00	7.11	8.70	81.76	0.00	0.00	0.00	0.00	0.00	0.00	
	D	1	0.00	5.80	8.70	66.75	0.00	0.00	0.00	0.00	0.00	0.00	
	Ax	1	0.00	0.00	23.90	0.00	0.00	0.00	0.00	38.00	0.00	38.00	
	Bx	1	0.00	0.00	24.38	0.00	0.00	0.00	0.00	85.00	0.00	85.00	
	Cx	1	0.00	0.00	24.35	0.00	0.00	0.00	0.00	75.00	0.00	75.00	
	Dx	1	0.00	0.00	23.87	0.00	0.00	0.00	0.00	69.00	0.00	69.00	

Traffic Stream Results: Journey times

Time Segment	Arm	Traffic Stream	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	A	1	9.70	2.95	3.28	54.83
	B	1	1.35	0.46	2.93	61.50
	C	1	12.95	3.05	4.25	42.35
	D	1	9.55	2.74	3.49	51.59
	Ax	1	55.65	1.85	30.00	16.49
	Bx	1	7.29	0.24	30.00	16.82
	Cx	1	13.44	0.45	30.00	16.80
	Dx	1	16.19	0.54	30.00	16.47

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	Mean Max Queue EoTS (Veh)	Max End of Green Queue EoTS (Veh)	Max End of Red Queue EoTS (Veh)	PCU Factor	Cost of traffic penalties (£ per hr)	Performance Index (£ per hr)
08:00-09:00	A	1	0.00	0.00	✓	0.00	6.08	0.31	5.49	1.00	0.00	39.63
	B	1	0.00	0.00	✓	0.00	0.86	0.02	0.86	1.00	0.00	6.23
	C	1	0.00	0.00	✓	0.00	7.11	0.20	6.18	1.00	0.00	39.78
	D	1	0.00	0.00	✓	0.00	5.81	0.23	5.22	1.00	0.00	36.50
	Ax	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00
	Bx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00
	Cx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00
	Dx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	8	50	11000	7	53.68	1.57	10.59	10.59

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))
08:00-09:00	(ALL)	(ALL)	50	50	0		11000	642	8		1183	0.00	7

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Uniform delay (Ped-hr/hr)	Random plus oversat delay (Ped-hr/hr)	Weighted cost of delay (£ per hr)
08:00-09:00	1	1	5.67	53.68	0.75	0.00	10.59
		2	5.67	53.68	0.75	0.00	10.59
	2	1	6.33	53.68	0.75	0.00	10.59
		2	6.33	53.68	0.75	0.00	10.59
	3	1	6.33	53.68	0.75	0.00	10.59
		2	6.33	53.68	0.75	0.00	10.59
	4	1	5.67	53.68	0.75	0.00	10.59
		2	5.67	53.68	0.75	0.00	10.59

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Average storage excess queue (Ped)	Average limit excess queue (Ped)	Excess queue penalty (£ per hr)
08:00-09:00	(ALL)	(ALL)	1.57	10.00	15.69	0.00	0.00	0.00

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Pedestrian Crossings: Journey times

Time Segment	Crossing	Side	Distance travelled (Ped-km/hr)	Time spent (Ped-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	1	1	0.40	0.82	0.49	59.34
		2	0.40	0.82	0.49	59.34
	2	1	0.45	0.83	0.54	60.01
		2	0.45	0.83	0.54	60.01
	3	1	0.45	0.83	0.54	60.01
		2	0.45	0.83	0.54	60.01
	4	1	0.40	0.82	0.49	59.34
		2	0.40	0.82	0.49	59.34

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	0.00	1.57	1.00	0.00	10.59

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
5	10/05/2019 10:42:03	10/05/2019 10:42:04	08:00	120	206.82	14.05	53.89	A/1	0	0	A/1	Dx/1	A/

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	54	0	1342	568	21.68	114.76	7.37	122.14

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	8	400	56	53.68	84.69	84.69

Network Results: Flows and signals

Time Segment	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))
08:00-09:00	1742	1742	0		54		86	624

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-hr/hr)	Random plus oversat delay (Veh-hr/hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	10.07	29.03	13.27	0.77	199.45	33.75	565.03	22.98	7.37

Network Results: Queues and blocking

Time Segment	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))
08:00-09:00	81.76	0.00	274.00	0.00	274.00

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
08:00-09:00	129.52	18.92	6.85

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	PCU Factor	Cost of traffic penalties (£ per hr)	Controller stream penalties (£ per hr)	Performance Index (£ per hr)
08:00-09:00	0.00	0.00	✓	0.00	1.00	0.00	0.00	206.82

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

		To							
		1	2	3	4	5	6	7	8
From	1	0.0	58.8	58.8	59.2	0.0	0.0	0.0	0.0
	2	68.4	0.0	68.1	68.4	0.0	0.0	0.0	0.0
	3	71.6	71.3	0.0	71.7	0.0	0.0	0.0	0.0
	4	78.3	0.0	78.0	0.0	0.0	0.0	0.0	0.0
	5	0.0	0.0	0.0	0.0	0.0	59.3	60.0	0.0
	6	0.0	0.0	0.0	0.0	59.3	0.0	0.0	60.0
	7	0.0	0.0	0.0	0.0	60.0	0.0	0.0	59.3
	8	0.0	0.0	0.0	0.0	0.0	60.0	59.3	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (Veh/hr)	Pedestrian calculated flow (Ped/hr)	Normal journey time (s)	Pedestrian journey time (s)	Calculated Total Flow (Veh/hr)	Avg journey time (s)
1	1	2	39		58.82		39	58.82
2	1	3	207		58.84		207	58.84
3	1	4	13		59.18		13	59.18
5	2	3	176		68.08		176	68.08
6	2	4	1		68.41		1	68.41
7	2	1	14		68.39		14	68.39
8	3	2	79		71.30		79	71.30
9	3	4	38		71.65		38	71.65
10	3	1	77		71.63		77	71.63
11	4	2	0		0.00		0	0.00
12	4	3	22		77.98		22	77.98
13	4	1	5		78.30		5	78.30
17	8	7		50		59.34	50	59.34
18	8	6		50		60.01	50	60.01
22	5	7		50		60.01	50	60.01
23	5	6		50		59.34	50	59.34
34	6	8		50		60.01	50	60.01
35	6	5		50		59.34	50	59.34
41	7	8		50		59.34	50	59.34
42	7	5		50		60.01	50	60.01

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Final Prediction Table

Traffic Stream Results

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QUEUES
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (Veh)
A	1	(untitled)	1	1	A	194	1800	22	0.00	54	86	54.83	48.83	92.88	6.08
B	1	(untitled)	1	1	D	27	1800	7	7.00	20	400	61.50	55.50	95.09	0.86
C	1	(untitled)	1	1	C	259	1800	35	0.00	47	114	42.35	36.35	81.31	7.11
D	1	(untitled)	1	1	B	191	1800	24	0.00	49	104	51.59	45.59	89.81	5.80
Ax	1	(untitled)				405	Unrestricted	120	38.00	0	Unrestricted	16.49	0.00	0.00	0.00
Bx	1	(untitled)				52	Unrestricted	120	85.00	0	Unrestricted	16.82	0.00	0.00	0.00
Cx	1	(untitled)				96	Unrestricted	120	75.00	0	Unrestricted	16.80	0.00	0.00	0.00
Dx	1	(untitled)				118	Unrestricted	120	69.00	0	Unrestricted	16.47	0.00	0.00	0.00

Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE			PER PED		QUEUES	WEIGHTS	PEN
Pedestrian	Side	Name	Traffic node	Controller stream	Phase	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Ped (s)	Mean max queue (Ped)	Delay weighting (%)	Co tra pen (£ p
1	1	(untitled)	1	1	E	50	11000	7	8	1183	59.34	53.68	1.57	100	0
	2	(untitled)	1	1	E	50	11000	7	8	1183	59.34	53.68	1.57	100	0
2	1	(untitled)	1	1	E	50	11000	7	8	1183	60.01	53.68	1.57	100	0
	2	(untitled)	1	1	E	50	11000	7	8	1183	60.01	53.68	1.57	100	0
3	1	(untitled)	1	1	E	50	11000	7	8	1183	60.01	53.68	1.57	100	0
	2	(untitled)	1	1	E	50	11000	7	8	1183	60.01	53.68	1.57	100	0
4	1	(untitled)	1	1	E	50	11000	7	8	1183	59.34	53.68	1.57	100	0
	2	(untitled)	1	1	E	50	11000	7	8	1183	59.34	53.68	1.57	100	0

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (Veh-hr/hr)	Random plus oversat delay (Veh-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	126.12	12.29	10.27	7.31	0.77	114.76	7.37	0.00	122.14
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	3.40	6.63	0.51	5.96	0.00	84.69	0.00	0.00	84.69
TOTAL	129.52	18.92	6.85	13.27	0.77	199.45	7.37	0.00	206.82

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

TRANSYT 15

Version: 15.5.0.6767
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Filename: Rathmullan Road - Local Road PM.t15
Path: M:\Projects\18\18-014 - Rathmullan Drogheda SHD Planning Application\Design\Civil\Traffic\Junction Modelling\Junction 1 - 21-11-2018 - Rathmullan Road-Local Road\Proposed Signalised Junction
Report generation date: 10/05/2019 10:53:33

»Network Diagrams
«A5 - 2038 (BASE + DEV) - PM : D5 - 2038 (BASE + DEV) - PM* :
»Summary
»Network Options
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»Arms and Traffic Streams
»Pedestrian Crossings
»Local OD Matrix - Local Matrix: 1
»Signal Timings
»Results - Link
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»Data Entry - Phase
»Data Entry - Traffic Stream
»Data entry - Link
»Results - Pedestrian
»Traffic Stream Results
»Pedestrian Crossing Results
»Network Results
»Point to Point Journey Time
»Final Prediction Table

File summary

File description

File title	(untitled)
Location	
Site number	
UTCRegion	
Driving side	Left
Date	06/12/2011
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	DOMAIN\f.silva
Description	

Model and Results

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

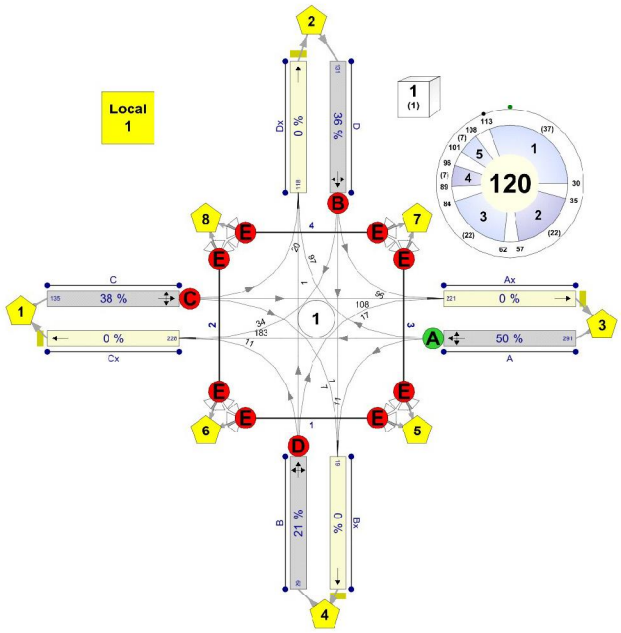
Units

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

Sorting

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

Network Diagrams



(untitled)
Diagram produced using TRANSYT 15.5.0.6767

A5 - 2038 (BASE + DEV) - PM
D5 - 2038 (BASE + 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)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
5	10/05/2019 10:49:47	10/05/2019 10:49:48	17:00	120	184.80	12.58	49.74	A/1	0	0	A/1	Dx/1	A/

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2038 (BASE + DEV) - PM		D5	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2038 (BASE + DEV) - PM				17:00	

Network Options

Network timings

Network cycle time (s)	Restrict to SCOOT cycle times	Time segment length (min)	Number of time segments	Modelled time period (min)
120		60	1	60

Signals options

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

Advanced

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

Traffic options

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

Advanced

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

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Normal Traffic parameters

Dispersion type	Dispersion coefficient
Default	35

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Bus	1.00	70	15	0.47	30	85

Tram parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Tram	1.00	0	0	0.47	100	100

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order
Hill Climb (Fast)	15, 40, -1, 15, 40, 1, -1, 1	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05		✓	1

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
1	(untitled)	

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
A	(untitled)		1
B	(untitled)		1
C	(untitled)		1
D	(untitled)		1
Ax	(untitled)		
Bx	(untitled)		
Cx	(untitled)		
Dx	(untitled)		

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
A	1	(untitled)		✓	50.00	✓	Sum of lanes	1800	✓		Normal	
B	1	(untitled)		✓	50.00	✓	Sum of lanes	1800	✓		Normal	
C	1	(untitled)		✓	50.00	✓	Sum of lanes	1800	✓		Normal	
D	1	(untitled)		✓	50.00	✓	Sum of lanes	1800	✓		Normal	
Ax	1	(untitled)		✓	137.40						Normal	
Bx	1	(untitled)		✓	140.18						Normal	
Cx	1	(untitled)		✓	140.00						Normal	
Dx	1	(untitled)		✓	137.24						Normal	

Lanes

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

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
(ALL)	1	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
(ALL)	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	120

Normal - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	1	100	100

Flows

Arm	Traffic Stream	Total Flow (Veh/hr)	Normal Flow (Veh/hr)
A	1	291	291
B	1	29	29
C	1	135	135
D	1	131	131
Ax	1	221	221
Bx	1	19	19
Cx	1	228	228
Dx	1	118	118

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled
A	1	1	A	
B	1	1	D	
C	1	1	C	
D	1	1	B	

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Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
(ALL)	1	6.00	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	1	1	C/1	Ax/1	16.49	30.00	✓	Straight	Straight Movement
Bx	1	1	A/1	Bx/1	16.82	30.00	✓	Nearside	40.00
Cx	1	1	A/1	Cx/1	16.80	30.00	✓	Straight	Straight Movement
Dx	1	1	C/1	Dx/1	16.47	30.00	✓	Nearside	40.00
Ax	1	2	B/1	Ax/1	16.49	30.00	✓	Offside	55.00
Bx	1	2	D/1	Bx/1	16.82	30.00	✓	Straight	Straight Movement
Cx	1	2	B/1	Cx/1	16.80	30.00	✓	Nearside	45.00
Dx	1	2	A/1	Dx/1	16.47	30.00	✓	Offside	55.00
Ax	1	3	D/1	Ax/1	16.49	30.00	✓	Nearside	40.00
Bx	1	3	C/1	Bx/1	16.82	30.00	✓	Offside	60.00
Cx	1	3	D/1	Cx/1	16.80	30.00	✓	Offside	55.00
Dx	1	3	B/1	Dx/1	16.47	30.00	✓	Straight	Straight Movement

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
1	(untitled)		1		Farside	7.00	4.67	5.40
2	(untitled)		1		Farside	8.00	5.33	5.40
3	(untitled)		1		Farside	8.00	5.33	5.40
4	(untitled)		1		Farside	7.00	4.67	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	E	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(ALL)	11000

Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	100	100		0.00		

Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1	(untitled)	✓	✓	Path Equalisation	✓		✓			✓	1.25		

Normal Input Flows (Veh/hr)

		To							
		1	2	3	4	5	6	7	8
From	1	0	20	108	7	0	0	0	0
	2	34	0	96	1	0	0	0	0
	3	183	97	0	11	0	0	0	0
	4	11	1	17	0	0	0	0	0
	5	0	0	0	0	0	0	0	0
	6	0	0	0	0	0	0	0	0
	7	0	0	0	0	0	0	0	0
	8	0	0	0	0	0	0	0	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows (Veh/hr)

		To							
		1	2	3	4	5	6	7	8
From	1	0	0	0	0	0	0	0	0
	2	0	0	0	0	0	0	0	0
	3	0	0	0	0	0	0	0	0
	4	0	0	0	0	0	0	0	0
	5	0	0	0	0	0	50	50	0
	6	0	0	0	0	50	0	0	50
	7	0	0	0	0	50	0	0	50
	8	0	0	0	0	0	50	50	0

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
1	1	(untitled)	C/1	Cx/1	#0000FF
	2	(untitled)	D/1	Dx/1	#FF0000
	3	(untitled)	A/1	Ax/1	#00FF00
	4	(untitled)	B/1	Bx/1	#FFFF00
	5	(untitled)	3:2E, 1:1E	3:2X, 1:1X	#FF00FF
	6	(untitled)	2:1E, 1:2E	2:1X, 1:2X	#008000
	7	(untitled)	4:2E, 3:1E	4:2X, 3:1X	#FFA500
	8	(untitled)	4:1E, 2:2E	4:1X, 2:2X	#00FFFF

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (Veh/hr)
1	1		1	2	C/1, Dx/1	Normal	20
	2		1	3	C/1, Ax/1	Normal	108
	3		1	4	C/1, Bx/1	Normal	7
	5		2	3	D/1, Ax/1	Normal	96
	6		2	4	D/1, Bx/1	Normal	1
	7		2	1	D/1, Cx/1	Normal	34
	8		3	2	A/1, Dx/1	Normal	97
	9		3	4	A/1, Bx/1	Normal	11
	10		3	1	A/1, Cx/1	Normal	183
	11		4	2	B/1, Dx/1	Normal	1
	12		4	3	B/1, Ax/1	Normal	17
	13		4	1	B/1, Cx/1	Normal	11

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Pedestrian Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Pedestrian calculated flow (Ped/hr)
1	17		8	7	4:1E, 4:2X	Normal	50
	18		8	6	2:2E, 2:1X	Normal	50
	22		5	7	3:2E, 3:1X	Normal	50
	23		5	6	1:1E, 1:2X	Normal	50
	34		6	8	2:1E, 2:2X	Normal	50
	35		6	5	1:2E, 1:1X	Normal	50
	41		7	8	4:2E, 4:1X	Normal	50
	42		7	5	3:1E, 3:2X	Normal	50

Signal Timings

Network Default: 120s cycle time; 120 steps

Controller Stream 1

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)
1	(untitled)		1	NetworkDefault	120

Controller Stream 1 - Properties

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
1	Unspecified						Relative

Controller Stream 1 - Optimisation

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
1	✓	✓	Offsets And Green Splits	✓	

Phases

Controller Stream	Phase	Name	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type	Blackout Time (s)
1	A	(untitled)	7	300	2	3	Traffic	
	B	(untitled)	7	300	2	3	Traffic	
	C	(untitled)	7	300	2	3	Traffic	
	D	(untitled)	7	300	2	3	Traffic	
	E	(untitled)	5	7	0	0	Pedestrian	0

Library Stages

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)
1	1	A	1
	2	B	1
	3	C	1
	4	D	1
	5	E	1

Stage Sequences

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends
1	1	(untitled)	Single	1, 2, 3, 4, 5	30, 57, 84, 96, 108

Intergreen Matrix for Controller Stream 1

		To				
		A	B	C	D	E
From	A		5	5	5	5
	B	5		5	5	5
	C	5	5		5	5
	D	5	5	5		5
	E	5	5	5	5	

Banned Stage transitions for Controller Stream 1

		To				
		1	2	3	4	5
From	1					
	2					
	3					
	4					
	5					

Interstage Matrix for Controller Stream 1

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

Resultant Stages

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
1	1	✓	1	A	113	30	37	1	7
	2	✓	2	B	35	57	22	1	7
	3	✓	3	C	62	84	22	1	7
	4	✓	4	D	89	96	7	1	7
	5	✓	5	E	101	108	7	1	5

Resultant Phase Green Periods

Controller Stream	Phase	Green period	Is base green period	Start time (s)	End time (s)	Duration (s)
1	A	1	✓	113	30	37
	B	1	✓	35	57	22
	C	1	✓	62	84	22
	D	1	✓	89	96	7
	E	1	✓	101	108	7

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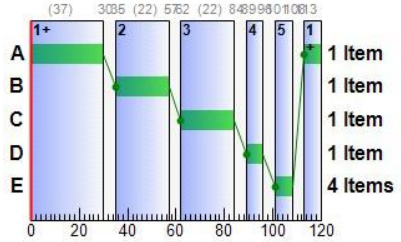
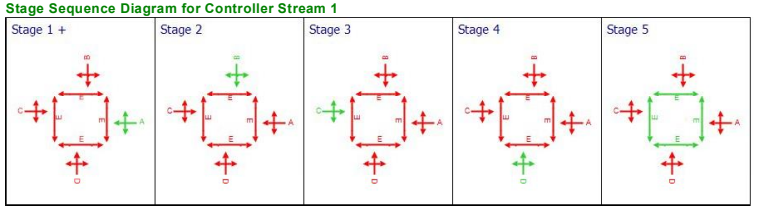
Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
A	1	1	1	A	113	30	37
B	1	1	1	D	89	96	7
C	1	1	1	C	62	84	22
D	1	1	1	B	35	57	22

Phase Timings Diagram for Controller Stream 1



Stage Sequence Diagram for Controller Stream 1



Resultant penalties

Time Segment	Controller stream	Phase min max penalty (£ per hr)	Intergreen broken penalty (£ per hr)	Stage constraint broken penalty (£ per hr)	Cost of controller stream penalties (£ per hr)
17:00-18:00	1	0.00	0.00	0.00	0.00

Results - Link

Results - Traffic Stream

Results - Traffic Stream: Vehicle summary

Time Segment	Arm	Traffic Stream	Name	Phase	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Calculated capacity (Veh/hr)	Degree of saturation (%)	Practical reserve capacity (%)	Mean Delay per Veh (s)	Mean max queue (Veh)	Utilised storage (%)	JourneyTime (s)
17:00-18:00	A	1	(untitled)	A	291	1800	37	585	50	101	35.64	8.00	92.06	41.64
	B	1	(untitled)	D	29	1800	7	135	21	366	55.85	0.93	10.71	61.85
	C	1	(untitled)	C	135	1800	22	360	38	167	44.51	3.97	45.71	50.51
	D	1	(untitled)	B	131	1800	22	360	36	175	44.28	3.85	44.29	50.28
	Ax	1	(untitled)		221	Unrestricted	120	Unrestricted	0	Unrestricted	0.00	0.00	0.00	16.49
	Bx	1	(untitled)		19	Unrestricted	120	Unrestricted	0	Unrestricted	0.00	0.00	0.00	16.82
	Cx	1	(untitled)		228	Unrestricted	120	Unrestricted	0	Unrestricted	0.00	0.00	0.00	16.80
	Dx	1	(untitled)		118	Unrestricted	120	Unrestricted	0	Unrestricted	0.00	0.00	0.00	16.47

Data Entry - Stage Start and End

Resultant Stage

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
1	1	✓	1	A	113	30	37	1	7
	2	✓	2	B	35	57	22	1	7
	3	✓	3	C	62	84	22	1	7
	4	✓	4	D	89	96	7	1	7
	5	✓	5	E	101	108	7	1	5

Data Entry - Phase

Phase

Controller Stream	Phase	Phase	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type
1	A	A	7	300	2	3	Traffic
	B	B	7	300	2	3	Traffic
	C	C	7	300	2	3	Traffic
	D	D	7	300	2	3	Traffic
	E	E	5	7	0	0	Pedestrian

Data Entry - Traffic Stream

Traffic Stream

Arm	Traffic Stream	Auto length	Length (m)	Traffic model	Max queue storage (PCU)	Traffic type	Has Saturation Flow	Is signal controlled	Is give way	Saturation flow source	Saturation flow (PCU/hr)	Delay weighting multiplier (%)	Stop weighting multiplier (%)
A	1	✓	50.00	NetworkDefault	0.00	Normal	✓	✓		Sum of lanes	1800	100	100
B	1	✓	50.00	NetworkDefault	0.00	Normal	✓	✓		Sum of lanes	1800	100	100
C	1	✓	50.00	NetworkDefault	0.00	Normal	✓	✓		Sum of lanes	1800	100	100
D	1	✓	50.00	NetworkDefault	0.00	Normal	✓	✓		Sum of lanes	1800	100	100
Ax	1	✓	137.40	NetworkDefault	0.00	Normal						100	100
Bx	1	✓	140.18	NetworkDefault	0.00	Normal						100	100
Cx	1	✓	140.00	NetworkDefault	0.00	Normal						100	100
Dx	1	✓	137.24	NetworkDefault	0.00	Normal						100	100

Data entry - Link

Results - Pedestrian

Pedestrian Crossings: Pedestrian summary

Time Segment	Pedestrian crossing	Side	Calculated Flow Entering (Ped/hr)	Degree of saturation (%)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)
17:00-18:00	(ALL)	(ALL)	50	8	7	53.68	1.57

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Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (Veh)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	A	1	50	101	291	1800	37	35.64	8.00	92.06	40.91	2.97	43.88
	B	1	21	366	29	1800	7	55.85	0.93	10.71	6.39	0.35	6.74
	C	1	38	167	135	1800	22	44.51	3.97	45.71	23.70	1.48	25.18
	D	1	36	175	131	1800	22	44.28	3.85	44.29	22.88	1.43	24.31
	Ax	1	0	Unrestricted	221	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	Bx	1	0	Unrestricted	19	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	Cx	1	0	Unrestricted	228	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	Dx	1	0	Unrestricted	118	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Calculated sat flow (Veh/hr)	Calculated capacity (Veh/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))
17:00-18:00	A	1	291	291	0		1800	585	50		101	0.00	37
	B	1	29	29	0		1800	135	21		366	0.00	7
	C	1	135	135	0		1800	360	38		167	0.00	22
	D	1	131	131	0		1800	360	36		175	0.00	22
	Ax	1	221	221	0		Unrestricted	Unrestricted	0		Unrestricted	1.04	120
	Bx	1	19	19	0		Unrestricted	Unrestricted	0		Unrestricted	0.87	120
	Cx	1	228	228	0		Unrestricted	Unrestricted	0		Unrestricted	0.96	120
	Dx	1	118	118	0		Unrestricted	Unrestricted	0		Unrestricted	1.00	120

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-hr/hr)	Random plus oversat delay (Veh-hr/hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	A	1	6.00	35.64	2.64	0.24	40.91	81.38	229.50	7.30	2.97
	B	1	6.00	55.85	0.42	0.03	6.39	95.35	26.78	0.87	0.35
	C	1	6.00	44.51	1.56	0.11	23.70	87.32	114.54	3.34	1.48
	D	1	6.00	44.28	1.51	0.10	22.88	87.19	111.13	3.09	1.43
	Ax	1	16.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Bx	1	16.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Cx	1	16.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Dx	1	16.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (Veh)	Mean max queue (Veh)	Max queue storage (Veh)	Utilised storage (%)	Average storage excess queue (Veh)	Average limit excess queue (Veh)	Excess queue penalty (£ per hr)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))	Estimated blocking
17:00-18:00	A	1	0.00	8.00	8.70	92.06	0.00	0.00	0.00	0.00	0.00	0.00	
	B	1	0.00	0.93	8.70	10.71	0.00	0.00	0.00	7.00	0.00	7.00	
	C	1	0.00	3.97	8.70	45.71	0.00	0.00	0.00	0.00	0.00	0.00	
	D	1	0.00	3.85	8.70	44.29	0.00	0.00	0.00	0.00	0.00	0.00	
	Ax	1	0.00	0.00	23.90	0.00	0.00	0.00	0.00	55.00	0.00	55.00	
	Bx	1	0.00	0.00	24.38	0.00	0.00	0.00	0.00	112.00	0.00	112.00	
	Cx	1	0.00	0.00	24.35	0.00	0.00	0.00	0.00	49.00	0.00	49.00	
	Dx	1	0.00	0.00	23.87	0.00	0.00	0.00	0.00	65.00	0.00	65.00	

Traffic Stream Results: Journey times

Time Segment	Arm	Traffic Stream	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
17:00-18:00	A	1	14.55	3.37	4.32	41.64
	B	1	1.45	0.50	2.91	61.85
	C	1	6.75	1.89	3.56	50.51
	D	1	6.55	1.83	3.58	50.28
	Ax	1	30.36	1.01	30.00	16.49
	Bx	1	2.66	0.09	30.00	16.82
	Cx	1	31.92	1.06	30.00	16.80
	Dx	1	16.19	0.54	30.00	16.47

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	Mean Max Queue EoTS (Veh)	Max End of Green Queue EoTS (Veh)	Max End of Red Queue EoTS (Veh)	PCU Factor	Cost of traffic penalties (£ per hr)	Performance Index (£ per hr)
17:00-18:00	A	1	0.00	0.00	✓	0.00	8.01	0.25	6.79	1.00	0.00	43.88
	B	1	0.00	0.00	✓	0.00	0.93	0.03	0.92	1.00	0.00	6.74
	C	1	0.00	0.00	✓	0.00	3.97	0.11	3.71	1.00	0.00	25.18
	D	1	0.00	0.00	✓	0.00	3.85	0.10	3.60	1.00	0.00	24.31
	Ax	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00
	Bx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00
	Cx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00
	Dx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
17:00-18:00	(ALL)	(ALL)	8	50	11000	7	53.68	1.57	10.59	10.59

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))
17:00-18:00	(ALL)	(ALL)	50	50	0		11000	642	8		1183	0.00	7

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Uniform delay (Ped-hr/hr)	Random plus oversat delay (Ped-hr/hr)	Weighted cost of delay (£ per hr)
17:00-18:00	1	1	5.67	53.68	0.75	0.00	10.59
		2	5.67	53.68	0.75	0.00	10.59
	2	1	6.33	53.68	0.75	0.00	10.59
		2	6.33	53.68	0.75	0.00	10.59
	3	1	6.33	53.68	0.75	0.00	10.59
		2	6.33	53.68	0.75	0.00	10.59
	4	1	5.67	53.68	0.75	0.00	10.59
		2	5.67	53.68	0.75	0.00	10.59

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Average storage excess queue (Ped)	Average limit excess queue (Ped)	Excess queue penalty (£ per hr)
17:00-18:00	(ALL)	(ALL)	1.57	10.00	15.69	0.00	0.00	0.00

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Pedestrian Crossings: Journey times

Time Segment	Crossing	Side	Distance travelled (Ped-km/hr)	Time spent (Ped-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
17:00-18:00	1	1	0.40	0.82	0.49	59.34
		2	0.40	0.82	0.49	59.34
	2	1	0.45	0.83	0.54	60.01
		2	0.45	0.83	0.54	60.01
	3	1	0.45	0.83	0.54	60.01
		2	0.45	0.83	0.54	60.01
	4	1	0.40	0.82	0.49	59.34
		2	0.40	0.82	0.49	59.34

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Performance Index (£ per hr)
17:00-18:00	(ALL)	(ALL)	0.00	0.00	1.57	1.00	0.00	10.59

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
5	10/05/2019 10:49:47	10/05/2019 10:49:48	17:00	120	184.80	12.58	49.74	A/1	0	0	A/1	Dx/1	A/

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	50	0	1172	568	20.31	93.88	6.23	100.11

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
17:00-18:00	8	400	56	53.68	84.69	84.69

Network Results: Flows and signals

Time Segment	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))
17:00-18:00	1572	1572	0		50		101	624

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-hr/hr)	Random plus oversat delay (Veh-hr/hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	9.96	28.80	12.09	0.49	178.57	31.59	481.96	14.60	6.23

Network Results: Queues and blocking

Time Segment	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))
17:00-18:00	92.06	0.00	288.00	0.00	288.00

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
17:00-18:00	113.84	16.92	6.73

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	PCU Factor	Cost of traffic penalties (£ per hr)	Controller stream penalties (£ per hr)	Performance Index (£ per hr)
17:00-18:00	0.00	0.00	✓	0.00	1.00	0.00	0.00	184.80

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

		To							
		1	2	3	4	5	6	7	8
From	1	0.0	67.0	67.0	67.3	0.0	0.0	0.0	0.0
	2	67.1	0.0	66.8	67.1	0.0	0.0	0.0	0.0
	3	58.4	58.1	0.0	58.5	0.0	0.0	0.0	0.0
	4	78.6	78.3	78.3	0.0	0.0	0.0	0.0	0.0
	5	0.0	0.0	0.0	0.0	0.0	59.3	60.0	0.0
	6	0.0	0.0	0.0	0.0	59.3	0.0	0.0	60.0
	7	0.0	0.0	0.0	0.0	60.0	0.0	0.0	59.3
	8	0.0	0.0	0.0	0.0	0.0	60.0	59.3	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (Veh/hr)	Pedestrian calculated flow (Ped/hr)	Normal journey time (s)	Pedestrian journey time (s)	Calculated Total Flow (Veh/hr)	Avg journey time (s)
1	1	2	20		66.98		20	66.98
2	1	3	108		67.00		108	67.00
3	1	4	7		67.33		7	67.33
5	2	3	96		66.76		96	66.76
6	2	4	1		67.10		1	67.10
7	2	1	34		67.08		34	67.08
8	3	2	97		58.11		97	58.11
9	3	4	11		58.47		11	58.47
10	3	1	183		58.44		183	58.44
11	4	2	1		78.32		1	78.32
12	4	3	17		78.33		17	78.33
13	4	1	11		78.65		11	78.65
17	8	7		50		59.34	50	59.34
18	8	6		50		60.01	50	60.01
22	5	7		50		60.01	50	60.01
23	5	6		50		59.34	50	59.34
34	6	8		50		60.01	50	60.01
35	6	5		50		59.34	50	59.34
41	7	8		50		59.34	50	59.34
42	7	5		50		60.01	50	60.01

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Final Prediction Table

Traffic Stream Results

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QUEUES
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (Veh)
A	1	(untitled)	1	1	A	291	1800	37	0.00	50	101	41.64	35.64	81.38	8.00
B	1	(untitled)	1	1	D	29	1800	7	7.00	21	366	61.85	55.85	95.35	0.93
C	1	(untitled)	1	1	C	135	1800	22	0.00	38	167	50.51	44.51	87.32	3.97
D	1	(untitled)	1	1	B	131	1800	22	0.00	36	175	50.28	44.28	87.19	3.85
Ax	1	(untitled)				221	Unrestricted	120	55.00	0	Unrestricted	16.49	0.00	0.00	0.00
Bx	1	(untitled)				19	Unrestricted	120	112.00	0	Unrestricted	16.82	0.00	0.00	0.00
Cx	1	(untitled)				228	Unrestricted	120	49.00	0	Unrestricted	16.80	0.00	0.00	0.00
Dx	1	(untitled)				118	Unrestricted	120	65.00	0	Unrestricted	16.47	0.00	0.00	0.00

Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE			PER PED		QUEUES	WEIGHTS	PEN
Pedestrian	Side	Name	Traffic node	Controller stream	Phase	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Ped (s)	Mean max queue (Ped)	Delay weighting (%)	Co tra pen (£ p
1	1	(untitled)	1	1	E	50	11000	7	8	1183	59.34	53.68	1.57	100	0
	2	(untitled)	1	1	E	50	11000	7	8	1183	59.34	53.68	1.57	100	0
2	1	(untitled)	1	1	E	50	11000	7	8	1183	60.01	53.68	1.57	100	0
	2	(untitled)	1	1	E	50	11000	7	8	1183	60.01	53.68	1.57	100	0
3	1	(untitled)	1	1	E	50	11000	7	8	1183	60.01	53.68	1.57	100	0
	2	(untitled)	1	1	E	50	11000	7	8	1183	60.01	53.68	1.57	100	0
4	1	(untitled)	1	1	E	50	11000	7	8	1183	59.34	53.68	1.57	100	0
	2	(untitled)	1	1	E	50	11000	7	8	1183	59.34	53.68	1.57	100	0

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (Veh-hr/hr)	Random plus oversat delay (Veh-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	110.44	10.29	10.73	6.12	0.49	93.88	6.23	0.00	100.11
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	3.40	6.63	0.51	5.96	0.00	84.69	0.00	0.00	84.69
TOTAL	113.84	16.92	6.73	12.09	0.49	178.57	6.23	0.00	184.80

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

TRANSYT 15

Version: 15.5.0.6767
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Filename: Rathmullan Road - Local Road AM.t15
Path: M:\Projects\18\18-014 - Rathmullan Drogheda SHD Planning Application\Design\Civil\Traffic\Junction Modelling\Junction 1 - 21-11-2018 - Rathmullan Road-Local Road\Proposed Signalised Junction
Report generation date: 10/05/2019 10:48:46

»Network Diagrams
«A6 - 2038 (BASE + DEV + COMM PHASES 1 AND 2) - AM : D6 - 2038 (BASE + DEV + COMM PHASES 1 AND 2) - AM* :
»Summary
»Network Options
»Traffic Nodes
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»Pedestrian Crossings
»Local OD Matrix - Local Matrix: 1
»Signal Timings
»Results - Link
»Results - Traffic Stream
»Data Entry - Stage Start and End
»Data Entry - Phase
»Data Entry - Traffic Stream
»Data entry - Link
»Results - Pedestrian
»Traffic Stream Results
»Pedestrian Crossing Results
»Network Results
»Point to Point Journey Time
»Final Prediction Table

File summary

File description

File title	(untitled)
Location	
Site number	
UTCRegion	
Driving side	Left
Date	06/12/2011
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	DOMAIN\f.silva
Description	

Model and Results

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

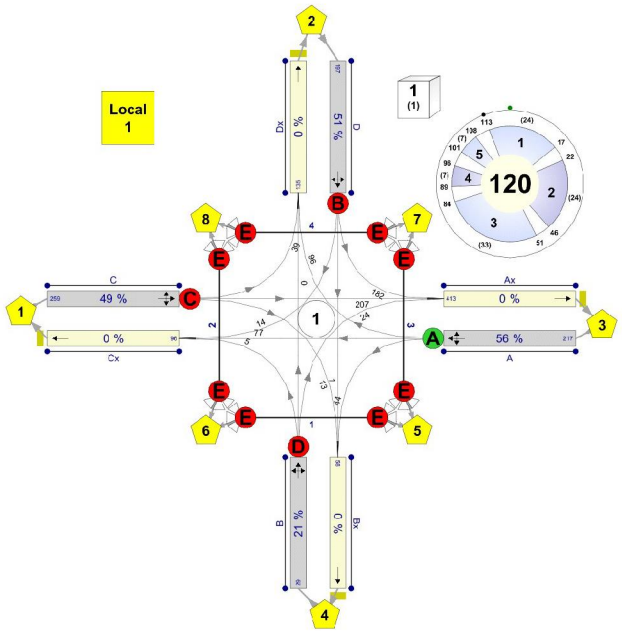
Units

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

Sorting

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

Network Diagrams



(untitled)
Diagram produced using TRANSYT 15.5.0.6767

A6 - 2038 (BASE + DEV + COMM PHASES 1 AND 2) - AM
D6 - 2038 (BASE + DEV + COMM PHASES 1 AND 2) - AM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
6	10/05/2019 10:42:04	10/05/2019 10:42:06	08:00	120	214.71	14.57	55.64	A/1	0	0	A/1	Dx/1	A/

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2038 (BASE + DEV + COMM PHASES 1 AND 2) - AM		D6	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2038 (BASE + DEV + COMM PHASES 1 AND 2) - AM				08:00	

Network Options

Network timings

Network cycle time (s)	Restrict to SCOOT cycle times	Time segment length (min)	Number of time segments	Modelled time period (min)
120		60	1	60

Signals options

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

Advanced

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

Traffic options

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

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Advanced

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

Normal Traffic parameters

Dispersion type	Dispersion coefficient
Default	35

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Bus	1.00	70	15	0.47	30	85

Tram parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Tram	1.00	0	0	0.47	100	100

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order
Hill Climb (Fast)	15, 40, -1, 15, 40, 1, -1, 1	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05		✓	1

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
1	(untitled)	

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
A	(untitled)		1
B	(untitled)		1
C	(untitled)		1
D	(untitled)		1
Ax	(untitled)		
Bx	(untitled)		
Cx	(untitled)		
Dx	(untitled)		

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
A	1	(untitled)		✓	50.00	✓	Sum of lanes	1800	✓		Normal	
B	1	(untitled)		✓	50.00	✓	Sum of lanes	1800	✓		Normal	
C	1	(untitled)		✓	50.00	✓	Sum of lanes	1800	✓		Normal	
D	1	(untitled)		✓	50.00	✓	Sum of lanes	1800	✓		Normal	
Ax	1	(untitled)		✓	137.40						Normal	
Bx	1	(untitled)		✓	140.18						Normal	
Cx	1	(untitled)		✓	140.00						Normal	
Dx	1	(untitled)		✓	137.24						Normal	

Lanes

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

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
(ALL)	1	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
(ALL)	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	120

Normal - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	1	100	100

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Flows

Arm	Traffic Stream	Total Flow (Veh/hr)	Normal Flow (Veh/hr)
A	1	217	217
B	1	29	29
C	1	259	259
D	1	197	197
Ax	1	413	413
Bx	1	58	58
Cx	1	96	96
Dx	1	135	135

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled
A	1	1	A	
B	1	1	D	
C	1	1	C	
D	1	1	B	

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
(ALL)	1	6.00	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	1	1	C/1	Ax/1	16.49	30.00	✓	Straight	Straight Movement
Bx	1	1	A/1	Bx/1	16.82	30.00	✓	Nearside	40.00
Cx	1	1	A/1	Cx/1	16.80	30.00	✓	Straight	Straight Movement
Dx	1	1	C/1	Dx/1	16.47	30.00	✓	Nearside	40.00
Ax	1	2	B/1	Ax/1	16.49	30.00	✓	Offside	55.00
Bx	1	2	D/1	Bx/1	16.82	30.00	✓	Straight	Straight Movement
Cx	1	2	B/1	Cx/1	16.80	30.00	✓	Nearside	45.00
Dx	1	2	A/1	Dx/1	16.47	30.00	✓	Offside	55.00
Ax	1	3	D/1	Ax/1	16.49	30.00	✓	Nearside	40.00
Bx	1	3	C/1	Bx/1	16.82	30.00	✓	Offside	60.00
Cx	1	3	D/1	Cx/1	16.80	30.00	✓	Offside	55.00
Dx	1	3	B/1	Dx/1	16.47	30.00	✓	Straight	Straight Movement

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
1	(untitled)		1		Farside	7.00	4.67	5.40
2	(untitled)		1		Farside	8.00	5.33	5.40
3	(untitled)		1		Farside	8.00	5.33	5.40
4	(untitled)		1		Farside	7.00	4.67	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	E	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(ALL)	11000

Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	100	100		0.00		

Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1	(untitled)	✓	✓	Path Equalisation	✓		✓			✓	1.25		

Normal Input Flows (Veh/hr)

		To							
		1	2	3	4	5	6	7	8
From	1	0	39	207	13	0	0	0	0
	2	14	0	182	1	0	0	0	0
	3	77	96	0	44	0	0	0	0
	4	5	0	24	0	0	0	0	0
	5	0	0	0	0	0	0	0	0
	6	0	0	0	0	0	0	0	0
	7	0	0	0	0	0	0	0	0
	8	0	0	0	0	0	0	0	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows (Veh/hr)

		To							
		1	2	3	4	5	6	7	8
From	1	0	0	0	0	0	0	0	0
	2	0	0	0	0	0	0	0	0
	3	0	0	0	0	0	0	0	0
	4	0	0	0	0	0	0	0	0
	5	0	0	0	0	0	50	50	0
	6	0	0	0	0	50	0	0	50
	7	0	0	0	0	50	0	0	50
	8	0	0	0	0	0	50	50	0

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
1	1	(untitled)	C/1	Cx/1	#0000FF
	2	(untitled)	D/1	Dx/1	#FF0000
	3	(untitled)	A/1	Ax/1	#00FF00
	4	(untitled)	B/1	Bx/1	#FFFF00
	5	(untitled)	3:2E, 1:1E	3:2X, 1:1X	#FF00FF
	6	(untitled)	2:1E, 1:2E	2:1X, 1:2X	#008000
	7	(untitled)	4:2E, 3:1E	4:2X, 3:1X	#FFA500
	8	(untitled)	4:1E, 2:2E	4:1X, 2:2X	#00FFFF

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Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (Veh/hr)
1	1		1	2	C/1, Dx/1	Normal	39
	2		1	3	C/1, Ax/1	Normal	207
	3		1	4	C/1, Bx/1	Normal	13
	5		2	3	D/1, Ax/1	Normal	182
	6		2	4	D/1, Bx/1	Normal	1
	7		2	1	D/1, Cx/1	Normal	14
	8		3	2	A/1, Dx/1	Normal	96
	9		3	4	A/1, Bx/1	Normal	44
	10		3	1	A/1, Cx/1	Normal	77
	11		4	2	B/1, Dx/1	Normal	0
	12		4	3	B/1, Ax/1	Normal	24
	13		4	1	B/1, Cx/1	Normal	5

Pedestrian Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Pedestrian calculated flow (Ped/hr)
1	17		8	7	4:1E, 4:2X	Normal	50
	18		8	6	2:2E, 2:1X	Normal	50
	22		5	7	3:2E, 3:1X	Normal	50
	23		5	6	1:1E, 1:2X	Normal	50
	34		6	8	2:1E, 2:2X	Normal	50
	35		6	5	1:2E, 1:1X	Normal	50
	41		7	8	4:2E, 4:1X	Normal	50
	42		7	5	3:1E, 3:2X	Normal	50

Signal Timings

Network Default: 120s cycle time; 120 steps

Controller Stream 1

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)
1	(untitled)		1	NetworkDefault	120

Controller Stream 1 - Properties

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
1	Unspecified						Relative

Controller Stream 1 - Optimisation

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
1	✓	✓	Offsets And Green Splits	✓	

Phases

Controller Stream	Phase	Name	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type	Blackout Time (s)
1	A	(untitled)	7	300	2	3	Traffic	
	B	(untitled)	7	300	2	3	Traffic	
	C	(untitled)	7	300	2	3	Traffic	
	D	(untitled)	7	300	2	3	Traffic	
	E	(untitled)	5	7	0	0	Pedestrian	0

Library Stages

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)
1	1	A	1
	2	B	1
	3	C	1
	4	D	1
	5	E	1

Stage Sequences

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends
1	1	(untitled)	Single	1, 2, 3, 4, 5	17, 46, 84, 96, 108

Intergreen Matrix for Controller Stream 1

		To				
		A	B	C	D	E
From	A		5	5	5	5
	B	5		5	5	5
	C	5	5		5	5
	D	5	5	5		5
	E	5	5	5	5	

Banned Stage transitions for Controller Stream 1

		To				
		1	2	3	4	5
From	1					
	2					
	3					
	4					
	5					

Interstage Matrix for Controller Stream 1

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

Resultant Stages

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
1	1	✓	1	A	113	17	24	1	7
	2	✓	2	B	22	46	24	1	7
	3	✓	3	C	51	84	33	1	7
	4	✓	4	D	89	96	7	1	7
	5	✓	5	E	101	108	7	1	5

Resultant Phase Green Periods

Controller Stream	Phase	Green period	Is base green period	Start time (s)	End time (s)	Duration (s)
1	A	1	✓	113	17	24
	B	1	✓	22	46	24
	C	1	✓	51	84	33
	D	1	✓	89	96	7
	E	1	✓	101	108	7

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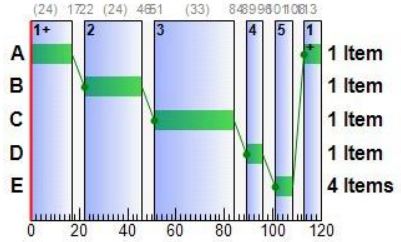
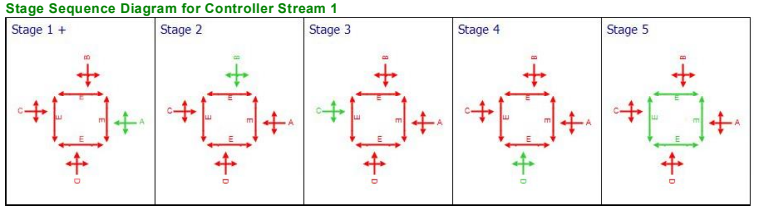
Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
A	1	1	1	A	113	17	24
B	1	1	1	D	89	96	7
C	1	1	1	C	51	84	33
D	1	1	1	B	22	46	24

Phase Timings Diagram for Controller Stream 1



Stage Sequence Diagram for Controller Stream 1



Resultant penalties

Time Segment	Controller stream	Phase min max penalty (£ per hr)	Intergreen broken penalty (£ per hr)	Stage constraint broken penalty (£ per hr)	Cost of controller stream penalties (£ per hr)
08:00-09:00	1	0.00	0.00	0.00	0.00

Results - Link

Results - Traffic Stream

Results - Traffic Stream: Vehicle summary

Time Segment	Arm	Traffic Stream	Name	Phase	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Calculated capacity (Veh/hr)	Degree of saturation (%)	Practical reserve capacity (%)	Mean Delay per Veh (s)	Mean max queue (Veh)	Utilised storage (%)	JourneyTime (s)
08:00-09:00	A	1	(untitled)	A	217	1800	24	390	56	80	47.60	6.73	77.45	53.60
	B	1	(untitled)	D	29	1800	7	135	21	366	55.85	0.93	10.71	61.85
	C	1	(untitled)	C	259	1800	33	525	49	103	38.49	7.36	84.66	44.49
	D	1	(untitled)	B	197	1800	24	390	51	98	46.02	6.00	69.02	52.02
	Ax	1	(untitled)		413	Unrestricted	120	Unrestricted	0	Unrestricted	0.00	0.00	0.00	16.49
	Bx	1	(untitled)		58	Unrestricted	120	Unrestricted	0	Unrestricted	0.00	0.00	0.00	16.82
	Cx	1	(untitled)		96	Unrestricted	120	Unrestricted	0	Unrestricted	0.00	0.00	0.00	16.80
	Dx	1	(untitled)		135	Unrestricted	120	Unrestricted	0	Unrestricted	0.00	0.00	0.00	16.47

Data Entry - Stage Start and End

Resultant Stage

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
1	1	✓	1	A	113	17	24	1	7
	2	✓	2	B	22	46	24	1	7
	3	✓	3	C	51	84	33	1	7
	4	✓	4	D	89	96	7	1	7
	5	✓	5	E	101	108	7	1	5

Data Entry - Phase

Phase

Controller Stream	Phase	Phase	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type
1	A	A	7	300	2	3	Traffic
	B	B	7	300	2	3	Traffic
	C	C	7	300	2	3	Traffic
	D	D	7	300	2	3	Traffic
	E	E	5	7	0	0	Pedestrian

Data Entry - Traffic Stream

Traffic Stream

Arm	Traffic Stream	Auto length	Length (m)	Traffic model	Max queue storage (PCU)	Traffic type	Has Saturation Flow	Is signal controlled	Is give way	Saturation flow source	Saturation flow (PCU/hr)	Delay weighting multiplier (%)	Stop weighting multiplier (%)
A	1	✓	50.00	NetworkDefault	0.00	Normal	✓	✓		Sum of lanes	1800	100	100
B	1	✓	50.00	NetworkDefault	0.00	Normal	✓	✓		Sum of lanes	1800	100	100
C	1	✓	50.00	NetworkDefault	0.00	Normal	✓	✓		Sum of lanes	1800	100	100
D	1	✓	50.00	NetworkDefault	0.00	Normal	✓	✓		Sum of lanes	1800	100	100
Ax	1	✓	137.40	NetworkDefault	0.00	Normal						100	100
Bx	1	✓	140.18	NetworkDefault	0.00	Normal						100	100
Cx	1	✓	140.00	NetworkDefault	0.00	Normal						100	100
Dx	1	✓	137.24	NetworkDefault	0.00	Normal						100	100

Data entry - Link

Results - Pedestrian

Pedestrian Crossings: Pedestrian summary

Time Segment	Pedestrian crossing	Side	Calculated Flow Entering (Ped/hr)	Degree of saturation (%)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)
08:00-09:00	(ALL)	(ALL)	50	8	7	53.68	1.57

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Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (Veh)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	A	1	56	80	217	1800	24	47.60	6.73	77.45	40.74	2.50	43.24
	B	1	21	366	29	1800	7	55.85	0.93	10.71	6.39	0.35	6.74
	C	1	49	103	259	1800	33	38.49	7.36	84.66	39.32	2.73	42.05
	D	1	51	98	197	1800	24	46.02	6.00	69.02	35.76	2.23	37.99
	Ax	1	0	Unrestricted	413	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	Bx	1	0	Unrestricted	58	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	Cx	1	0	Unrestricted	96	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	Dx	1	0	Unrestricted	135	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Calculated sat flow (Veh/hr)	Calculated capacity (Veh/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))
08:00-09:00	A	1	217	217	0		1800	390	56		80	0.00	24
	B	1	29	29	0		1800	135	21		366	0.00	7
	C	1	259	259	0		1800	525	49		103	0.00	33
	D	1	197	197	0		1800	390	51		98	0.00	24
	Ax	1	413	413	0		Unrestricted	Unrestricted	0		Unrestricted	0.90	120
	Bx	1	58	58	0		Unrestricted	Unrestricted	0		Unrestricted	1.05	120
	Cx	1	96	96	0		Unrestricted	Unrestricted	0		Unrestricted	1.10	120
	Dx	1	135	135	0		Unrestricted	Unrestricted	0		Unrestricted	1.04	120

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-hr/hr)	Random plus oversat delay (Veh-hr/hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	A	1	6.00	47.60	2.52	0.35	40.74	92.04	189.49	10.24	2.50
	B	1	6.00	55.85	0.42	0.03	6.39	95.35	26.78	0.87	0.35
	C	1	6.00	38.49	2.53	0.24	39.32	83.97	210.37	7.12	2.73
	D	1	6.00	46.02	2.26	0.26	35.76	90.29	170.28	7.60	2.23
	Ax	1	16.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Bx	1	16.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Cx	1	16.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Dx	1	16.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (Veh)	Mean max queue (Veh)	Max queue storage (Veh)	Utilised storage (%)	Average storage excess queue (Veh)	Average limit excess queue (Veh)	Excess queue penalty (£ per hr)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))	Estimated blocking
08:00-09:00	A	1	0.00	6.73	8.70	77.45	0.00	0.00	0.00	0.00	0.00	0.00	
	B	1	0.00	0.93	8.70	10.71	0.00	0.00	0.00	7.00	0.00	7.00	
	C	1	0.00	7.36	8.70	84.66	0.00	0.00	0.00	0.00	0.00	0.00	
	D	1	0.00	6.00	8.70	69.02	0.00	0.00	0.00	0.00	0.00	0.00	
	Ax	1	0.00	0.00	23.90	0.00	0.00	0.00	0.00	40.00	0.00	40.00	
	Bx	1	0.00	0.00	24.38	0.00	0.00	0.00	0.00	83.00	0.00	83.00	
	Cx	1	0.00	0.00	24.35	0.00	0.00	0.00	0.00	73.00	0.00	73.00	
	Dx	1	0.00	0.00	23.87	0.00	0.00	0.00	0.00	65.00	0.00	65.00	

Traffic Stream Results: Journey times

Time Segment	Arm	Traffic Stream	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	A	1	10.85	3.23	3.36	53.60
	B	1	1.45	0.50	2.91	61.85
	C	1	12.95	3.20	4.05	44.49
	D	1	9.85	2.85	3.46	52.02
	Ax	1	56.75	1.89	30.00	16.49
	Bx	1	8.13	0.27	30.00	16.82
	Cx	1	13.44	0.45	30.00	16.80
	Dx	1	18.53	0.62	30.00	16.47

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	Mean Max Queue EoTS (Veh)	Max End of Green Queue EoTS (Veh)	Max End of Red Queue EoTS (Veh)	PCU Factor	Cost of traffic penalties (£ per hr)	Performance Index (£ per hr)
08:00-09:00	A	1	0.00	0.00	✓	0.00	6.74	0.35	6.01	1.00	0.00	43.24
	B	1	0.00	0.00	✓	0.00	0.93	0.03	0.92	1.00	0.00	6.74
	C	1	0.00	0.00	✓	0.00	7.36	0.24	6.35	1.00	0.00	42.05
	D	1	0.00	0.00	✓	0.00	6.00	0.26	5.40	1.00	0.00	37.99
	Ax	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00
	Bx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00
	Cx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00
	Dx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	8	50	11000	7	53.68	1.57	10.59	10.59

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))
08:00-09:00	(ALL)	(ALL)	50	50	0		11000	642	8		1183	0.00	7

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Uniform delay (Ped-hr/hr)	Random plus oversat delay (Ped-hr/hr)	Weighted cost of delay (£ per hr)
08:00-09:00	1	1	5.67	53.68	0.75	0.00	10.59
		2	5.67	53.68	0.75	0.00	10.59
	2	1	6.33	53.68	0.75	0.00	10.59
		2	6.33	53.68	0.75	0.00	10.59
	3	1	6.33	53.68	0.75	0.00	10.59
		2	6.33	53.68	0.75	0.00	10.59
	4	1	5.67	53.68	0.75	0.00	10.59
		2	5.67	53.68	0.75	0.00	10.59

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Average storage excess queue (Ped)	Average limit excess queue (Ped)	Excess queue penalty (£ per hr)
08:00-09:00	(ALL)	(ALL)	1.57	10.00	15.69	0.00	0.00	0.00

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Pedestrian Crossings: Journey times

Time Segment	Crossing	Side	Distance travelled (Ped-km/hr)	Time spent (Ped-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	1	1	0.40	0.82	0.49	59.34
		2	0.40	0.82	0.49	59.34
	2	1	0.45	0.83	0.54	60.01
		2	0.45	0.83	0.54	60.01
	3	1	0.45	0.83	0.54	60.01
		2	0.45	0.83	0.54	60.01
	4	1	0.40	0.82	0.49	59.34
		2	0.40	0.82	0.49	59.34

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	0.00	1.57	1.00	0.00	10.59

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
6	10/05/2019 10:42:04	10/05/2019 10:42:06	08:00	120	214.71	14.57	55.64	A/1	0	0	A/1	Dx/1	A/

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	56	0	1404	568	22.07	122.21	7.81	130.02

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	8	400	56	53.68	84.69	84.69

Network Results: Flows and signals

Time Segment	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))
08:00-09:00	1804	1804	0		56		80	624

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-hr/hr)	Random plus oversat delay (Veh-hr/hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	10.11	29.08	13.70	0.87	206.90	34.52	596.92	25.82	7.81

Network Results: Queues and blocking

Time Segment	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))
08:00-09:00	84.66	0.00	268.00	0.00	268.00

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
08:00-09:00	135.34	19.64	6.89

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	PCU Factor	Cost of traffic penalties (£ per hr)	Controller stream penalties (£ per hr)	Performance Index (£ per hr)
08:00-09:00	0.00	0.00	✓	0.00	1.00	0.00	0.00	214.71

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

		To							
		1	2	3	4	5	6	7	8
From	1	0.0	61.0	61.0	61.3	0.0	0.0	0.0	0.0
	2	68.8	0.0	68.5	68.8	0.0	0.0	0.0	0.0
	3	70.4	70.1	0.0	70.4	0.0	0.0	0.0	0.0
	4	78.6	0.0	78.3	0.0	0.0	0.0	0.0	0.0
	5	0.0	0.0	0.0	0.0	0.0	59.3	60.0	0.0
	6	0.0	0.0	0.0	0.0	59.3	0.0	0.0	60.0
	7	0.0	0.0	0.0	0.0	60.0	0.0	0.0	59.3
	8	0.0	0.0	0.0	0.0	0.0	60.0	59.3	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (Veh/hr)	Pedestrian calculated flow (Ped/hr)	Normal journey time (s)	Pedestrian journey time (s)	Calculated Total Flow (Veh/hr)	Avg journey time (s)
1	1	2	39		60.96		39	60.96
2	1	3	207		60.98		207	60.98
3	1	4	13		61.31		13	61.31
5	2	3	182		68.51		182	68.51
6	2	4	1		68.85		1	68.85
7	2	1	14		68.82		14	68.82
8	3	2	96		70.06		96	70.06
9	3	4	44		70.42		44	70.42
10	3	1	77		70.40		77	70.40
11	4	2	0		0.00		0	0.00
12	4	3	24		78.33		24	78.33
13	4	1	5		78.65		5	78.65
17	8	7		50		59.34	50	59.34
18	8	6		50		60.01	50	60.01
22	5	7		50		60.01	50	60.01
23	5	6		50		59.34	50	59.34
34	6	8		50		60.01	50	60.01
35	6	5		50		59.34	50	59.34
41	7	8		50		59.34	50	59.34
42	7	5		50		60.01	50	60.01

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Final Prediction Table

Traffic Stream Results

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QUEUES
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (Veh)
A	1	(untitled)	1	1	A	217	1800	24	0.00	56	80	53.60	47.60	92.04	6.73
B	1	(untitled)	1	1	D	29	1800	7	7.00	21	366	61.85	55.85	95.35	0.93
C	1	(untitled)	1	1	C	259	1800	33	0.00	49	103	44.49	38.49	83.97	7.36
D	1	(untitled)	1	1	B	197	1800	24	0.00	51	98	52.02	46.02	90.29	6.00
Ax	1	(untitled)				413	Unrestricted	120	40.00	0	Unrestricted	16.49	0.00	0.00	0.00
Bx	1	(untitled)				58	Unrestricted	120	83.00	0	Unrestricted	16.82	0.00	0.00	0.00
Cx	1	(untitled)				96	Unrestricted	120	73.00	0	Unrestricted	16.80	0.00	0.00	0.00
Dx	1	(untitled)				135	Unrestricted	120	65.00	0	Unrestricted	16.47	0.00	0.00	0.00

Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE			PER PED		QUEUES	WEIGHTS	PEN
Pedestrian	Side	Name	Traffic node	Controller stream	Phase	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Ped (s)	Mean max queue (Ped)	Delay weighting (%)	Co tra pen (£ p
1	1	(untitled)	1	1	E	50	11000	7	8	1183	59.34	53.68	1.57	100	0
	2	(untitled)	1	1	E	50	11000	7	8	1183	59.34	53.68	1.57	100	0
2	1	(untitled)	1	1	E	50	11000	7	8	1183	60.01	53.68	1.57	100	0
	2	(untitled)	1	1	E	50	11000	7	8	1183	60.01	53.68	1.57	100	0
3	1	(untitled)	1	1	E	50	11000	7	8	1183	60.01	53.68	1.57	100	0
	2	(untitled)	1	1	E	50	11000	7	8	1183	60.01	53.68	1.57	100	0
4	1	(untitled)	1	1	E	50	11000	7	8	1183	59.34	53.68	1.57	100	0
	2	(untitled)	1	1	E	50	11000	7	8	1183	59.34	53.68	1.57	100	0

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (Veh-hr/hr)	Random plus oversat delay (Veh-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	131.94	13.00	10.15	7.74	0.87	122.21	7.81	0.00	130.02
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	3.40	6.63	0.51	5.96	0.00	84.69	0.00	0.00	84.69
TOTAL	135.34	19.64	6.89	13.70	0.87	206.90	7.81	0.00	214.71

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

TRANSYT 15

Version: 15.5.0.6767
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Filename: Rathmullan Road - Local Road PM.t15
Path: M:\Projects\18\18-014 - Rathmullan Drogheda SHD Planning Application\Design\Civil\Traffic\Junction Modelling\Junction 1 - 21-11-2018 - Rathmullan Road-Local Road\Proposed Signalised Junction
Report generation date: 10/05/2019 10:54:15

»Network Diagrams
«A6 - 2038 (BASE + DEV + COMM PHASES 1 AND 2) - PM : D6 - 2038 (BASE + DEV + COMM PHASES 1 AND 2) - PM* :
»Summary
»Network Options
»Traffic Nodes
»Arms and Traffic Streams
»Pedestrian Crossings
»Local OD Matrix - Local Matrix: 1
»Signal Timings
»Results - Link
»Results - Traffic Stream
»Data Entry - Stage Start and End
»Data Entry - Phase
»Data Entry - Traffic Stream
»Data entry - Link
»Results - Pedestrian
»Traffic Stream Results
»Pedestrian Crossing Results
»Network Results
»Point to Point Journey Time
»Final Prediction Table

File summary

File description

File title	(untitled)
Location	
Site number	
UTCRegion	
Driving side	Left
Date	06/12/2011
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	DOMAIN\f.silva
Description	

Model and Results

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

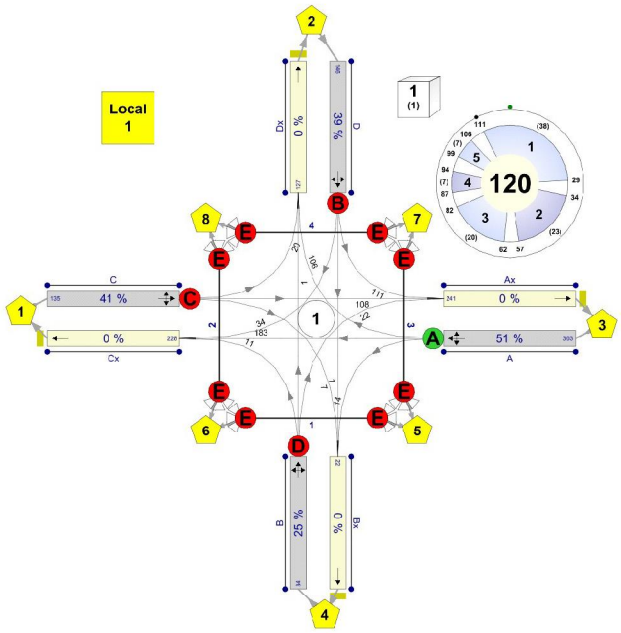
Units

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

Sorting

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

Network Diagrams



(untitled)
Diagram produced using TRANSYT 15.5.0.6767

A6 - 2038 (BASE + DEV + COMM PHASES 1 AND 2) - PM
D6 - 2038 (BASE + DEV + COMM PHASES 1 AND 2) - PM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
6	10/05/2019 10:49:49	10/05/2019 10:49:50	17:00	120	191.25	13.00	50.50	A/1	0	0	A/1	Dx/1	A/

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2038 (BASE + DEV + COMM PHASES 1 AND 2) - PM		D6	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2038 (BASE + DEV + COMM PHASES 1 AND 2) - PM				17:00	

Network Options

Network timings

Network cycle time (s)	Restrict to SCOOT cycle times	Time segment length (min)	Number of time segments	Modelled time period (min)
120		60	1	60

Signals options

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

Advanced

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

Traffic options

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

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Advanced

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

Normal Traffic parameters

Dispersion type	Dispersion coefficient
Default	35

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Bus	1.00	70	15	0.47	30	85

Tram parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Tram	1.00	0	0	0.47	100	100

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order
Hill Climb (Fast)	15, 40, -1, 15, 40, 1, -1, 1	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05		✓	1

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
1	(untitled)	

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
A	(untitled)		1
B	(untitled)		1
C	(untitled)		1
D	(untitled)		1
Ax	(untitled)		
Bx	(untitled)		
Cx	(untitled)		
Dx	(untitled)		

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
A	1	(untitled)		✓	50.00	✓	Sum of lanes	1800	✓		Normal	
B	1	(untitled)		✓	50.00	✓	Sum of lanes	1800	✓		Normal	
C	1	(untitled)		✓	50.00	✓	Sum of lanes	1800	✓		Normal	
D	1	(untitled)		✓	50.00	✓	Sum of lanes	1800	✓		Normal	
Ax	1	(untitled)		✓	137.40						Normal	
Bx	1	(untitled)		✓	140.18						Normal	
Cx	1	(untitled)		✓	140.00						Normal	
Dx	1	(untitled)		✓	137.24						Normal	

Lanes

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

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
(ALL)	1	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
(ALL)	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	120

Normal - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	1	100	100

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Flows

Arm	Traffic Stream	Total Flow (Veh/hr)	Normal Flow (Veh/hr)
A	1	303	303
B	1	34	34
C	1	135	135
D	1	146	146
Ax	1	241	241
Bx	1	22	22
Cx	1	228	228
Dx	1	127	127

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled
A	1	1	A	
B	1	1	D	
C	1	1	C	
D	1	1	B	

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
(ALL)	1	6.00	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	1	1	C/1	Ax/1	16.49	30.00	✓	Straight	Straight Movement
Bx	1	1	A/1	Bx/1	16.82	30.00	✓	Nearside	40.00
Cx	1	1	A/1	Cx/1	16.80	30.00	✓	Straight	Straight Movement
Dx	1	1	C/1	Dx/1	16.47	30.00	✓	Nearside	40.00
Ax	1	2	B/1	Ax/1	16.49	30.00	✓	Offside	55.00
Bx	1	2	D/1	Bx/1	16.82	30.00	✓	Straight	Straight Movement
Cx	1	2	B/1	Cx/1	16.80	30.00	✓	Nearside	45.00
Dx	1	2	A/1	Dx/1	16.47	30.00	✓	Offside	55.00
Ax	1	3	D/1	Ax/1	16.49	30.00	✓	Nearside	40.00
Bx	1	3	C/1	Bx/1	16.82	30.00	✓	Offside	60.00
Cx	1	3	D/1	Cx/1	16.80	30.00	✓	Offside	55.00
Dx	1	3	B/1	Dx/1	16.47	30.00	✓	Straight	Straight Movement

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
1	(untitled)		1		Farside	7.00	4.67	5.40
2	(untitled)		1		Farside	8.00	5.33	5.40
3	(untitled)		1		Farside	8.00	5.33	5.40
4	(untitled)		1		Farside	7.00	4.67	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	E	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(ALL)	11000

Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	100	100		0.00		

Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1	(untitled)	✓	✓	Path Equalisation	✓		✓			✓	1.25		

Normal Input Flows (Veh/hr)

		To							
		1	2	3	4	5	6	7	8
From	1	0	20	108	7	0	0	0	0
	2	34	0	111	1	0	0	0	0
	3	183	106	0	14	0	0	0	0
	4	11	1	22	0	0	0	0	0
	5	0	0	0	0	0	0	0	0
	6	0	0	0	0	0	0	0	0
	7	0	0	0	0	0	0	0	0
	8	0	0	0	0	0	0	0	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows (Veh/hr)

		To							
		1	2	3	4	5	6	7	8
From	1	0	0	0	0	0	0	0	0
	2	0	0	0	0	0	0	0	0
	3	0	0	0	0	0	0	0	0
	4	0	0	0	0	0	0	0	0
	5	0	0	0	0	0	50	50	0
	6	0	0	0	0	50	0	0	50
	7	0	0	0	0	50	0	0	50
	8	0	0	0	0	0	50	50	0

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
1	1	(untitled)	C/1	Cx/1	#0000FF
	2	(untitled)	D/1	Dx/1	#FF0000
	3	(untitled)	A/1	Ax/1	#00FF00
	4	(untitled)	B/1	Bx/1	#FFFF00
	5	(untitled)	3:2E, 1:1E	3:2X, 1:1X	#FF00FF
	6	(untitled)	2:1E, 1:2E	2:1X, 1:2X	#008000
	7	(untitled)	4:2E, 3:1E	4:2X, 3:1X	#FFA500
	8	(untitled)	4:1E, 2:2E	4:1X, 2:2X	#00FFFF

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Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (Veh/hr)
1	1		1	2	C/1, Dx/1	Normal	20
	2		1	3	C/1, Ax/1	Normal	108
	3		1	4	C/1, Bx/1	Normal	7
	5		2	3	D/1, Ax/1	Normal	111
	6		2	4	D/1, Bx/1	Normal	1
	7		2	1	D/1, Cx/1	Normal	34
	8		3	2	A/1, Dx/1	Normal	106
	9		3	4	A/1, Bx/1	Normal	14
	10		3	1	A/1, Cx/1	Normal	183
	11		4	2	B/1, Dx/1	Normal	1
	12		4	3	B/1, Ax/1	Normal	22
	13		4	1	B/1, Cx/1	Normal	11

Pedestrian Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Pedestrian calculated flow (Ped/hr)
1	17		8	7	4:1E, 4:2X	Normal	50
	18		8	6	2:2E, 2:1X	Normal	50
	22		5	7	3:2E, 3:1X	Normal	50
	23		5	6	1:1E, 1:2X	Normal	50
	34		6	8	2:1E, 2:2X	Normal	50
	35		6	5	1:2E, 1:1X	Normal	50
	41		7	8	4:2E, 4:1X	Normal	50
	42		7	5	3:1E, 3:2X	Normal	50

Signal Timings

Network Default: 120s cycle time; 120 steps

Controller Stream 1

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)
1	(untitled)		1	NetworkDefault	120

Controller Stream 1 - Properties

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
1	Unspecified						Relative

Controller Stream 1 - Optimisation

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
1	✓	✓	Offsets And Green Splits	✓	

Phases

Controller Stream	Phase	Name	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type	Blackout Time (s)
1	A	(untitled)	7	300	2	3	Traffic	
	B	(untitled)	7	300	2	3	Traffic	
	C	(untitled)	7	300	2	3	Traffic	
	D	(untitled)	7	300	2	3	Traffic	
	E	(untitled)	5	7	0	0	Pedestrian	0

Library Stages

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)
1	1	A	1
	2	B	1
	3	C	1
	4	D	1
	5	E	1

Stage Sequences

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends
1	1	(untitled)	Single	1, 2, 3, 4, 5	29, 57, 82, 94, 106

Intergreen Matrix for Controller Stream 1

		To				
		A	B	C	D	E
From	A		5	5	5	5
	B	5		5	5	5
	C	5	5		5	5
	D	5	5	5		5
	E	5	5	5	5	

Banned Stage transitions for Controller Stream 1

		To				
		1	2	3	4	5
From	1					
	2					
	3					
	4					
	5					

Interstage Matrix for Controller Stream 1

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

Resultant Stages

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
1	1	✓	1	A	111	29	38	1	7
	2	✓	2	B	34	57	23	1	7
	3	✓	3	C	62	82	20	1	7
	4	✓	4	D	87	94	7	1	7
	5	✓	5	E	99	106	7	1	5

Resultant Phase Green Periods

Controller Stream	Phase	Green period	Is base green period	Start time (s)	End time (s)	Duration (s)
1	A	1	✓	111	29	38
	B	1	✓	34	57	23
	C	1	✓	62	82	20
	D	1	✓	87	94	7
	E	1	✓	99	106	7

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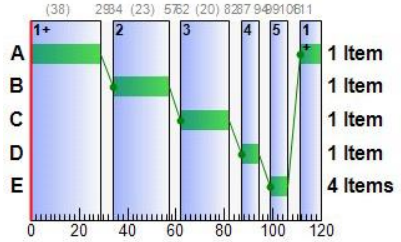
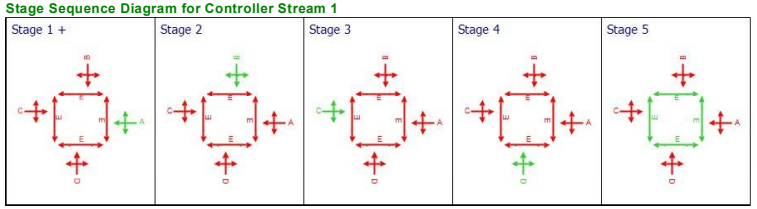
Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
A	1	1	1	A	111	29	38
B	1	1	1	D	87	94	7
C	1	1	1	C	62	82	20
D	1	1	1	B	34	57	23

Phase Timings Diagram for Controller Stream 1



Stage Sequence Diagram for Controller Stream 1



Resultant penalties

Time Segment	Controller stream	Phase min max penalty (£ per hr)	Intergreen broken penalty (£ per hr)	Stage constraint broken penalty (£ per hr)	Cost of controller stream penalties (£ per hr)
17:00-18:00	1	0.00	0.00	0.00	0.00

Results - Link

Results - Traffic Stream

Results - Traffic Stream: Vehicle summary

Time Segment	Arm	Traffic Stream	Name	Phase	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Calculated capacity (Veh/hr)	Degree of saturation (%)	Practical reserve capacity (%)	Mean Delay per Veh (s)	Mean max queue (Veh)	Utilised storage (%)	JourneyTime (s)
17:00-18:00	A	1	(untitled)	A	303	1800	38	600	51	98	35.11	8.34	95.87	41.11
	B	1	(untitled)	D	34	1800	7	135	25	297	56.81	1.11	12.76	62.81
	C	1	(untitled)	C	135	1800	20	330	41	144	47.02	4.08	46.90	53.02
	D	1	(untitled)	B	146	1800	23	375	39	157	43.98	4.30	49.46	49.98
	Ax	1	(untitled)		241	Unrestricted	120	Unrestricted	0	Unrestricted	0.00	0.00	0.00	16.49
	Bx	1	(untitled)		22	Unrestricted	120	Unrestricted	0	Unrestricted	0.00	0.00	0.00	16.82
	Cx	1	(untitled)		228	Unrestricted	120	Unrestricted	0	Unrestricted	0.00	0.00	0.00	16.80
	Dx	1	(untitled)		127	Unrestricted	120	Unrestricted	0	Unrestricted	0.00	0.00	0.00	16.47

Data Entry - Stage Start and End

Resultant Stage

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
1	1	✓	1	A	111	29	38	1	7
	2	✓	2	B	34	57	23	1	7
	3	✓	3	C	62	82	20	1	7
	4	✓	4	D	87	94	7	1	7
	5	✓	5	E	99	106	7	1	5

Data Entry - Phase

Phase

Controller Stream	Phase	Phase	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type
1	A	A	7	300	2	3	Traffic
	B	B	7	300	2	3	Traffic
	C	C	7	300	2	3	Traffic
	D	D	7	300	2	3	Traffic
	E	E	5	7	0	0	Pedestrian

Data Entry - Traffic Stream

Traffic Stream

Arm	Traffic Stream	Auto length	Length (m)	Traffic model	Max queue storage (PCU)	Traffic type	Has Saturation Flow	Is signal controlled	Is give way	Saturation flow source	Saturation flow (PCU/hr)	Delay weighting multiplier (%)	Stop weighting multiplier (%)
A	1	✓	50.00	NetworkDefault	0.00	Normal	✓	✓		Sum of lanes	1800	100	100
B	1	✓	50.00	NetworkDefault	0.00	Normal	✓	✓		Sum of lanes	1800	100	100
C	1	✓	50.00	NetworkDefault	0.00	Normal	✓	✓		Sum of lanes	1800	100	100
D	1	✓	50.00	NetworkDefault	0.00	Normal	✓	✓		Sum of lanes	1800	100	100
Ax	1	✓	137.40	NetworkDefault	0.00	Normal						100	100
Bx	1	✓	140.18	NetworkDefault	0.00	Normal						100	100
Cx	1	✓	140.00	NetworkDefault	0.00	Normal						100	100
Dx	1	✓	137.24	NetworkDefault	0.00	Normal						100	100

Data entry - Link

Results - Pedestrian

Pedestrian Crossings: Pedestrian summary

Time Segment	Pedestrian crossing	Side	Calculated Flow Entering (Ped/hr)	Degree of saturation (%)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)
17:00-18:00	(ALL)	(ALL)	50	8	7	53.68	1.57

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Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (Veh)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	A	1	51	98	303	1800	38	35.11	8.34	95.87	41.97	3.08	45.05
	B	1	25	297	34	1800	7	56.81	1.11	12.76	7.62	0.41	8.03
	C	1	41	144	135	1800	20	47.02	4.08	46.90	25.04	1.52	26.55
	D	1	39	157	146	1800	23	43.98	4.30	49.46	25.33	1.60	26.93
	Ax	1	0	Unrestricted	241	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	Bx	1	0	Unrestricted	22	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	Cx	1	0	Unrestricted	228	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00
	Dx	1	0	Unrestricted	127	Unrestricted	120	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Calculated sat flow (Veh/hr)	Calculated capacity (Veh/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))
17:00-18:00	A	1	303	303	0		1800	600	51		98	0.00	38
	B	1	34	34	0		1800	135	25		297	0.00	7
	C	1	135	135	0		1800	330	41		144	0.00	20
	D	1	146	146	0		1800	375	39		157	0.00	23
	Ax	1	241	241	0		Unrestricted	Unrestricted	0		Unrestricted	1.03	120
	Bx	1	22	22	0		Unrestricted	Unrestricted	0		Unrestricted	0.88	120
	Cx	1	228	228	0		Unrestricted	Unrestricted	0		Unrestricted	0.94	120
	Dx	1	127	127	0		Unrestricted	Unrestricted	0		Unrestricted	0.99	120

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-hr/hr)	Random plus oversat delay (Veh-hr/hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	A	1	6.00	35.11	2.70	0.26	41.97	81.10	238.09	7.64	3.08
	B	1	6.00	56.81	0.49	0.04	7.62	96.85	31.68	1.25	0.41
	C	1	6.00	47.02	1.62	0.14	25.04	89.62	116.79	4.19	1.52
	D	1	6.00	43.98	1.66	0.12	25.33	87.29	123.75	3.68	1.60
	Ax	1	16.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Bx	1	16.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Cx	1	16.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Dx	1	16.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (Veh)	Mean max queue (Veh)	Max queue storage (Veh)	Utilised storage (%)	Average storage excess queue (Veh)	Average limit excess queue (Veh)	Excess queue penalty (£ per hr)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))	Estimated blocking
17:00-18:00	A	1	0.00	8.34	8.70	95.87	0.00	0.00	0.00	0.00	0.00	0.00	
	B	1	0.00	1.11	8.70	12.76	0.00	0.00	0.00	6.00	0.00	6.00	
	C	1	0.00	4.08	8.70	46.90	0.00	0.00	0.00	0.00	0.00	0.00	
	D	1	0.00	4.30	8.70	49.46	0.00	0.00	0.00	0.00	0.00	0.00	
	Ax	1	0.00	0.00	23.90	0.00	0.00	0.00	0.00	54.00	0.00	54.00	
	Bx	1	0.00	0.00	24.38	0.00	0.00	0.00	0.00	104.00	0.00	104.00	
	Cx	1	0.00	0.00	24.35	0.00	0.00	0.00	0.00	47.00	0.00	47.00	
	Dx	1	0.00	0.00	23.87	0.00	0.00	0.00	0.00	63.00	0.00	63.00	

Traffic Stream Results: Journey times

Time Segment	Arm	Traffic Stream	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
17:00-18:00	A	1	15.15	3.46	4.38	41.11
	B	1	1.70	0.59	2.87	62.81
	C	1	6.75	1.99	3.40	53.02
	D	1	7.30	2.03	3.60	49.98
	Ax	1	33.11	1.10	30.00	16.49
	Bx	1	3.08	0.10	30.00	16.82
	Cx	1	31.92	1.06	30.00	16.80
	Dx	1	17.43	0.58	30.00	16.47

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	Mean Max Queue EoTS (Veh)	Max End of Green Queue EoTS (Veh)	Max End of Red Queue EoTS (Veh)	PCU Factor	Cost of traffic penalties (£ per hr)	Performance Index (£ per hr)
17:00-18:00	A	1	0.00	0.00	✓	0.00	8.34	0.26	6.99	1.00	0.00	45.05
	B	1	0.00	0.00	✓	0.00	1.11	0.04	1.09	1.00	0.00	8.03
	C	1	0.00	0.00	✓	0.00	4.08	0.14	3.82	1.00	0.00	26.55
	D	1	0.00	0.00	✓	0.00	4.30	0.12	3.98	1.00	0.00	26.93
	Ax	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00
	Bx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00
	Cx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00
	Dx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
17:00-18:00	(ALL)	(ALL)	8	50	11000	7	53.68	1.57	10.59	10.59

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))
17:00-18:00	(ALL)	(ALL)	50	50	0		11000	642	8		1183	0.00	7

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Uniform delay (Ped-hr/hr)	Random plus oversat delay (Ped-hr/hr)	Weighted cost of delay (£ per hr)
17:00-18:00	1	1	5.67	53.68	0.75	0.00	10.59
		2	5.67	53.68	0.75	0.00	10.59
	2	1	6.33	53.68	0.75	0.00	10.59
		2	6.33	53.68	0.75	0.00	10.59
	3	1	6.33	53.68	0.75	0.00	10.59
		2	6.33	53.68	0.75	0.00	10.59
	4	1	5.67	53.68	0.75	0.00	10.59
		2	5.67	53.68	0.75	0.00	10.59

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Average storage excess queue (Ped)	Average limit excess queue (Ped)	Excess queue penalty (£ per hr)
17:00-18:00	(ALL)	(ALL)	1.57	10.00	15.69	0.00	0.00	0.00

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Pedestrian Crossings: Journey times

Time Segment	Crossing	Side	Distance travelled (Ped-km/hr)	Time spent (Ped-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
17:00-18:00	1	1	0.40	0.82	0.49	59.34
		2	0.40	0.82	0.49	59.34
	2	1	0.45	0.83	0.54	60.01
		2	0.45	0.83	0.54	60.01
	3	1	0.45	0.83	0.54	60.01
		2	0.45	0.83	0.54	60.01
	4	1	0.40	0.82	0.49	59.34
		2	0.40	0.82	0.49	59.34

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Performance Index (£ per hr)
17:00-18:00	(ALL)	(ALL)	0.00	0.00	1.57	1.00	0.00	10.59

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
6	10/05/2019 10:49:49	10/05/2019 10:49:50	17:00	120	191.25	13.00	50.50	A/1	0	0	A/1	Dx/1	A/

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	51	0	1236	568	20.50	99.95	6.61	106.56

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
17:00-18:00	8	400	56	53.68	84.69	84.69

Network Results: Flows and signals

Time Segment	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))
17:00-18:00	1636	1636	0		51		98	624

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-hr/hr)	Random plus oversat delay (Veh-hr/hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	10.01	28.61	12.44	0.56	184.64	32.22	510.32	16.77	6.61

Network Results: Queues and blocking

Time Segment	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))
17:00-18:00	95.87	0.00	274.00	0.00	274.00

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
17:00-18:00	119.85	17.55	6.83

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	PCU Factor	Cost of traffic penalties (£ per hr)	Controller stream penalties (£ per hr)	Performance Index (£ per hr)
17:00-18:00	0.00	0.00	✓	0.00	1.00	0.00	0.00	191.25

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

		To							
		1	2	3	4	5	6	7	8
From	1	0.0	69.5	69.5	69.8	0.0	0.0	0.0	0.0
	2	66.8	0.0	66.5	66.8	0.0	0.0	0.0	0.0
	3	57.9	57.6	0.0	57.9	0.0	0.0	0.0	0.0
	4	79.6	79.3	79.3	0.0	0.0	0.0	0.0	0.0
	5	0.0	0.0	0.0	0.0	0.0	59.3	60.0	0.0
	6	0.0	0.0	0.0	0.0	59.3	0.0	0.0	60.0
	7	0.0	0.0	0.0	0.0	60.0	0.0	0.0	59.3
	8	0.0	0.0	0.0	0.0	0.0	60.0	59.3	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (Veh/hr)	Pedestrian calculated flow (Ped/hr)	Normal journey time (s)	Pedestrian journey time (s)	Calculated Total Flow (Veh/hr)	Avg journey time (s)
1	1	2	20		69.49		20	69.49
2	1	3	108		69.51		108	69.51
3	1	4	7		69.84		7	69.84
5	2	3	111		66.47		111	66.47
6	2	4	1		66.80		1	66.80
7	2	1	34		66.78		34	66.78
8	3	2	106		57.58		106	57.58
9	3	4	14		57.93		14	57.93
10	3	1	183		57.91		183	57.91
11	4	2	1		79.28		1	79.28
12	4	3	22		79.30		22	79.30
13	4	1	11		79.61		11	79.61
17	8	7		50		59.34	50	59.34
18	8	6		50		60.01	50	60.01
22	5	7		50		60.01	50	60.01
23	5	6		50		59.34	50	59.34
34	6	8		50		60.01	50	60.01
35	6	5		50		59.34	50	59.34
41	7	8		50		59.34	50	59.34
42	7	5		50		60.01	50	60.01

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Final Prediction Table

Traffic Stream Results

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QUEUES
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (Veh)
A	1	(untitled)	1	1	A	303	1800	38	0.00	51	98	41.11	35.11	81.10	8.34
B	1	(untitled)	1	1	D	34	1800	7	6.00	25	297	62.81	56.81	96.85	1.11
C	1	(untitled)	1	1	C	135	1800	20	0.00	41	144	53.02	47.02	89.62	4.08
D	1	(untitled)	1	1	B	146	1800	23	0.00	39	157	49.98	43.98	87.29	4.30
Ax	1	(untitled)				241	Unrestricted	120	54.00	0	Unrestricted	16.49	0.00	0.00	0.00
Bx	1	(untitled)				22	Unrestricted	120	104.00	0	Unrestricted	16.82	0.00	0.00	0.00
Cx	1	(untitled)				228	Unrestricted	120	47.00	0	Unrestricted	16.80	0.00	0.00	0.00
Dx	1	(untitled)				127	Unrestricted	120	63.00	0	Unrestricted	16.47	0.00	0.00	0.00

Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE			PER PED		QUEUES	WEIGHTS	PEN
Pedestrian	Side	Name	Traffic node	Controller stream	Phase	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Ped (s)	Mean max queue (Ped)	Delay weighting (%)	Co tra pen (£ p
1	1	(untitled)	1	1	E	50	11000	7	8	1183	59.34	53.68	1.57	100	0
	2	(untitled)	1	1	E	50	11000	7	8	1183	59.34	53.68	1.57	100	0
2	1	(untitled)	1	1	E	50	11000	7	8	1183	60.01	53.68	1.57	100	0
	2	(untitled)	1	1	E	50	11000	7	8	1183	60.01	53.68	1.57	100	0
3	1	(untitled)	1	1	E	50	11000	7	8	1183	60.01	53.68	1.57	100	0
	2	(untitled)	1	1	E	50	11000	7	8	1183	60.01	53.68	1.57	100	0
4	1	(untitled)	1	1	E	50	11000	7	8	1183	59.34	53.68	1.57	100	0
	2	(untitled)	1	1	E	50	11000	7	8	1183	59.34	53.68	1.57	100	0

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (Veh-hr/hr)	Random plus oversat delay (Veh-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	116.45	10.92	10.66	6.48	0.56	99.95	6.61	0.00	106.56
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	3.40	6.63	0.51	5.96	0.00	84.69	0.00	0.00	84.69
TOTAL	119.85	17.55	6.83	12.44	0.56	184.64	6.61	0.00	191.25

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

TRANSYT 15

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Path: M:\Projects\18\18-014 - Rathmullan Drogheda SHD Planning Application\Design\Civil\Traffic\Junction Modelling\Junction 2
Report generation date: 20/12/2018 09:35:49

»A1 - 2018 - SURVEYED FLOWS - AM : D1 - 2018 - SURVEYED FLOWS - AM* :
»A2 - 2018 - SURVEYED FLOWS - PM : D2 - 2018 - SURVEYED FLOWS - PM* :
»A3 - 2023 - OPENING YEAR - BASE - AM : D3 - 2023 - OPENING YEAR - BASE - AM* :
»A4 - 2023 - OPENING YEAR - BASE - PM : D4 - 2023 - OPENING YEAR - BASE - PM* :
»A5 - 2023 - OPENING YEAR - BASE + DEV - AM : D5 - 2023 - OPENING YEAR - BASE + DEV - AM* :
»A6 - 2023 - OPENING YEAR - BASE + DEV - PM : D6 - 2023 - OPENING YEAR - BASE + DEV - PM* :
»A7 - 2023 - OPENING YEAR - BASE + DEV + COM(PHASE 1)- AM : D7 - 2023 - OPENING YEAR - BASE + DEV + COM(PHASE 1)- AM* :
»A8 - 2023 - OPENING YEAR - BASE + DEV + COM(PHASE 1) - PM : D8 - 2023 - OPENING YEAR - BASE + DEV + COM(PHASE 1) - PM* :
»A9 - 2028 - BASE - AM : D9 - 2028 - BASE - AM* :
»A10 - 2028 - BASE - PM : D10 - 2028 - BASE - PM* :
»A11 - 2028 - BASE + DEV - AM : D11 - 2028 - BASE + DEV - AM* :
»A12 - 2028 - BASE + DEV - PM : D12 - 2028 - BASE + DEV - PM* :
»A13 - 2028 - BASE + DEV + COM(PHASES 1 AND 2) - AM : D13 - 2028 - BASE + DEV + COM(PHASES 1 AND 2) - AM* :
»A14 - 2028 - BASE + DEV + COM(PHASES 1 AND 2) - PM : D14 - 2028 - BASE + DEV + COM(PHASES 1 AND 2) - PM* :
»A15 - 2038 - BASE - AM : D15 - 2038 - BASE - AM* :
»A16 - 2038 - BASE - PM : D16 - 2038 - BASE - PM* :
»A17 - 2038 - BASE + DEV - AM : D17 - 2038 - BASE + DEV - AM* :
»A18 - 2038 - BASE + DEV - PM : D18 - 2038 - BASE + DEV - PM* :
»A19 - 2038 - BASE + DEV + COM(PHASES 1 AND 2) - AM : D19 - 2038 - BASE + DEV + COM(PHASES 1 AND 2) - AM* :
»A20 - 2038 - BASE + DEV + COM(PHASES 1 AND 2) - PM : D20 - 2038 - BASE + DEV + COM(PHASES 1 AND 2) - PM* :

File summary

File description

File title	(untitled)
Location	
Site number	
UTCRegion	
Driving side	Left
Date	18/03/2010
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	DOMAIN\j.ulicna
Description	

Model and Results

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

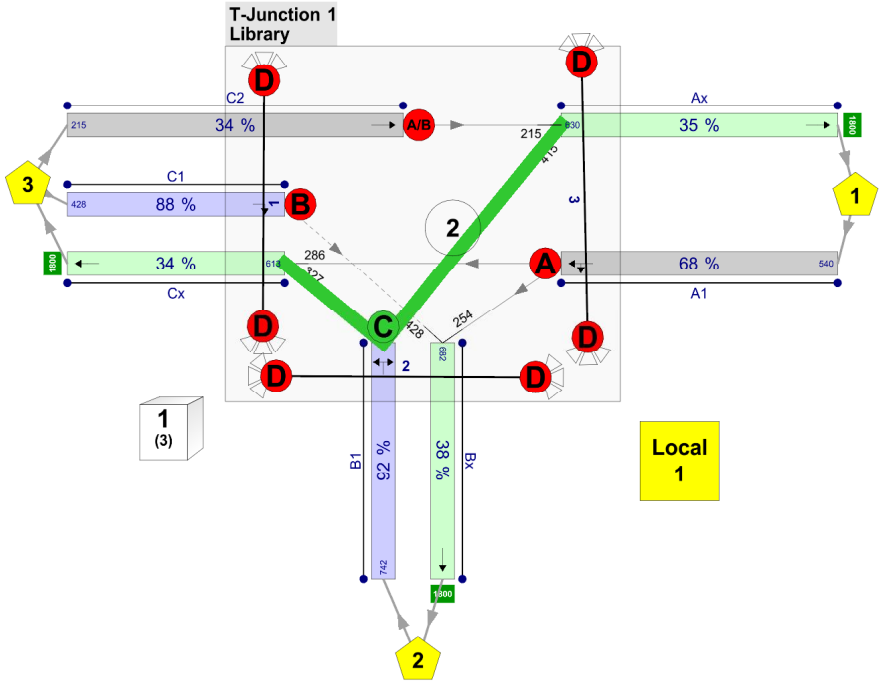
Units

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

Sorting

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

Network Diagrams



A1 - 2018 - SURVEYED FLOWS - AM
D1 - 2018 - SURVEYED FLOWS - AM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-min/min)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
1	20/12/2018 09:34:21	20/12/2018 09:34:22	08:00	100	130.95	8.46	56.35	B1/1	0	0	B1/1	Bx/1	B1/1	✓

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2018 - SURVEYED FLOWS - AM		D1	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2018 - SURVEYED FLOWS - AM				08:00	

Network Options

Network timings

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

Signals options

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

Advanced

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

Traffic options

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

Advanced

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

Normal Traffic parameters

Dispersion type	Dispersion coefficient
Default	35

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Bus	1.00	70	15	0.47	30	85

Tram parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Tram	1.00	70	15	0.47	30	85

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order
Hill Climb (Fast)	15, 40, -1, 15, 40, 1, -1, 1	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05		✓	1

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
2		

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
A1			2
Ax			
B1			2
Bx			
C1			2
C2			2
Cx			

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
A1	1	Rahtmullen Road (E)			100.00	✓	Sum of lanes	9999	✓		Normal	
Ax	1	Rathmullen Road (E)			100.00	✓	Sum of lanes	1800			Normal	
B1	1	Marleys Lane			100.00	✓	Sum of lanes	1800	✓	✓	Normal	
Bx	1	Marleys Lane			100.00	✓	Sum of lanes	1800			Normal	
C1	1	Rathmullen Road (W)			30.00	✓	Sum of lanes	1800	✓	✓	Normal	
C2	1	Rathmullen Road (W)			30.00	✓	Sum of lanes	1800	✓		Normal	
Cx	1	Rathmullen Road (W)			100.00	✓	Sum of lanes	1800			Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Saturation flow (PCU/hr)
A1	1	1				9999
Ax	1	1				1800
B1	1	1				1800
Bx	1	1				1800
C1	1	1				1800
C2	1	1				1800
Cx	1	1				1800

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
A1	1	NetworkDefault	100	100	100		0.00		
Ax	1	NetworkDefault	100	100	100		0.00		
B1	1	NetworkDefault	100	100	100		0.00		
Bx	1	NetworkDefault	100	100	100		0.00		
C1	1	Flare	100	100	100		0.00		
C2	1	Flare	100	100	100		0.00		
Cx	1	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
(ALL)	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100

Normal - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	1	100	100

Flows

Arm	Traffic Stream	Total Flow (Veh/hr)	Normal Flow (Veh/hr)
A1	1	363	363
Ax	1	340	340
B1	1	284	284
Bx	1	441	441
C1	1	232	232
C2	1	179	179
Cx	1	277	277

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled	Second phase
A1	1	1	A		
B1	1	1	C		
C1	1	1	B		
C2	1	1	A	✓	B

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
A1	1	12.00	30.00
B1	1	12.00	30.00
C1	1	3.60	30.00
C2	1	3.60	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	1	1	B1/1	Ax/1	12.00	30.00	✓	Offside	45.00
Bx	1	1	A1/1	Bx/1	12.00	30.00	✓	Nearside	20.00
Cx	1	1	A1/1	Cx/1	12.00	30.00	✓	Straight	Straight Movement
Ax	1	2	C2/1	Ax/1	12.00	30.00	✓	Straight	Straight Movement
Bx	1	2	C1/1	Bx/1	12.00	30.00	✓	Offside	35.00
Cx	1	2	B1/1	Cx/1	12.00	30.00	✓	Nearside	20.00

Give Way Data

Arm	Traffic Stream	Opposed traffic	Use Step-wise Opposed Turn Model	Visibility restricted
(ALL)	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 (%)
B1	1	1	Cx/1	574	1800	100
		2	Ax/1	440	1800	100
C1	1	1	Bx/1	574	1800	100

Give Way Data - Movements - Conflicts

Arm	Traffic Stream	Movement	Destination traffic stream	Description	Controlling type	Controlling from traffic stream	Controlling to traffic stream	Percentage opposing (%)	Slope coefficient	Upstream signals visible	Conflict shift	Conflict duration
B1	1	1	Cx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.09		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0
		2	Ax/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.08		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.20		0	0
				T-junction opposing flow	TrafficStreamMovement	C2/1	Ax/1	100	0.13		0	0
				T-junction opposing flow	TrafficStreamMovement	C1/1	Bx/1	100	0.29		0	0
C1	1	1	Bx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.22		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
(ALL)	(untitled)				Farside	3.00	2.00	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	D	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(ALL)	11000

Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	100	100		0.00		

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
1	Library		✓	TrafficStream	Two-Way	A1/1	A1/1	Ax/1	Two-Way	B1/1	B1/1	Bx/1	Two-Way	C2/1	C1/1	Cx/1	✓

T-Junction Majors

T-Junction	Left Carriageway Width (m)	Right Carriageway Width (m)	Kerbed Central Reserve Width (m)	Width for C-B traffic (m)	Visibility for C-B traffic (m)
1	6.00	6.00	0.00	2.20	0.00

T-Junction Minors

T-Junction	B-C Lane Width (m)	B-A Lane Width (m)	B-C Visibility (m)	B-A Visibility (m)
1	2.20	2.20	0.00	0.00

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
1	574	0.09	0.22	440	0.08	0.20	0.13	0.29	574	0.22	0.22

Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1		✓	✓	Lane Balancing			✓			✓	1.25		

Normal Input Flows (Veh/hr)

From	To 1	To 2	To 3
1	0	209	154
2	161	0	123
3	179	232	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
1	1		A1/1	Ax/1	#0000FF
	2		B1/1	Bx/1	#FF0000
	3		C2/1, C1/1	Cx/1	#00FF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (Veh/hr)
1	1		1	2	A1/1, Bx/1	Normal	209
	2		1	3	A1/1, Cx/1	Normal	154
	3		2	3	B1/1, Cx/1	Normal	123
	4		2	1	B1/1, Ax/1	Normal	161
	5		3	1	C2/1, Ax/1	Normal	179
	6		3	2	C1/1, Bx/1	Normal	232

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (Veh)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	A1	1	14	616	363	9999	25	28.55	7.67	44.13	40.87	3.41	44.28
	Ax	1	19	429	340	1800	100	0.23	0.02	0.13	0.31	0.00	0.31
	B1	1	56	77	284	1800	27	35.35	7.07	40.63	39.60	3.14	42.74
	Bx	1	25	308	441	1800	100	0.53	3.57	20.56	0.92	0.61	1.53
	C1	1	50	102	232	1800	25	35.19	5.01	100.22	32.20	2.52	34.72
	C2	1	19	423	179	1800	50	8.46	1.81	36.25	5.97	1.13	7.10
	Cx	1	15	550	277	1800	100	0.20	1.06	6.08	0.22	0.04	0.25

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Calculated sat flow (Veh/hr)	Calculated capacity (Veh/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
08:00-09:00	A1	1	363	363	0		9999	2600	14		616	0.00	25	26
	Ax	1	340	340	0		1800	1800	19		429	0.67	100	100
	B1	1	284	284	0		1800	504	56		77	0.00	27	28
	Bx	1	441	441	0		1800	1800	25		308	1.04	100	100
	C1	1	232	232	0		1800	468	50		102	0.00	25	26
	C2	1	179	179	0		1800	936	19		423	0.00	50	52
	Cx	1	277	277	0		1800	1800	15		550	1.02	100	100

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	A1	1	12.00	28.55	2.87	0.01	40.87	40.87	74.93	271.59	0.41	3.41	3.41
	Ax	1	12.00	0.23	0.00	0.02	0.31	0.31	0.00	0.00	0.00	0.00	0.00
	B1	1	12.00	35.35	2.43	0.36	39.60	39.60	88.10	237.38	12.84	3.14	3.14
	Bx	1	12.00	0.53	0.03	0.04	0.92	0.92	11.09	47.47	1.43	0.61	0.61
	C1	1	3.60	35.19	2.03	0.24	32.20	32.20	86.51	192.07	8.64	2.52	2.52
	C2	1	3.60	8.46	0.40	0.02	5.97	5.97	50.35	88.50	1.62	1.13	1.13
	Cx	1	12.00	0.20	0.00	0.01	0.22	0.22	1.09	2.51	0.50	0.04	0.04

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (Veh)	Mean max queue (Veh)	Max queue storage (Veh)	Utilised storage (%)	Average storage excess queue (Veh)	Average limit excess queue (Veh)	Excess queue penalty (£ per hr)	Max end of green queue (Veh)	Max end of red queue (Veh)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))	Estimated blocking
08:00-09:00	A1	1	0.00	7.67	17.39	44.13	0.00	0.00	0.00	0.01	7.47	0.00	0.00	0.00	
	Ax	1	0.00	0.02	17.39	0.13	0.00	0.00	0.00			10.00	0.00	10.00	
	B1	1	0.00	7.07	17.39	40.63	0.00	0.00	0.00	0.36	6.04	0.00	0.00	0.00	
	Bx	1	0.00	3.57	17.39	20.56	0.00	0.00	0.00			39.00	0.00	39.00	
	C1	1	0.00	5.01	5.00	100.22	0.00	0.00	0.00	0.24	5.01	0.00	0.00	0.00	
	C2	1	0.00	1.81	5.00	36.25	0.00	0.00	0.00	0.02	1.81	0.00	0.00	0.00	
	Cx	1	0.00	1.06	17.39	6.08	0.00	0.00	0.00			41.00	0.00	41.00	

Traffic Stream Results: Journey times

Time Segment	Arm	Traffic Stream	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	A1	1	36.30	4.09	8.88	40.55
	Ax	1	34.00	1.16	29.43	12.23
	B1	1	28.40	3.74	7.60	47.35
	Bx	1	44.10	1.53	28.73	12.53
	C1	1	6.96	2.50	2.78	38.79
	C2	1	5.37	0.60	8.95	12.06

	Cx	1	27.70	0.94	29.51	12.20

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	Mean Max Queue EoTS (Veh)	Max End of Green Queue EoTS (Veh)	Max End of Red Queue EoTS (Veh)	PCU Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	A1	1	0.00	0.00	✓	0.00	7.67	0.01	7.47	1.00	0.00	44.28	44.28
	Ax	1	0.00	0.00	✓	0.00	0.02			1.00	0.00	0.31	0.31
	B1	1	0.00	0.00	✓	0.00	7.07	0.36	6.04	1.00	0.00	42.74	42.74
	Bx	1	0.00	0.00	✓	0.00	3.57			1.00	0.00	1.53	1.53
	C1	1	0.00	0.00	✓	0.00	5.01	0.24	5.01	1.00	0.00	34.72	34.72
	C2	1	0.00	0.00	✓	0.00	1.81	0.02	1.81	1.00	0.00	7.10	7.10
	Cx	1	0.00	0.00	✓	0.00	1.06			1.00	0.00	0.25	0.25

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
08:00-09:00	(ALL)	(ALL)	0	0	0		11000	770	0		Unrestricted	0.00	7	7

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Uniform delay (Ped-min/min)	Random plus oversat delay (Ped-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)
08:00-09:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Average storage excess queue (Ped)	Average limit excess queue (Ped)	Excess queue penalty (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Journey times

Time Segment	Crossing	Side	Distance travelled (Ped-km/hr)	Time spent (Ped-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	(ALL)	(ALL)	0.00	0.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-min/min)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
1	20/12/2018 09:34:21	20/12/2018 09:34:22	08:00	100	130.95	8.46	56.35	B1/1	0	0	B1/1	Bx/1	B1/1	✓

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	56	0	2116	427	14.39	120.10	10.85	130.95

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	0	0	42	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))	Effective green (s (per cycle))
08:00-09:00	2116	2116	0		56		77	469	474

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	10.37	14.39	7.75	0.71	120.10	120.10	40.88	839.51	25.44	10.85	10.85

Network Results: Queues and blocking

Time Segment	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))
08:00-09:00	100.22	0.00	90.00	0.00	90.00

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)

08:00-09:00	182.83	14.55	12.56

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	PCU Factor	Cost of traffic penalties (£ per hr)	Controller stream penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	0.00	0.00	✓	0.00	1.00	0.00	0.00	130.95	130.95

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

From	To 1	To 2	To 3
1	0.0	53.3	52.8
2	59.6	0.0	59.5
3	24.3	51.1	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (Veh/hr)	Normal journey time (s)	Calculated Total Flow (Veh/hr)	Avg journey time (s)
1	1	2	209	53.30	209	53.30
2	1	3	154	52.76	154	52.76
3	2	3	123	59.54	123	59.54
4	2	1	161	59.59	161	59.59
5	3	1	179	24.29	179	24.29
6	3	2	232	51.12	232	51.12

Final Prediction Table

Traffic Stream Results

				SIGNALS			FLOWS		PERFORMANCE				PER PCU			QUEUES		WEIGHTS		PENALTIES	P.I.
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Second phase	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (Veh)	Max end of red queue (Veh)	Delay weighting multiplier (%)	Stop weighting multiplier (%)	Cost of traffic penalties (£ per hr)	P.I.
A1	1	Rathmullen Road (E)	2	1	A		363	9999	25	0.00	14	616	40.55	28.55	74.93	7.67	7.47	100	100	0.00	44.28
Ax	1	Rathmullen Road (E)					340	1800	100	10.00	19	429	12.23	0.23	0.00	0.02		100	100	0.00	0.31
B1	1	Marleys Lane	2	1	C		284	1800	27	0.00	56	77	47.35	35.35	88.10	7.07	6.04	100	100	0.00	42.74
Bx	1	Marleys Lane					441	1800	100	39.00	25	308	12.53	0.53	11.09	3.57		100	100	0.00	1.53
C1	1	Rathmullen Road (W)	2	1	B		232<	1800	25	0.00	50	102	38.79	35.19	86.51	5.01+	5.01	100	100	0.00	34.72
C2	1	Rathmullen Road (W)	2	1	A	B	179	1800	50	0.00	19	423	12.06	8.46	50.35	1.81	1.81	100	100	0.00	7.10
Cx	1	Rathmullen Road (W)					277	1800	100	41.00	15	550	12.20	0.20	1.09	1.06		100	100	0.00	0.25

Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE			PER PED		QUEUES	WEIGHTS	PENALTIES	P.I.
Pedestrian	Side	Name	Traffic node	Controller stream	Phase	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Degree of saturation (%)	Practical reserve capacity	Journey Time (s)	Mean Delay per Ped (s)	Mean max queue (Ped)	Delay weighting (%)	Cost of traffic penalties (£ per hr)	P.I.
(ALL)	(ALL)	(untitled)		1	D	0	11000	7	0	Unrestricted	0.00	0.00	0.00	100	0.00	0.00

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	182.83	14.55	12.56	7.75	0.71	120.10	10.85	0.00	130.95
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	182.83	14.55	12.56	7.75	0.71	120.10	10.85	0.00	130.95

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

A2 - 2018 - SURVEYED FLOWS - PM
D2 - 2018 - SURVEYED FLOWS - PM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-min/min)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
2	20/12/2018 09:34:24	20/12/2018 09:34:25	17:00	100	129.20	8.31	53.14	B1/1	0	0	B1/1	Ax/1	B1/1	✓

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2018 - SURVEYED FLOWS - PM		D2	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2018 - SURVEYED FLOWS - PM				17:00	

Network Options

Network timings

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

Signals options

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

Advanced

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

Traffic options

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

Advanced

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

Normal Traffic parameters

Dispersion type	Dispersion coefficient
Default	35

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Bus	1.00	70	15	0.47	30	85

Tram parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Tram	1.00	70	15	0.47	30	85

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order
Hill Climb (Fast)	15, 40, -1, 15, 40, 1, -1, 1	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05		✓	1

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
2		

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
A1			2
Ax			
B1			2
Bx			
C1			2
C2			2
Cx			

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
A1	1	Rahtmullen Road (E)			100.00	✓	Sum of lanes	9999	✓		Normal	

Ax	1	Rathmullen Road (E)			100.00	✓	Sum of lanes	1800			Normal	
B1	1	Marleys Lane			100.00	✓	Sum of lanes	1800	✓	✓	Normal	
Bx	1	Marleys Lane			100.00	✓	Sum of lanes	1800			Normal	
C1	1	Rathmullen Road (W)			30.00	✓	Sum of lanes	1800	✓	✓	Normal	
C2	1	Rathmullen Road (W)			30.00	✓	Sum of lanes	1800	✓		Normal	
Cx	1	Rathmullen Road (W)			100.00	✓	Sum of lanes	1800			Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Saturation flow (PCU/hr)
A1	1	1				9999
Ax	1	1				1800
B1	1	1				1800
Bx	1	1				1800
C1	1	1				1800
C2	1	1				1800
Cx	1	1				1800

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
A1	1	NetworkDefault	100	100	100		0.00		
Ax	1	NetworkDefault	100	100	100		0.00		
B1	1	NetworkDefault	100	100	100		0.00		
Bx	1	NetworkDefault	100	100	100		0.00		
C1	1	Flare	100	100	100		0.00		
C2	1	Flare	100	100	100		0.00		
Cx	1	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
(ALL)	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100

Normal - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	1	100	100

Flows

Arm	Traffic Stream	Total Flow (Veh/hr)	Normal Flow (Veh/hr)
A1	1	339	339
Ax	1	459	459
B1	1	507	507
Bx	1	318	318
C1	1	107	107
C2	1	114	114
Cx	1	290	290

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled	Second phase
A1	1	1	A		
B1	1	1	C		
C1	1	1	B		
C2	1	1	A	✓	B

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
A1	1	12.00	30.00
B1	1	12.00	30.00
C1	1	3.60	30.00
C2	1	3.60	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	1	1	B1/1	Ax/1	12.00	30.00	✓	Offside	45.00
Bx	1	1	A1/1	Bx/1	12.00	30.00	✓	Nearside	20.00
Cx	1	1	A1/1	Cx/1	12.00	30.00	✓	Straight	Straight Movement
Ax	1	2	C2/1	Ax/1	12.00	30.00	✓	Straight	Straight Movement
Bx	1	2	C1/1	Bx/1	12.00	30.00	✓	Offside	35.00
Cx	1	2	B1/1	Cx/1	12.00	30.00	✓	Nearside	20.00

Give Way Data

Arm	Traffic Stream	Opposed traffic	Use Step-wise Opposed Turn Model	Visibility restricted
(ALL)	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 (%)
B1	1	1	Cx/1	574	1800	100
		2	Ax/1	440	1800	100
C1	1	1	Bx/1	574	1800	100

Give Way Data - Movements - Conflicts

Arm	Traffic Stream	Movement	Destination traffic stream	Description	Controlling type	Controlling from traffic stream	Controlling to traffic stream	Percentage opposing (%)	Slope coefficient	Upstream signals visible	Conflict shift	Conflict duration
B1	1	1	Cx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.09		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0
		2	Ax/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.08		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.20		0	0
				T-junction opposing flow	TrafficStreamMovement	C2/1	Ax/1	100	0.13		0	0

				T-junction opposing flow	TrafficStreamMovement	C1/1	Bx/1	100	0.29		0	0
C1	1	1	Bx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.22		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
(ALL)	(untitled)				Farside	3.00	2.00	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	D	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(ALL)	11000

Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	100	100		0.00		

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
1	Library		✓	TrafficStream	Two-Way	A1/1	A1/1	Ax/1	Two-Way	B1/1	B1/1	Bx/1	Two-Way	C2/1	C1/1	Cx/1	✓

T-Junction Majors

T-Junction	Left Carriageway Width (m)	Right Carriageway Width (m)	Kerbed Central Reserve Width (m)	Width for C-B traffic (m)	Visibility for C-B traffic (m)
1	6.00	6.00	0.00	2.20	0.00

T-Junction Minors

T-Junction	B-C Lane Width (m)	B-A Lane Width (m)	B-C Visibility (m)	B-A Visibility (m)
1	2.20	2.20	0.00	0.00

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
1	574	0.09	0.22	440	0.08	0.20	0.13	0.29	574	0.22	0.22

Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1		✓	✓	Lane Balancing			✓			✓	1.25		

Normal Input Flows (Veh/hr)

From	To 1	To 2	To 3
1	0	211	128
2	345	0	162
3	114	107	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
1	1		A1/1	Ax/1	#0000FF
	2		B1/1	Bx/1	#FF0000
	3		C2/1, C1/1	Cx/1	#00FF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (Veh/hr)
1	1		1	2	A1/1, Bx/1	Normal	211
	2		1	3	A1/1, Cx/1	Normal	128
	3		2	3	B1/1, Cx/1	Normal	162
	4		2	1	B1/1, Ax/1	Normal	345
	5		3	1	C2/1, Ax/1	Normal	114
	6		3	2	C1/1, Bx/1	Normal	107

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (Veh)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	A1	1	23	342	339	9999	14	37.75	8.23	47.30	50.47	3.66	54.13
	Ax	1	26	292	459	1800	100	0.34	0.04	0.25	0.62	0.00	0.62
	B1	1	53	88	507	1800	52	17.51	9.45	54.36	35.02	4.15	39.17

	Bx	1	18	466	318	1800	100	0.81	4.53	26.05	1.01	1.01	2.02
	C1	1	50	102	107	1800	11	49.26	2.86	57.11	20.79	1.34	22.13
	C2	1	23	326	114	1800	25	21.78	1.97	39.35	9.80	1.08	10.87
	Cx	1	16	521	290	1800	100	0.20	1.02	5.89	0.23	0.03	0.26

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Calculated sat flow (Veh/hr)	Calculated capacity (Veh/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
17:00-18:00	A1	1	339	339	0		9999	1500	23		342	0.00	14	15
	Ax	1	459	459	0		1800	1800	26		292	0.64	100	100
	B1	1	507	507	0		1800	954	53		88	0.00	52	53
	Bx	1	318	318	0		1800	1800	18		466	1.32	100	100
	C1	1	107	107	0		1800	216	50		102	0.00	11	12
	C2	1	114	114	0		1800	486	23		326	0.00	25	27
	Cx	1	290	290	0		1800	1800	16		521	0.83	100	100

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	A1	1	12.00	37.75	3.52	0.03	50.47	50.47	86.17	290.92	1.19	3.66	3.66
	Ax	1	12.00	0.34	0.00	0.04	0.62	0.62	0.00	0.00	0.00	0.00	0.00
	B1	1	12.00	17.51	2.17	0.30	35.02	35.02	65.32	320.42	10.75	4.15	4.15
	Bx	1	12.00	0.81	0.05	0.02	1.01	1.01	25.25	79.60	0.68	1.01	1.01
	C1	1	3.60	49.26	1.22	0.24	20.79	20.79	99.73	98.24	8.46	1.34	1.34
	C2	1	3.60	21.78	0.65	0.04	9.80	9.80	75.45	84.73	1.29	1.08	1.08
	Cx	1	12.00	0.20	0.00	0.02	0.23	0.23	0.69	1.44	0.56	0.03	0.03

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (Veh)	Mean max queue (Veh)	Max queue storage (Veh)	Utilised storage (%)	Average storage excess queue (Veh)	Average limit excess queue (Veh)	Excess queue penalty (£ per hr)	Max end of green queue (Veh)	Max end of red queue (Veh)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))	Estimated blocking
17:00-18:00	A1	1	0.00	8.23	17.39	47.30	0.00	0.00	0.00	0.03	8.04	0.00	0.00	0.00	
	Ax	1	0.00	0.04	17.39	0.25	0.00	0.00	0.00			7.00	0.00	7.00	
	B1	1	0.00	9.45	17.39	54.36	0.00	0.00	0.00	0.30	6.92	0.00	0.00	0.00	
	Bx	1	0.00	4.53	17.39	26.05	0.00	0.00	0.00			61.00	0.00	61.00	
	C1	1	0.00	2.86	5.00	57.11	0.00	0.00	0.00	0.24	2.86	0.00	0.00	0.00	
	C2	1	0.00	1.97	5.00	39.35	0.00	0.00	0.00	0.04	1.97	0.00	0.00	0.00	
	Cx	1	0.00	1.02	17.39	5.89	0.00	0.00	0.00			27.00	0.00	27.00	

Traffic Stream Results: Journey times

Time Segment	Arm	Traffic Stream	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
17:00-18:00	A1	1	33.90	4.68	7.24	49.75
	Ax	1	45.90	1.57	29.17	12.34
	B1	1	50.70	4.16	12.20	29.51
	Bx	1	31.80	1.13	28.11	12.81
	C1	1	3.21	1.57	2.04	52.86
	C2	1	3.42	0.80	4.25	25.38
	Cx	1	29.00	0.98	29.51	12.20

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	Mean Max Queue EoTS (Veh)	Max End of Green Queue EoTS (Veh)	Max End of Red Queue EoTS (Veh)	PCU Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
17:00-18:00	A1	1	0.00	0.00	✓	0.00	8.23	0.03	8.04	1.00	0.00	54.13	54.13
	Ax	1	0.00	0.00	✓	0.00	0.04			1.00	0.00	0.62	0.62
	B1	1	0.00	0.00	✓	0.00	9.46	0.30	6.92	1.00	0.00	39.17	39.17
	Bx	1	0.00	0.00	✓	0.00	4.53			1.00	0.00	2.02	2.02
	C1	1	0.00	0.00	✓	0.00	2.86	0.24	2.86	1.00	0.00	22.13	22.13
	C2	1	0.00	0.00	✓	0.00	1.97	0.04	1.97	1.00	0.00	10.87	10.87
	Cx	1	0.00	0.00	✓	0.00	1.02			1.00	0.00	0.26	0.26

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
17:00-18:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
17:00-18:00	(ALL)	(ALL)	0	0	0		11000	770	0		Unrestricted	0.00	7	7

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Uniform delay (Ped-min/min)	Random plus oversat delay (Ped-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)
17:00-18:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Average storage excess queue (Ped)	Average limit excess queue (Ped)	Excess queue penalty (£ per hr)

17:00-18:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Journey times

Time Segment	Crossing	Side	Distance travelled (Ped-km/hr)	Time spent (Ped-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
17:00-18:00	(ALL)	(ALL)	0.00	0.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
17:00-18:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-min/min)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
2	20/12/2018 09:34:24	20/12/2018 09:34:25	17:00	100	129.20	8.31	53.14	B1/1	0	0	B1/1	Ax/1	B1/1	✓

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	53	0	2134	402	14.01	117.94	11.26	129.20

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
17:00-18:00	0	0	42	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))	Effective green (s (per cycle))
17:00-18:00	2134	2134	0		53		88	444	449

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	11.13	14.01	7.62	0.69	117.94	117.94	42.09	875.35	22.93	11.26	11.26

Network Results: Queues and blocking

Time Segment	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))
17:00-18:00	57.11	0.00	95.00	0.00	95.00

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
17:00-18:00	197.93	14.90	13.28

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	PCU Factor	Cost of traffic penalties (£ per hr)	Controller stream penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
17:00-18:00	0.00	0.00	✓	0.00	1.00	0.00	0.00	129.20	129.20

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

From	To 1	To 2	To 3
1	0.0	62.9	62.0
2	41.9	0.0	41.7
3	37.7	65.1	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (Veh/hr)	Normal journey time (s)	Calculated Total Flow (Veh/hr)	Avg journey time (s)
1	1	2	211	62.85	211	62.85
2	1	3	128	61.96	128	61.96
3	2	3	162	41.70	162	41.70
4	2	1	345	41.85	345	41.85
5	3	1	114	37.73	114	37.73
6	3	2	107	65.08	107	65.08

Final Prediction Table

Traffic Stream Results

				SIGNALS			FLOWS		PERFORMANCE				PER PCU			QUEUES		WEIGHTS		PENALTIES	P.I.
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Second phase	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (Veh)	Max end of red queue (Veh)	Delay weighting multiplier (%)	Stop weighting multiplier (%)	Cost of traffic penalties (£ per hr)	P.I.
A1	1	Rahtmullen Road (E)	2	1	A		339	9999	14	0.00	23	342	49.75	37.75	86.17	8.23	8.04	100	100	0.00	54.13

Ax	1	Rathmullen Road (E)					459	1800	100	7.00	26	292	12.34	0.34	0.00	0.04		100	100	0.00	0.62
B1	1	Marleys Lane	2	1	C		507	1800	52	0.00	53	88	29.51	17.51	65.32	9.45	6.92	100	100	0.00	39.17
Bx	1	Marleys Lane					318	1800	100	61.00	18	466	12.81	0.81	25.25	4.53		100	100	0.00	2.02
C1	1	Rathmullen Road (W)	2	1	B		107	1800	11	0.00	50	102	52.86	49.26	99.73	2.86	2.86	100	100	0.00	22.13
C2	1	Rathmullen Road (W)	2	1	A	B	114	1800	25	0.00	23	326	25.38	21.78	75.45	1.97	1.97	100	100	0.00	10.87
Cx	1	Rathmullen Road (W)					290	1800	100	27.00	16	521	12.20	0.20	0.69	1.02		100	100	0.00	0.26

Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE			PER PED		QUEUES	WEIGHTS	PENALTIES	P.I.
Pedestrian	Side	Name	Traffic node	Controller stream	Phase	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Degree of saturation (%)	Practical reserve capacity	Journey Time (s)	Mean Delay per Ped (s)	Mean max queue (Ped)	Delay weighting (%)	Cost of traffic penalties (£ per hr)	P.I.
(ALL)	(ALL)	(untitled)		1	D	0	11000	7	0	Unrestricted	0.00	0.00	0.00	100	0.00	0.00

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	197.93	14.90	13.28	7.62	0.69	117.94	11.26	0.00	129.20
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	197.93	14.90	13.28	7.62	0.69	117.94	11.26	0.00	129.20

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

A3 - 2023 - OPENING YEAR - BASE - AM
D3 - 2023 - OPENING YEAR - BASE - AM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-min/min)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
3	20/12/2018 09:34:26	20/12/2018 09:34:27	08:00	100	140.80	9.09	57.47	B1/1	0	0	B1/1	Bx/1	B1/1	✓

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2023 - OPENING YEAR - BASE - AM		D3	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2023 - OPENING YEAR - BASE - AM				08:00	

Network Options

Network timings

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

Signals options

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

Advanced

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

Traffic options

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

Advanced

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

Normal Traffic parameters

Dispersion type	Dispersion coefficient
Default	35

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Bus	1.00	70	15	0.47	30	85

Tram parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Tram	1.00	70	15	0.47	30	85

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order
Hill Climb (Fast)	15, 40, -1, 15, 40, 1, -1, 1	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05		✓	1

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
2		

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
A1			2
Ax			
B1			2
Bx			
C1			2
C2			2
Cx			

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
A1	1	Rahtmullen Road (E)			100.00	✓	Sum of lanes	9999	✓		Normal	
Ax	1	Rathmullen Road (E)			100.00	✓	Sum of lanes	1800			Normal	
B1	1	Marleys Lane			100.00	✓	Sum of lanes	1800	✓	✓	Normal	
Bx	1	Marleys Lane			100.00	✓	Sum of lanes	1800			Normal	
C1	1	Rathmullen Road (W)			30.00	✓	Sum of lanes	1800	✓	✓	Normal	
C2	1	Rathmullen Road (W)			30.00	✓	Sum of lanes	1800	✓		Normal	
Cx	1	Rathmullen Road (W)			100.00	✓	Sum of lanes	1800			Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Saturation flow (PCU/hr)
A1	1	1				9999
Ax	1	1				1800
B1	1	1				1800
Bx	1	1				1800
C1	1	1				1800
C2	1	1				1800
Cx	1	1				1800

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
A1	1	NetworkDefault	100	100	100		0.00		
Ax	1	NetworkDefault	100	100	100		0.00		
B1	1	NetworkDefault	100	100	100		0.00		
Bx	1	NetworkDefault	100	100	100		0.00		
C1	1	Flare	100	100	100		0.00		
C2	1	Flare	100	100	100		0.00		
Cx	1	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
(ALL)	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100

Normal - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	1	100	100

Flows

Arm	Traffic Stream	Total Flow (Veh/hr)	Normal Flow (Veh/hr)
A1	1	384	384
Ax	1	359	359
B1	1	300	300
Bx	1	466	466
C1	1	245	245

C2	1	189	189
Cx	1	293	293

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled	Second phase
A1	1	1	A		
B1	1	1	C		
C1	1	1	B		
C2	1	1	A	✓	B

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
A1	1	12.00	30.00
B1	1	12.00	30.00
C1	1	3.60	30.00
C2	1	3.60	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	1	1	B1/1	Ax/1	12.00	30.00	✓	Offside	45.00
Bx	1	1	A1/1	Bx/1	12.00	30.00	✓	Nearside	20.00
Cx	1	1	A1/1	Cx/1	12.00	30.00	✓	Straight	Straight Movement
Ax	1	2	C2/1	Ax/1	12.00	30.00	✓	Straight	Straight Movement
Bx	1	2	C1/1	Bx/1	12.00	30.00	✓	Offside	35.00
Cx	1	2	B1/1	Cx/1	12.00	30.00	✓	Nearside	20.00

Give Way Data

Arm	Traffic Stream	Opposed traffic	Use Step-wise Opposed Turn Model	Visibility restricted
(ALL)	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 (%)
B1	1	1	Cx/1	574	1800	100
		2	Ax/1	440	1800	100
C1	1	1	Bx/1	574	1800	100

Give Way Data - Movements - Conflicts

Arm	Traffic Stream	Movement	Destination traffic stream	Description	Controlling type	Controlling from traffic stream	Controlling to traffic stream	Percentage opposing (%)	Slope coefficient	Upstream signals visible	Conflict shift	Conflict duration
B1	1	1	Cx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.09		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0
		2	Ax/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.08		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.20		0	0
				T-junction opposing flow	TrafficStreamMovement	C2/1	Ax/1	100	0.13		0	0
				T-junction opposing flow	TrafficStreamMovement	C1/1	Bx/1	100	0.29		0	0
C1	1	1	Bx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.22		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
(ALL)	(untitled)				Farside	3.00	2.00	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	D	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(ALL)	11000

Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	100	100		0.00		

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
1	Library		✓	TrafficStream	Two-Way	A1/1	A1/1	Ax/1	Two-Way	B1/1	B1/1	Bx/1	Two-Way	C2/1	C1/1	Cx/1	✓

T-Junction Majors

T-Junction	Left Carriageway Width (m)	Right Carriageway Width (m)	Kerbed Central Reserve Width (m)	Width for C-B traffic (m)	Visibility for C-B traffic (m)
1	6.00	6.00	0.00	2.20	0.00

T-Junction Minors

T-Junction	B-C Lane Width (m)	B-A Lane Width (m)	B-C Visibility (m)	B-A Visibility (m)
1	2.20	2.20	0.00	0.00

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
1	574	0.09	0.22	440	0.08	0.20	0.13	0.29	574	0.22	0.22

Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1		✓	✓	Lane Balancing			✓			✓	1.25		

Normal Input Flows (Veh/hr)

From	To 1	To 2	To 3
1	0	221	163
2	170	0	130
3	189	245	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
1	1		A1/1	Ax/1	#0000FF
	2		B1/1	Bx/1	#FF0000
	3		C2/1, C1/1	Cx/1	#00FF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (Veh/hr)
1	1		1	2	A1/1, Bx/1	Normal	221
	2		1	3	A1/1, Cx/1	Normal	163
	3		2	3	B1/1, Cx/1	Normal	130
	4		2	1	B1/1, Ax/1	Normal	170
	5		3	1	C2/1, Ax/1	Normal	189
	6		3	2	C1/1, Bx/1	Normal	245

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s	Mean Delay per	Mean max queu	Utilised storage (%)	Weighted cost of delay	Weighted cost of stops	Performance Index (£ per hr)
08:00-09:00	A1	1	15	577	384	9999	25	28.60	8.12	46.69	43.32	3.61	46.93
	Ax	1	20	401	359	1800	100	0.25	0.02	0.14	0.35	0.00	0.35
	B1	1	57	74	300	1800	28	34.87	7.47	42.94	41.26	3.31	44.57
	Bx	1	26	286	466	1800	100	0.61	3.79	21.81	1.12	0.77	1.89
	C1	1	54	84	245	1800	24	37.30	5.43	108.54	36.05	2.75	38.80
	C2	1	21	386	189	1800	49	8.98	1.97	39.38	6.69	1.24	7.93
	Cx	1	16	514	293	1800	100	0.23	1.53	8.79	0.26	0.07	0.33

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Calculated sat flow (Veh/hr)	Calculated capacity (Veh/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
08:00-09:00	A1	1	384	384	0		9999	2600	15		577	0.00	25	26
	Ax	1	359	359	0		1800	1800	20		401	0.66	100	100
	B1	1	300	300	0		1800	522	57		74	0.00	28	29
	Bx	1	466	466	0		1800	1800	26		286	1.05	100	100
	C1	1	245	245	0		1800	450	54		84	0.00	24	25
	C2	1	189	189	0		1800	918	21		386	0.00	49	51
	Cx	1	293	293	0		1800	1800	16		514	1.01	100	100

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	A1	1	12.00	28.60	3.04	0.01	43.32	43.32	74.94	287.30	0.46	3.61	3.61
	Ax	1	12.00	0.25	0.00	0.02	0.35	0.35	0.00	0.00	0.00	0.00	0.00
	B1	1	12.00	34.87	2.52	0.38	41.26	41.26	87.89	249.98	13.70	3.31	3.31
	Bx	1	12.00	0.61	0.03	0.05	1.12	1.12	13.14	59.61	1.63	0.77	0.77
	C1	1	3.60	37.30	2.22	0.32	36.05	36.05	89.44	207.64	11.48	2.75	2.75
	C2	1	3.60	8.98	0.44	0.03	6.69	6.69	52.30	96.92	1.92	1.24	1.24
	Cx	1	12.00	0.23	0.00	0.02	0.26	0.26	1.96	5.18	0.57	0.07	0.07

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (Veh)	Mean max queue (Veh)	Max queue storage (Veh)	Utilised storage (%)	Average storage excess queue (Veh)	Average limit excess queue (Veh)	Excess queue penalty (£ per hr)	Max end of green queue (Veh)	Max end of red queue (Veh)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))	Estimated blocking
08:00-09:00	A1	1	0.00	8.12	17.39	46.69	0.00	0.00	0.00	0.01	7.91	0.00	0.00	0.00	
	Ax	1	0.00	0.02	17.39	0.14	0.00	0.00	0.00			10.00	0.00	10.00	
	B1	1	0.00	7.47	17.39	42.94	0.00	0.00	0.00	0.38	6.30	0.00	0.00	0.00	
	Bx	1	0.00	3.79	17.39	21.81	0.00	0.00	0.00			38.00	0.00	38.00	

	C1	1	0.00	5.43	5.00	108.54	0.02	0.00	0.00	0.32	5.43	0.00	0.00	0.00	
	C2	1	0.00	1.97	5.00	39.38	0.00	0.00	0.00	0.03	1.97	0.00	0.00	0.00	
	Cx	1	0.00	1.53	17.39	8.79	0.00	0.00	0.00			40.00	0.00	40.00	

Traffic Stream Results: Journey times

Time Segment	Arm	Traffic Stream	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	A1	1	38.40	4.33	8.87	40.60
	Ax	1	35.90	1.22	29.39	12.25
	B1	1	30.00	3.91	7.68	46.87
	Bx	1	46.60	1.63	28.55	12.61
	C1	1	7.35	2.78	2.64	40.90
	C2	1	5.67	0.66	8.58	12.58
	Cx	1	29.30	1.00	29.44	12.23

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	Mean Max Queue EoTS (Veh)	Max End of Green Queue EoTS (Veh)	Max End of Red Queue EoTS (Veh)	PCU Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	A1	1	0.00	0.00	✓	0.00	8.12	0.01	7.91	1.00	0.00	46.93	46.93
	Ax	1	0.00	0.00	✓	0.00	0.02			1.00	0.00	0.35	0.35
	B1	1	0.00	0.00	✓	0.00	7.47	0.39	6.30	1.00	0.00	44.57	44.57
	Bx	1	0.00	0.00	✓	0.00	3.79			1.00	0.00	1.89	1.89
	C1	1	0.00	0.00	✓	0.00	5.43	0.32	5.43	1.00	0.00	38.80	38.80
	C2	1	0.00	0.00	✓	0.00	1.97	0.03	1.97	1.00	0.00	7.93	7.93
	Cx	1	0.00	0.00	✓	0.00	1.53			1.00	0.00	0.33	0.33

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
08:00-09:00	(ALL)	(ALL)	0	0	0		11000	770	0		Unrestricted	0.00	7	7

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Uniform delay (Ped-min/min)	Random plus oversat delay (Ped-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)
08:00-09:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Average storage excess queue (Ped)	Average limit excess queue (Ped)	Excess queue penalty (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Journey times

Time Segment	Crossing	Side	Distance travelled (Ped-km/hr)	Time spent (Ped-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	(ALL)	(ALL)	0.00	0.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-min/min)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
3	20/12/2018 09:34:26	20/12/2018 09:34:27	08:00	100	140.80	9.09	57.47	B1/1	0	0	B1/1	Bx/1	B1/1	✓

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	57	0	2236	426	14.63	129.06	11.74	140.80

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	0	0	42	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))	Effective green (s (per cycle))
08:00-09:00	2236	2236	0		57		74	468	473

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-min/min)	Random plus oversat delay	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)

				(Veh-min/min)							
08:00-09:00	10.37	14.63	8.26	0.83	129.06	129.06	41.88	906.64	29.75	11.74	11.74

Network Results: Queues and blocking

Time Segment	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))
08:00-09:00	108.54	0.00	88.00	0.00	88.00

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
08:00-09:00	193.22	15.53	12.44

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	PCU Factor	Cost of traffic penalties (£ per hr)	Controller stream penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	0.00	0.00	✓	0.00	1.00	0.00	0.00	140.80	140.80

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

From	To 1	To 2	To 3
1	0.0	53.5	52.9
2	59.1	0.0	59.1
3	24.8	53.3	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (Veh/hr)	Normal journey time (s)	Calculated Total Flow (Veh/hr)	Avg journey time (s)
1	1	2	221	53.50	221	53.50
2	1	3	163	52.85	163	52.85
3	2	3	130	59.06	130	59.06
4	2	1	170	59.12	170	59.12
5	3	1	189	24.83	189	24.83
6	3	2	245	53.25	245	53.25

Final Prediction Table

Traffic Stream Results

				SIGNALS			FLOWS		PERFORMANCE				PER PCU			QUEUES		WEIGHTS		PENALTIES	P.I.
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Second phase	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (Veh)	Max end of red queue (V	Delay weighting multiplier (%)	Stop weighting multiplier (%)	Cost of traffic penalties (£ per hr)	P.I.
A1	1	Rathmullen Road (E)	2	1	A		384	9999	25	0.00	15	577	40.60	28.60	74.94	8.12	7.91	100	100	0.00	46.93
Ax	1	Rathmullen Road (E)					359	1800	100	10.00	20	401	12.25	0.25	0.00	0.02		100	100	0.00	0.35
B1	1	Marleys Lane	2	1	C		300	1800	28	0.00	57	74	46.87	34.87	87.89	7.47	6.30	100	100	0.00	44.57
Bx	1	Marleys Lane					466	1800	100	38.00	26	286	12.61	0.61	13.14	3.79		100	100	0.00	1.89
C1	1	Rathmullen Road (W)	2	1	B		245<	1800	24	0.00	54	84	40.90	37.30	89.44	5.43+	5.43	100	100	0.00	38.80
C2	1	Rathmullen Road (W)	2	1	A	B	189	1800	49	0.00	21	386	12.58	8.98	52.30	1.97	1.97	100	100	0.00	7.93
Cx	1	Rathmullen Road (W)					293	1800	100	40.00	16	514	12.23	0.23	1.96	1.53		100	100	0.00	0.33

Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE			PER PED		QUEUES	WEIGHTS	PENALTIES	P.I.
Pedestrian	Side	Name	Traffic node	Controller stream	Phase	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Degree of saturation (%)	Practical reserve capacity	Journey Time (s)	Mean Delay per Ped (s)	Mean max queue (Ped)	Delay weighting (%)	Cost of traffic penalties (£ per hr)	P.I.
(ALL)	(ALL)	(untitled)		1	D	0	11000	7	0	Unrestricted	0.00	0.00	0.00	100	0.00	0.00

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	193.22	15.53	12.44	8.26	0.83	129.06	11.74	0.00	140.80
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	193.22	15.53	12.44	8.26	0.83	129.06	11.74	0.00	140.80

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

A4 - 2023 - OPENING YEAR - BASE - PM
D4 - 2023 - OPENING YEAR - BASE - PM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-min/min)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
4	20/12/2018 09:34:29	20/12/2018 09:34:29	17:00	100	138.95	8.93	55.04	B1/1	0	0	B1/1	Ax/1	B1/1	✓

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2023 - OPENING YEAR - BASE - PM		D4	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2023 - OPENING YEAR - BASE - PM				17:00	

Network Options

Network timings

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

Signals options

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

Advanced

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

Traffic options

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

Advanced

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

Normal Traffic parameters

Dispersion type	Dispersion coefficient
Default	35

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Bus	1.00	70	15	0.47	30	85

Tram parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Tram	1.00	70	15	0.47	30	85

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order
Hill Climb (Fast)	15, 40, -1, 15, 40, 1, -1, 1	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05		✓	1

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
2		

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
A1			2

Ax			
B1			2
Bx			
C1			2
C2			2
Cx			

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
A1	1	Rahtmullen Road (E)			100.00	✓	Sum of lanes	9999	✓		Normal	
Ax	1	Rathmullen Road (E)			100.00	✓	Sum of lanes	1800			Normal	
B1	1	Marleys Lane			100.00	✓	Sum of lanes	1800	✓	✓	Normal	
Bx	1	Marleys Lane			100.00	✓	Sum of lanes	1800			Normal	
C1	1	Rathmullen Road (W)			30.00	✓	Sum of lanes	1800	✓	✓	Normal	
C2	1	Rathmullen Road (W)			30.00	✓	Sum of lanes	1800	✓		Normal	
Cx	1	Rathmullen Road (W)			100.00	✓	Sum of lanes	1800			Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Saturation flow (PCU/hr)
A1	1	1				9999
Ax	1	1				1800
B1	1	1				1800
Bx	1	1				1800
C1	1	1				1800
C2	1	1				1800
Cx	1	1				1800

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
A1	1	NetworkDefault	100	100	100		0.00		
Ax	1	NetworkDefault	100	100	100		0.00		
B1	1	NetworkDefault	100	100	100		0.00		
Bx	1	NetworkDefault	100	100	100		0.00		
C1	1	Flare	100	100	100		0.00		
C2	1	Flare	100	100	100		0.00		
Cx	1	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
(ALL)	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100

Normal - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	1	100	100

Flows

Arm	Traffic Stream	Total Flow (Veh/hr)	Normal Flow (Veh/hr)
A1	1	358	358
Ax	1	484	484
B1	1	535	535
Bx	1	336	336
C1	1	113	113
C2	1	120	120
Cx	1	306	306

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled	Second phase
A1	1	1	A		
B1	1	1	C		
C1	1	1	B		
C2	1	1	A	✓	B

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
A1	1	12.00	30.00
B1	1	12.00	30.00
C1	1	3.60	30.00
C2	1	3.60	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	1	1	B1/1	Ax/1	12.00	30.00	✓	Offside	45.00
Bx	1	1	A1/1	Bx/1	12.00	30.00	✓	Nearside	20.00
Cx	1	1	A1/1	Cx/1	12.00	30.00	✓	Straight	Straight Movement
Ax	1	2	C2/1	Ax/1	12.00	30.00	✓	Straight	Straight Movement
Bx	1	2	C1/1	Bx/1	12.00	30.00	✓	Offside	35.00
Cx	1	2	B1/1	Cx/1	12.00	30.00	✓	Nearside	20.00

Give Way Data

Arm	Traffic Stream	Opposed traffic	Use Step-wise Opposed Turn Model	Visibility restricted
(ALL)	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 (%)
B1	1	1	Cx/1	574	1800	100
		2	Ax/1	440	1800	100
C1	1	1	Bx/1	574	1800	100

Give Way Data - Movements - Conflicts

Arm	Traffic Stream	Movement	Destination traffic stream	Description	Controlling type	Controlling from traffic stream	Controlling to traffic stream	Percentage opposing (%)	Slope coefficient	Upstream signals visible	Conflict shift	Conflict duration
B1	1	1	Cx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.09		0	0

				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0
		2	Ax/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.08		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.20		0	0
				T-junction opposing flow	TrafficStreamMovement	C2/1	Ax/1	100	0.13		0	0
				T-junction opposing flow	TrafficStreamMovement	C1/1	Bx/1	100	0.29		0	0
C1	1	1	Bx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.22		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
(ALL)	(untitled)				Farside	3.00	2.00	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	D	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(ALL)	11000

Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	100	100		0.00		

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
1	Library		✓	TrafficStream	Two-Way	A1/1	A1/1	Ax/1	Two-Way	B1/1	B1/1	Bx/1	Two-Way	C2/1	C1/1	Cx/1	✓

T-Junction Majors

T-Junction	Left Carriageway Width (m)	Right Carriageway Width (m)	Kerbed Central Reserve Width (m)	Width for C-B traffic (m)	Visibility for C-B traffic (m)
1	6.00	6.00	0.00	2.20	0.00

T-Junction Minors

T-Junction	B-C Lane Width (m)	B-A Lane Width (m)	B-C Visibility (m)	B-A Visibility (m)
1	2.20	2.20	0.00	0.00

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
1	574	0.09	0.22	440	0.08	0.20	0.13	0.29	574	0.22	0.22

Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1		✓	✓	Lane Balancing			✓			✓	1.25		

Normal Input Flows (Veh/hr)

From	To 1	To 2	To 3
1	0	223	135
2	364	0	171
3	120	113	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
1	1		A1/1	Ax/1	#0000FF
	2		B1/1	Bx/1	#FF0000
	3		C2/1, C1/1	Cx/1	#00FF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (Veh/hr)
1	1		1	2	A1/1, Bx/1	Normal	223
	2		1	3	A1/1, Cx/1	Normal	135
	3		2	3	B1/1, Cx/1	Normal	171
	4		2	1	B1/1, Ax/1	Normal	364
	5		3	1	C2/1, Ax/1	Normal	120
	6		3	2	C1/1, Bx/1	Normal	113

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (Veh)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	A1	1	26	291	358	9999	13	38.82	8.89	51.14	54.81	3.96	58.77
	Ax	1	27	272	484	1800	100	0.37	0.05	0.28	0.70	0.00	0.70
	B1	1	55	82	535	1800	53	17.32	10.00	57.47	36.54	4.39	40.93
	Bx	1	19	436	336	1800	100	0.96	5.03	28.92	1.27	1.21	2.48
	C1	1	52	91	113	1800	11	50.32	3.04	60.90	22.43	1.43	23.86
	C2	1	26	290	120	1800	24	22.71	2.11	42.22	10.75	1.16	11.91
	Cx	1	17	488	306	1800	100	0.22	1.08	6.19	0.27	0.04	0.30

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Calculated sat flow (Veh/hr)	Calculated capacity (Veh/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
17:00-18:00	A1	1	358	358	0		9999	1400	26		291	0.00	13	14
	Ax	1	484	484	0		1800	1800	27		272	0.63	100	100
	B1	1	535	535	0		1800	972	55		82	0.00	53	54
	Bx	1	336	336	0		1800	1800	19		436	1.32	100	100
	C1	1	113	113	0		1800	216	52		91	0.00	11	12
	C2	1	120	120	0		1800	468	26		290	0.00	24	26
	Cx	1	306	306	0		1800	1800	17		488	0.83	100	100

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	A1	1	12.00	38.82	3.82	0.04	54.81	54.81	88.19	314.15	1.58	3.96	3.96
	Ax	1	12.00	0.37	0.00	0.05	0.70	0.70	0.00	0.00	0.00	0.00	0.00
	B1	1	12.00	17.32	2.24	0.34	36.54	36.54	65.41	337.96	12.01	4.39	4.39
	Bx	1	12.00	0.96	0.07	0.02	1.27	1.27	28.64	95.46	0.77	1.21	1.21
	C1	1	3.60	50.32	1.30	0.28	22.43	22.43	100.62	103.75	9.95	1.43	1.43
	C2	1	3.60	22.71	0.71	0.04	10.75	10.75	76.91	90.71	1.58	1.16	1.16
	Cx	1	12.00	0.22	0.00	0.02	0.27	0.27	1.02	2.51	0.63	0.04	0.04

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (Veh)	Mean max queue	Max queue storage (Veh)	Utilised storage (%)	Average storage excess	Average limit excess	Excess queue penalty (£	Max end of green	Max end of red queue	Wasted time starvation (s	Wasted time blocking back (s	Wasted time total (s (per	Estimated blocking
17:00-18:00	A1	1	0.00	8.89	17.39	51.14	0.00	0.00	0.00	0.04	8.60	0.00	0.00	0.00	
	Ax	1	0.00	0.05	17.39	0.28	0.00	0.00	0.00			7.00	0.00	7.00	
	B1	1	0.00	10.00	17.39	57.47	0.00	0.00	0.00	0.34	7.17	0.00	0.00	0.00	
	Bx	1	0.00	5.03	17.39	28.92	0.00	0.00	0.00			60.00	0.00	60.00	
	C1	1	0.00	3.04	5.00	60.90	0.00	0.00	0.00	0.28	3.04	0.00	0.00	0.00	
	C2	1	0.00	2.11	5.00	42.22	0.00	0.00	0.00	0.04	2.11	0.00	0.00	0.00	
	Cx	1	0.00	1.08	17.39	6.19	0.00	0.00	0.00			26.00	0.00	26.00	

Traffic Stream Results: Journey times

Time Segment	Arm	Traffic Stream	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
17:00-18:00	A1	1	35.80	5.05	7.08	50.82
	Ax	1	48.40	1.66	29.11	12.37
	B1	1	53.50	4.36	12.28	29.32
	Bx	1	33.60	1.21	27.78	12.96
	C1	1	3.39	1.69	2.00	53.92
	C2	1	3.60	0.88	4.10	26.31
	Cx	1	30.60	1.04	29.46	12.22

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	Mean Max Queue EoTS (Veh)	Max End of Green Queue EoTS (Veh)	Max End of Red Queue EoTS (Veh)	PCU Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
17:00-18:00	A1	1	0.00	0.00	✓	0.00	8.89	0.04	8.60	1.00	0.00	58.77	58.77
	Ax	1	0.00	0.00	✓	0.00	0.05			1.00	0.00	0.70	0.70
	B1	1	0.00	0.00	✓	0.00	10.00	0.34	7.17	1.00	0.00	40.93	40.93
	Bx	1	0.00	0.00	✓	0.00	5.03			1.00	0.00	2.48	2.48
	C1	1	0.00	0.00	✓	0.00	3.05	0.28	3.05	1.00	0.00	23.86	23.86
	C2	1	0.00	0.00	✓	0.00	2.11	0.04	2.11	1.00	0.00	11.91	11.91
	Cx	1	0.00	0.00	✓	0.00	1.08			1.00	0.00	0.30	0.30

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
17:00-18:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))

17:00-18:00	(ALL)	(ALL)	0	0	0		11000	770	0		Unrestricted	0.00	7	7

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Uniform delay (Ped-min/min)	Random plus oversat delay (Ped-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)
17:00-18:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Average storage excess queue (Ped)	Average limit excess queue (Ped)	Excess queue penalty (£ per hr)
17:00-18:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Journey times

Time Segment	Crossing	Side	Distance travelled (Ped-km/hr)	Time spent (Ped-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
17:00-18:00	(ALL)	(ALL)	0.00	0.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
17:00-18:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-min/min)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
4	20/12/2018 09:34:29	20/12/2018 09:34:29	17:00	100	138.95	8.93	55.04	B1/1	0	0	B1/1	Ax/1	B1/1	✓

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	55	0	2252	401	14.27	126.77	12.18	138.95

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
17:00-18:00	0	0	42	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))	Effective green (s (per cycle))
17:00-18:00	2252	2252	0		55		82	443	448

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	11.13	14.27	8.13	0.79	126.77	126.77	43.12	944.55	26.52	12.18	12.18

Network Results: Queues and blocking

Time Segment	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))
17:00-18:00	60.90	0.00	93.00	0.00	93.00

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
17:00-18:00	208.89	15.89	13.15

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	PCU Factor	Cost of traffic penalties (£ per hr)	Controller stream penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
17:00-18:00	0.00	0.00	✓	0.00	1.00	0.00	0.00	138.95	138.95

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

From	To 1	To 2	To 3
1	0.0	64.1	63.1
2	41.7	0.0	41.5
3	38.7	66.2	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (Veh/hr)	Normal journey time (s)	Calculated Total Flow (Veh/hr)	Avg journey time (s)
1	1	2	223	64.14	223	64.14
2	1	3	135	63.05	135	63.05
3	2	3	171	41.52	171	41.52
4	2	1	364	41.68	364	41.68
5	3	1	120	38.68	120	38.68
6	3	2	113	66.16	113	66.16

Final Prediction Table

Traffic Stream Results

				SIGNALS			FLOWS		PERFORMANCE				PER PCU			QUEUES		WEIGHTS		PENALTIES	P.I.
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Second phase	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (Veh)	Max end of red queue (Veh)	Delay weighting multiplier (%)	Stop weighting multiplier (%)	Cost of traffic penalties (£ per hr)	P.I.
A1	1	Rathmullen Road (E)	2	1	A		358	9999	13	0.00	26	291	50.82	38.82	88.19	8.89	8.60	100	100	0.00	58.77
Ax	1	Rathmullen Road (E)					484	1800	100	7.00	27	272	12.37	0.37	0.00	0.05		100	100	0.00	0.70
B1	1	Marleys Lane	2	1	C		535	1800	53	0.00	55	82	29.32	17.32	65.41	10.00	7.17	100	100	0.00	40.93
Bx	1	Marleys Lane					336	1800	100	60.00	19	436	12.96	0.96	28.64	5.03		100	100	0.00	2.48
C1	1	Rathmullen Road (W)	2	1	B		113	1800	11	0.00	52	91	53.92	50.32	100.62	3.04	3.04	100	100	0.00	23.86
C2	1	Rathmullen Road (W)	2	1	A	B	120	1800	24	0.00	26	290	26.31	22.71	76.91	2.11	2.11	100	100	0.00	11.91
Cx	1	Rathmullen Road (W)					306	1800	100	26.00	17	488	12.22	0.22	1.02	1.08		100	100	0.00	0.30

Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE			PER PED		QUEUES	WEIGHTS	PENALTIES	P.I.
Pedestrian	Side	Name	Traffic node	Controller stream	Phase	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Degree of saturation (%)	Practical reserve capacity	Journey Time (s)	Mean Delay per Ped (s)	Mean max queue (Ped)	Delay weighting (%)	Cost of traffic penalties (£ per hr)	P.I.
(ALL)	(ALL)	(untitled)		1	D	0	11000	7	0	Unrestricted	0.00	0.00	0.00	100	0.00	0.00

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	208.89	15.89	13.15	8.13	0.79	126.77	12.18	0.00	138.95
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	208.89	15.89	13.15	8.13	0.79	126.77	12.18	0.00	138.95

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

A5 - 2023 - OPENING YEAR - BASE + DEV - AM
D5 - 2023 - OPENING YEAR - BASE + 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)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-min/min)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
5	20/12/2018 09:34:32	20/12/2018 09:34:33	08:00	100	185.49	11.97	69.55	B1/1	0	0	B1/1	Bx/1	B1/1	✓

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2023 - OPENING YEAR - BASE + DEV - AM		D5	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2023 - OPENING YEAR - BASE + DEV - AM				08:00	

Network Options

Network timings

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

Signals options

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

Advanced

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

Traffic options

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

Advanced

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

Normal Traffic parameters

Dispersion type	Dispersion coefficient
Default	35

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Bus	1.00	70	15	0.47	30	85

Tram parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Tram	1.00	70	15	0.47	30	85

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order
Hill Climb (Fast)	15, 40, -1, 15, 40, 1, -1, 1	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05		✓	1

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
2		

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
A1			2
Ax			
B1			2
Bx			
C1			2
C2			2
Cx			

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
A1	1	Rahtmullen Road (E)			100.00	✓	Sum of lanes	9999	✓		Normal	
Ax	1	Rathmullen Road (E)			100.00	✓	Sum of lanes	1800			Normal	
B1	1	Marleys Lane			100.00	✓	Sum of lanes	1800	✓	✓	Normal	
Bx	1	Marleys Lane			100.00	✓	Sum of lanes	1800			Normal	
C1	1	Rathmullen Road (W)			30.00	✓	Sum of lanes	1800	✓	✓	Normal	
C2	1	Rathmullen Road (W)			30.00	✓	Sum of lanes	1800	✓		Normal	
Cx	1	Rathmullen Road (W)			100.00	✓	Sum of lanes	1800			Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Saturation flow (PCU/hr)
A1	1	1				9999
Ax	1	1				1800
B1	1	1				1800
Bx	1	1				1800
C1	1	1				1800
C2	1	1				1800
Cx	1	1				1800

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
A1	1	NetworkDefault	100	100	100		0.00		
Ax	1	NetworkDefault	100	100	100		0.00		
B1	1	NetworkDefault	100	100	100		0.00		
Bx	1	NetworkDefault	100	100	100		0.00		

C1	1	Flare	100	100	100		0.00		
C2	1	Flare	100	100	100		0.00		
Cx	1	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
(ALL)	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100

Normal - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	1	100	100

Flows

Arm	Traffic Stream	Total Flow (Veh/hr)	Normal Flow (Veh/hr)
A1	1	422	422
Ax	1	463	463
B1	1	338	338
Bx	1	570	570
C1	1	349	349
C2	1	293	293
Cx	1	369	369

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled	Second phase
A1	1	1	A		
B1	1	1	C		
C1	1	1	B		
C2	1	1	A	✓	B

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
A1	1	12.00	30.00
B1	1	12.00	30.00
C1	1	3.60	30.00
C2	1	3.60	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	1	1	B1/1	Ax/1	12.00	30.00	✓	Offside	45.00
Bx	1	1	A1/1	Bx/1	12.00	30.00	✓	Nearside	20.00
Cx	1	1	A1/1	Cx/1	12.00	30.00	✓	Straight	Straight Movement
Ax	1	2	C2/1	Ax/1	12.00	30.00	✓	Straight	Straight Movement
Bx	1	2	C1/1	Bx/1	12.00	30.00	✓	Offside	35.00
Cx	1	2	B1/1	Cx/1	12.00	30.00	✓	Nearside	20.00

Give Way Data

Arm	Traffic Stream	Opposed traffic	Use Step-wise Opposed Turn Model	Visibility restricted
(ALL)	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 (%)
B1	1	1	Cx/1	574	1800	100
		2	Ax/1	440	1800	100
C1	1	1	Bx/1	574	1800	100

Give Way Data - Movements - Conflicts

Arm	Traffic Stream	Movement	Destination traffic stream	Description	Controlling type	Controlling from traffic stream	Controlling to traffic stream	Percentage opposing (%)	Slope coefficient	Upstream signals visible	Conflict shift	Conflict duration
B1	1	1	Cx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.09		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0
		2	Ax/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.08		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.20		0	0
				T-junction opposing flow	TrafficStreamMovement	C2/1	Ax/1	100	0.13		0	0
				T-junction opposing flow	TrafficStreamMovement	C1/1	Bx/1	100	0.29		0	0
C1	1	1	Bx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.22		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
(ALL)	(untitled)				Farside	3.00	2.00	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	D	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(ALL)	11000

Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	100	100		0.00		

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
1	Library		✓	TrafficStream	Two-Way	A1/1	A1/1	Ax/1	Two-Way	B1/1	B1/1	Bx/1	Two-Way	C2/1	C1/1	Cx/1	✓

T-Junction Majors

T-Junction	Left Carriageway Width (m)	Right Carriageway Width (m)	Kerbed Central Reserve Width (m)	Width for C-B traffic (m)	Visibility for C-B traffic (m)
1	6.00	6.00	0.00	2.20	0.00

T-Junction Minors

T-Junction	B-C Lane Width (m)	B-A Lane Width (m)	B-C Visibility (m)	B-A Visibility (m)
1	2.20	2.20	0.00	0.00

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
1	574	0.09	0.22	440	0.08	0.20	0.13	0.29	574	0.22	0.22

Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1		✓	✓	Lane Balancing			✓			✓	1.25		

Normal Input Flows (Veh/hr)

From \ To	1	2	3
1	0	221	201
2	170	0	168
3	293	349	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
1	1		A1/1	Ax/1	#0000FF
	2		B1/1	Bx/1	#FF0000
	3		C2/1, C1/1	Cx/1	#00FF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (Veh/hr)
1	1		1	2	A1/1, Bx/1	Normal	221
	2		1	3	A1/1, Cx/1	Normal	201
	3		2	3	B1/1, Cx/1	Normal	168
	4		2	1	B1/1, Ax/1	Normal	170
	5		3	1	C2/1, Ax/1	Normal	293
	6		3	2	C1/1, Bx/1	Normal	349

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (Veh)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	A1	1	18	445	422	9999	22	31.15	9.40	54.04	51.86	4.18	56.04
	Ax	1	26	289	463	1800	100	0.35	0.04	0.26	0.63	0.00	0.63
	B1	1	70	44	338	1800	26	41.10	9.13	52.52	54.80	4.06	58.86
	Bx	1	32	216	570	1800	100	0.69	4.20	24.13	1.55	0.82	2.37
	C1	1	65	55	349	1800	29	36.41	7.37	147.38	50.12	3.96	54.08
	C2	1	31	226	293	1800	51	9.02	2.92	58.33	10.43	1.98	12.40
	Cx	1	21	388	369	1800	100	0.44	3.54	20.36	0.64	0.47	1.11

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Calculated sat flow (Veh/hr)	Calculated capacity (Veh/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
08:00-09:00	A1	1	422	422	0		9999	2300	18		445	0.00	22	23
	Ax	1	463	463	0		1800	1800	26		289	0.56	100	100
	B1	1	338	338	0		1800	486	70		44	0.00	26	27
	Bx	1	570	570	0		1800	1800	32		216	1.00	100	100
	C1	1	349	349	0		1800	540	65		55	0.00	29	30
	C2	1	293	293	0		1800	954	31		226	0.00	51	53
	Cx	1	369	369	0		1800	1800	21		388	1.03	100	100

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	A1	1	12.00	31.15	3.63	0.02	51.86	51.86	78.99	332.61	0.74	4.18	4.18
	Ax	1	12.00	0.35	0.00	0.04	0.63	0.63	0.00	0.00	0.00	0.00	0.00
	B1	1	12.00	41.10	3.08	0.78	54.80	54.80	95.80	296.36	27.46	4.06	4.06
	Bx	1	12.00	0.69	0.04	0.07	1.55	1.55	11.41	62.38	2.64	0.82	0.82

	C1	1	3.60	36.41	2.95	0.58	50.12	50.12	90.58	295.44	20.67	3.96	3.96
	C2	1	3.60	9.02	0.67	0.07	10.43	10.43	53.83	152.84	4.88	1.98	1.98
	Cx	1	12.00	0.44	0.02	0.03	0.64	0.64	10.14	36.47	0.95	0.47	0.47

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (Veh)	Mean max queue (Veh)	Max queue storage (Veh)	Utilised storage (%)	Average storage excess queue (Veh)	Average limit excess queue (Veh)	Excess queue penalty (£ per hr)	Max end of green queue (Veh)	Max end of red queue (Veh)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))	Estimated blocking
08:00-09:00	A1	1	0.00	9.40	17.39	54.04	0.00	0.00	0.00	0.02	9.05	0.00	0.00	0.00	
	Ax	1	0.00	0.04	17.39	0.26	0.00	0.00	0.00			7.00	0.00	7.00	
	B1	1	0.00	9.13	17.39	52.52	0.00	0.00	0.00	0.78	7.63	0.00	0.00	0.00	
	Bx	1	0.00	4.20	17.39	24.13	0.00	0.00	0.00			35.00	0.00	35.00	
	C1	1	0.00	7.37	5.00	147.38	0.36	0.00	0.00	0.58	7.37	0.00	0.00	0.00	
	C2	1	0.00	2.92	5.00	58.33	0.00	0.00	0.00	0.07	2.92	0.00	0.00	0.00	
	Cx	1	0.00	3.54	17.39	20.36	0.00	0.00	0.00			44.00	0.00	44.00	

Traffic Stream Results: Journey times

Time Segment	Arm	Traffic Stream	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	A1	1	42.20	5.06	8.34	43.15
	Ax	1	46.30	1.59	29.16	12.35
	B1	1	33.80	4.99	6.78	53.10
	Bx	1	57.00	2.01	28.37	12.69
	C1	1	10.47	3.88	2.70	40.01
	C2	1	8.79	1.03	8.56	12.62
	Cx	1	36.90	1.27	28.94	12.44

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	Mean Max Queue EoTS (Veh)	Max End of Green Queue EoTS (Veh)	Max End of Red Queue EoTS (Veh)	PCU Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	A1	1	0.00	0.00	✓	0.00	9.40	0.02	9.05	1.00	0.00	56.04	56.04
	Ax	1	0.00	0.00	✓	0.00	0.04			1.00	0.00	0.63	0.63
	B1	1	0.00	0.00	✓	0.00	9.14	0.79	7.64	1.00	0.00	58.86	58.86
	Bx	1	0.00	0.00	✓	0.00	4.20			1.00	0.00	2.37	2.37
	C1	1	0.00	0.00	✓	0.00	7.37	0.59	7.37	1.00	0.00	54.08	54.08
	C2	1	0.00	0.00	✓	0.00	2.92	0.07	2.92	1.00	0.00	12.40	12.40
	Cx	1	0.00	0.00	✓	0.00	3.54			1.00	0.00	1.11	1.11

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
08:00-09:00	(ALL)	(ALL)	0	0	0		11000	770	0		Unrestricted	0.00	7	7

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Uniform delay (Ped-min/min)	Random plus oversat delay (Ped-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)
08:00-09:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Average storage excess queue (Ped)	Average limit excess queue (Ped)	Excess queue penalty (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Journey times

Time Segment	Crossing	Side	Distance travelled (Ped-km/hr)	Time spent (Ped-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	(ALL)	(ALL)	0.00	0.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-min/min)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
5	20/12/2018 09:34:32	20/12/2018 09:34:33	08:00	100	185.49	11.97	69.55	B1/1	0	0	B1/1	Bx/1	B1/1	✓

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)

08:00-09:00	70	0	2804	428	15.37	170.02	15.47	185.49

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	0	0	42	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))	Effective green (s (per cycle))
08:00-09:00	2804	2804	0		70		44	470	475

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	10.08	15.37	10.38	1.59	170.02	170.02	43.99	1176.10	57.34	15.47	15.47

Network Results: Queues and blocking

Time Segment	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))
08:00-09:00	147.38	0.00	86.00	0.00	86.00

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
08:00-09:00	235.46	19.82	11.88

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	PCU Factor	Cost of traffic penalties (£ per hr)	Controller stream penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	0.00	0.00	✓	0.00	1.00	0.00	0.00	185.49	185.49

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

From \ To	1	2	3
1	0.0	56.2	55.7
2	65.4	0.0	65.4
3	25.0	52.5	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (Veh/hr)	Normal journey time (s)	Calculated Total Flow (Veh/hr)	Avg journey time (s)
1	1	2	221	56.20	221	56.20
2	1	3	201	55.74	201	55.74
3	2	3	168	65.36	168	65.36
4	2	1	170	65.45	170	65.45
5	3	1	293	24.97	293	24.97
6	3	2	349	52.47	349	52.47

Final Prediction Table

Traffic Stream Results

				SIGNALS			FLOWS		PERFORMANCE				PER PCU			QUEUES		WEIGHTS		PENALTIES	P.I.
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Second phase	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (Veh)	Max end of red queue (Veh)	Delay weighting multiplier (%)	Stop weighting multiplier (%)	Cost of traffic penalties (£ per hr)	P.I.
A1	1	Rathmullen Road (E)	2	1	A		422	9999	22	0.00	18	445	43.15	31.15	78.99	9.40	9.05	100	100	0.00	56.04
Ax	1	Rathmullen Road (E)					463	1800	100	7.00	26	289	12.35	0.35	0.00	0.04		100	100	0.00	0.63
B1	1	Marleys Lane	2	1	C		338	1800	26	0.00	70	44	53.10	41.10	95.80	9.13	7.63	100	100	0.00	58.86
Bx	1	Marleys Lane					570	1800	100	35.00	32	216	12.69	0.69	11.41	4.20		100	100	0.00	2.37
C1	1	Rathmullen Road (W)	2	1	B		349<	1800	29	0.00	65	55	40.01	36.41	90.58	7.37+	7.37	100	100	0.00	54.08
C2	1	Rathmullen Road (W)	2	1	A	B	293	1800	51	0.00	31	226	12.62	9.02	53.83	2.92	2.92	100	100	0.00	12.40
Cx	1	Rathmullen Road (W)					369	1800	100	44.00	21	388	12.44	0.44	10.14	3.54		100	100	0.00	1.11

Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE			PER PED		QUEUES	WEIGHTS	PENALTIES	P.I.
Pedestrian	Side	Name	Traffic node	Controller stream	Phase	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Degree of saturation (%)	Practical reserve capacity	Journey Time (s)	Mean Delay per Ped (s)	Mean max queue (Ped)	Delay weighting (%)	Cost of traffic penalties (£ per hr)	P.I.
(ALL)	(ALL)	(untitled)		1	D	0	11000	7	0	Unrestricted	0.00	0.00	0.00	100	0.00	0.00

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	235.46	19.82	11.88	10.38	1.59	170.02	15.47	0.00	185.49
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	235.46	19.82	11.88	10.38	1.59	170.02	15.47	0.00	185.49

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

A6 - 2023 - OPENING YEAR - BASE + DEV - PM
D6 - 2023 - OPENING YEAR - BASE + 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)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-min/min)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
6	20/12/2018 09:34:35	20/12/2018 09:34:36	17:00	100	194.77	12.50	66.99	B1/1	0	0	B1/1	Ax/1	B1/1	✓

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2023 - OPENING YEAR - BASE + DEV - PM		D6	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2023 - OPENING YEAR - BASE + DEV - PM				17:00	

Network Options

Network timings

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

Signals options

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

Advanced

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

Traffic options

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

Advanced

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

Normal Traffic parameters

Dispersion type	Dispersion coefficient
Default	35

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Bus	1.00	70	15	0.47	30	85

Tram parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Tram	1.00	70	15	0.47	30	85

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order

Hill Climb (Fast)	15, 40, -1, 15, 40, 1, -1, 1	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05		✓	1

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
2		

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
A1			2
Ax			
B1			2
Bx			
C1			2
C2			2
Cx			

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
A1	1	Rahtmullen Road (E)			100.00	✓	Sum of lanes	9999	✓		Normal	
Ax	1	Rathmullen Road (E)			100.00	✓	Sum of lanes	1800			Normal	
B1	1	Marleys Lane			100.00	✓	Sum of lanes	1800	✓	✓	Normal	
Bx	1	Marleys Lane			100.00	✓	Sum of lanes	1800			Normal	
C1	1	Rathmullen Road (W)			30.00	✓	Sum of lanes	1800	✓	✓	Normal	
C2	1	Rathmullen Road (W)			30.00	✓	Sum of lanes	1800	✓		Normal	
Cx	1	Rathmullen Road (W)			100.00	✓	Sum of lanes	1800			Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Saturation flow (PCU/hr)
A1	1	1				9999
Ax	1	1				1800
B1	1	1				1800
Bx	1	1				1800
C1	1	1				1800
C2	1	1				1800
Cx	1	1				1800

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
A1	1	NetworkDefault	100	100	100		0.00		
Ax	1	NetworkDefault	100	100	100		0.00		
B1	1	NetworkDefault	100	100	100		0.00		
Bx	1	NetworkDefault	100	100	100		0.00		
C1	1	Flare	100	100	100		0.00		
C2	1	Flare	100	100	100		0.00		
Cx	1	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
(ALL)	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100

Normal - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	1	100	100

Flows

Arm	Traffic Stream	Total Flow (Veh/hr)	Normal Flow (Veh/hr)
A1	1	450	450
Ax	1	538	538
B1	1	627	627
Bx	1	390	390
C1	1	167	167
C2	1	174	174
Cx	1	490	490

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled	Second phase
A1	1	1	A		
B1	1	1	C		
C1	1	1	B		
C2	1	1	A	✓	B

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
A1	1	12.00	30.00
B1	1	12.00	30.00
C1	1	3.60	30.00
C2	1	3.60	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	1	1	B1/1	Ax/1	12.00	30.00	✓	Offside	45.00
Bx	1	1	A1/1	Bx/1	12.00	30.00	✓	Nearside	20.00
Cx	1	1	A1/1	Cx/1	12.00	30.00	✓	Straight	Straight Movement
Ax	1	2	C2/1	Ax/1	12.00	30.00	✓	Straight	Straight Movement

Bx	1	2	C1/1	Bx/1	12.00	30.00	✓	Offside	35.00
Cx	1	2	B1/1	Cx/1	12.00	30.00	✓	Nearside	20.00

Give Way Data

Arm	Traffic Stream	Opposed traffic	Use Step-wise Opposed Turn Model	Visibility restricted
(ALL)	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 (%)
B1	1	1	Cx/1	574	1800	100
		2	Ax/1	440	1800	100
C1	1	1	Bx/1	574	1800	100

Give Way Data - Movements - Conflicts

Arm	Traffic Stream	Movement	Destination traffic stream	Description	Controlling type	Controlling from traffic stream	Controlling to traffic stream	Percentage opposing (%)	Slope coefficient	Upstream signals visible	Conflict shift	Conflict duration
B1	1	1	Cx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.09		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0
		2	Ax/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.08		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.20		0	0
				T-junction opposing flow	TrafficStreamMovement	C2/1	Ax/1	100	0.13		0	0
				T-junction opposing flow	TrafficStreamMovement	C1/1	Bx/1	100	0.29		0	0
C1	1	1	Bx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.22		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
(ALL)	(untitled)				Farside	3.00	2.00	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	D	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(ALL)	11000

Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	100	100		0.00		

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
1	Library		✓	TrafficStream	Two-Way	A1/1	A1/1	Ax/1	Two-Way	B1/1	B1/1	Bx/1	Two-Way	C2/1	C1/1	Cx/1	✓

T-Junction Majors

T-Junction	Left Carriageway Width (m)	Right Carriageway Width (m)	Kerbed Central Reserve Width (m)	Width for C-B traffic (m)	Visibility for C-B traffic (m)
1	6.00	6.00	0.00	2.20	0.00

T-Junction Minors

T-Junction	B-C Lane Width (m)	B-A Lane Width (m)	B-C Visibility (m)	B-A Visibility (m)
1	2.20	2.20	0.00	0.00

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
1	574	0.09	0.22	440	0.08	0.20	0.13	0.29	574	0.22	0.22

Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1		✓	✓	Lane Balancing			✓			✓	1.25		

Normal Input Flows (Veh/hr)

		To		
		1	2	3
From	1	0	223	227
	2	364	0	263
	3	174	167	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
1	1		A1/1	Ax/1	#0000FF
	2		B1/1	Bx/1	#FF0000
	3		C2/1, C1/1	Cx/1	#00FF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (Veh/hr)
1	1		1	2	A1/1, Bx/1	Normal	223
	2		1	3	A1/1, Cx/1	Normal	227
	3		2	3	B1/1, Cx/1	Normal	263
	4		2	1	B1/1, Ax/1	Normal	364
	5		3	1	C2/1, Ax/1	Normal	174
	6		3	2	C1/1, Bx/1	Normal	167

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (Veh)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	A1	1	38	167	450	9999	11	41.46	11.61	66.77	73.59	5.16	78.75
	Ax	1	30	235	538	1800	100	0.43	0.06	0.37	0.90	0.00	0.90
	B1	1	67	49	627	1800	51	21.55	13.39	76.98	53.29	5.89	59.19
	Bx	1	22	362	390	1800	100	0.85	5.17	29.72	1.31	1.15	2.46
	C1	1	58	72	167	1800	15	47.39	4.29	85.81	31.22	2.07	33.29
	C2	1	35	190	174	1800	26	22.62	2.99	59.82	15.53	1.75	17.27
	Cx	1	27	267	490	1800	100	0.87	5.27	30.31	1.68	1.23	2.91

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Calculated sat flow (Veh/hr)	Calculated capacity (Veh/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
17:00-18:00	A1	1	450	450	0		9999	1200	38		167	0.00	11	12
	Ax	1	538	538	0		1800	1800	30		235	0.59	100	100
	B1	1	627	627	0		1800	936	67		49	0.00	51	52
	Bx	1	390	390	0		1800	1800	22		362	1.28	100	100
	C1	1	167	167	0		1800	288	58		72	0.00	15	16
	C2	1	174	174	0		1800	504	35		190	0.00	26	28
	Cx	1	490	490	0		1800	1800	27		267	0.84	100	100

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	A1	1	12.00	41.46	5.07	0.11	73.59	73.59	91.54	407.87	4.04	5.16	5.16
	Ax	1	12.00	0.43	0.00	0.06	0.90	0.90	0.00	0.00	0.00	0.00	0.00
	B1	1	12.00	21.55	3.08	0.67	53.29	53.29	74.96	445.96	24.02	5.89	5.89
	Bx	1	12.00	0.85	0.06	0.03	1.31	1.31	23.62	91.02	1.08	1.15	1.15
	C1	1	3.60	47.39	1.80	0.39	31.22	31.22	99.08	151.59	13.88	2.07	2.07
	C2	1	3.60	22.62	1.00	0.09	15.53	15.53	80.01	132.74	6.47	1.75	1.75
	Cx	1	12.00	0.87	0.07	0.05	1.68	1.68	20.01	96.22	1.83	1.23	1.23

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (Veh)	Mean max queue (Veh)	Max queue storage (Veh)	Utilised storage (%)	Average storage excess queue (Veh)	Average limit excess queue (Veh)	Excess queue penalty (£ per hr)	Max end of green queue (Veh)	Max end of red queue (Veh)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))	Estimated blocking
17:00-18:00	A1	1	0.00	11.61	17.39	66.77	0.00	0.00	0.00	0.11	11.11	0.00	0.00	0.00	
	Ax	1	0.00	0.06	17.39	0.37	0.00	0.00	0.00			7.00	0.00	7.00	
	B1	1	0.00	13.39	17.39	76.98	0.00	0.00	0.00	0.67	9.03	0.00	0.00	0.00	
	Bx	1	0.00	5.17	17.39	29.72	0.00	0.00	0.00			57.00	0.00	57.00	
	C1	1	0.00	4.29	5.00	85.81	0.00	0.00	0.00	0.39	4.29	0.00	0.00	0.00	
	C2	1	0.00	2.99	5.00	59.82	0.00	0.00	0.00	0.09	2.99	0.00	0.00	0.00	
	Cx	1	0.00	5.27	17.39	30.31	0.00	0.00	0.00			29.00	0.00	29.00	

Traffic Stream Results: Journey times

Time Segment	Arm	Traffic Stream	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
17:00-18:00	A1	1	45.00	6.68	6.73	53.46
	Ax	1	53.80	1.86	28.97	12.43
	B1	1	62.70	5.84	10.73	33.55
	Bx	1	39.00	1.39	28.02	12.85
	C1	1	5.01	2.37	2.12	50.99
	C2	1	5.22	1.27	4.12	26.22
	Cx	1	49.00	1.75	27.98	12.87

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	Mean Max Queue EoTS (Veh)	Max End of Green Queue EoTS (Veh)	Max End of Red Queue EoTS (Veh)	PCU Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
17:00-18:00	A1	1	0.00	0.00	✓	0.00	11.61	0.11	11.11	1.00	0.00	78.75	78.75
	Ax	1	0.00	0.00	✓	0.00	0.06			1.00	0.00	0.90	0.90
	B1	1	0.00	0.00	✓	0.00	13.39	0.68	9.04	1.00	0.00	59.19	59.19
	Bx	1	0.00	0.00	✓	0.00	5.17			1.00	0.00	2.46	2.46
	C1	1	0.00	0.00	✓	0.00	4.29	0.40	4.29	1.00	0.00	33.29	33.29
	C2	1	0.00	0.00	✓	0.00	2.99	0.09	2.99	1.00	0.00	17.27	17.27
	Cx	1	0.00	0.00	✓	0.00	5.27			1.00	0.00	2.91	2.91

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
17:00-18:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
17:00-18:00	(ALL)	(ALL)	0	0	0		11000	770	0		Unrestricted	0.00	7	7

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Uniform delay (Ped-min/min)	Random plus oversat delay (Ped-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)
17:00-18:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Average storage excess queue (Ped)	Average limit excess queue (Ped)	Excess queue penalty (£ per hr)
17:00-18:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Journey times

Time Segment	Crossing	Side	Distance travelled (Ped-km/hr)	Time spent (Ped-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
17:00-18:00	(ALL)	(ALL)	0.00	0.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
17:00-18:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-min/min)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
6	20/12/2018 09:34:35	20/12/2018 09:34:36	17:00	100	194.77	12.50	66.99	B1/1	0	0	B1/1	Ax/1	B1/1	✓

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	67	0	2836	403	15.87	177.51	17.26	194.77

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
17:00-18:00	0	0	42	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))	Effective green (s (per cycle))
17:00-18:00	2836	2836	0		67		49	445	450

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	10.99	15.87	11.09	1.42	177.51	177.51	48.54	1325.40	51.32	17.26	17.26

Network Results: Queues and blocking

Time Segment	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))
17:00-18:00	85.81	0.00	93.00	0.00	93.00

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
17:00-18:00	259.73	21.16	12.28

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	PCU Factor	Cost of traffic penalties (£ per hr)	Controller stream penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
17:00-18:00	0.00	0.00	✓	0.00	1.00	0.00	0.00	194.77	194.77

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

From	To 1	To 2	To 3
1	0.0	66.7	66.9
2	46.0	0.0	45.9
3	38.6	63.3	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (Veh/hr)	Normal journey time (s)	Calculated Total Flow (Veh/hr)	Avg journey time (s)
1	1	2	223	66.73	223	66.73
2	1	3	227	66.90	227	66.90
3	2	3	263	45.92	263	45.92
4	2	1	364	45.97	364	45.97
5	3	1	174	38.65	174	38.65
6	3	2	167	63.27	167	63.27

Final Prediction Table

Traffic Stream Results

				SIGNALS			FLOWS		PERFORMANCE				PER PCU			QUEUES		WEIGHTS		PENALTIES	P.I.
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Second phase	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (Veh)	Max end of red queue (Veh)	Delay weighting multiplier (%)	Stop weighting multiplier (%)	Cost of traffic penalties (£ per hr)	P.I.
A1	1	Rathmullen Road (E)	2	1	A		450	9999	11	0.00	38	167	53.46	41.46	91.54	11.61	11.11	100	100	0.00	78.75
Ax	1	Rathmullen Road (E)					538	1800	100	7.00	30	235	12.43	0.43	0.00	0.06		100	100	0.00	0.90
B1	1	Marleys Lane	2	1	C		627	1800	51	0.00	67	49	33.55	21.55	74.96	13.39	9.03	100	100	0.00	59.19
Bx	1	Marleys Lane					390	1800	100	57.00	22	362	12.85	0.85	23.62	5.17		100	100	0.00	2.46
C1	1	Rathmullen Road (W)	2	1	B		167	1800	15	0.00	58	72	50.99	47.39	99.08	4.29	4.29	100	100	0.00	33.29
C2	1	Rathmullen Road (W)	2	1	A	B	174	1800	26	0.00	35	190	26.22	22.62	80.01	2.99	2.99	100	100	0.00	17.27
Cx	1	Rathmullen Road (W)					490	1800	100	29.00	27	267	12.87	0.87	20.01	5.27		100	100	0.00	2.91

Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE			PER PED		QUEUES	WEIGHTS	PENALTIES	P.I.
Pedestrian	Side	Name	Traffic node	Controller stream	Phase	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Degree of saturation (%)	Practical reserve capacity	Journey Time (s)	Mean Delay per Ped (s)	Mean max queue (Ped)	Delay weighting (%)	Cost of traffic penalties (£ per hr)	P.I.
(ALL)	(ALL)	(untitled)		1	D	0	11000	7	0	Unrestricted	0.00	0.00	0.00	100	0.00	0.00

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	259.73	21.16	12.28	11.09	1.42	177.51	17.26	0.00	194.77
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	259.73	21.16	12.28	11.09	1.42	177.51	17.26	0.00	194.77

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

A7 - 2023 - OPENING YEAR - BASE + DEV + COM(PHASE 1)- AM

D7 - 2023 - OPENING YEAR - BASE + DEV + COM(PHASE 1)- AM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-min/min)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
7	20/12/2018 09:34:39	20/12/2018 09:34:39	08:00	100	197.34	12.73	71.60	B1/1	0	0	B1/1	Bx/1	B1/1	✓

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2023 - OPENING YEAR - BASE + DEV + COM(PHASE 1)- AM		D7	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2023 - OPENING YEAR - BASE + DEV + COM(PHASE 1)- AM				08:00	

Network Options

Network timings

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

Signals options

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

Advanced

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

Traffic options

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

Advanced

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

Normal Traffic parameters

Dispersion type	Dispersion coefficient
Default	35

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Bus	1.00	70	15	0.47	30	85

Tram parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Tram	1.00	70	15	0.47	30	85

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order
Hill Climb (Fast)	15, 40, -1, 15, 40, 1, -1, 1	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05		✓	1

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
2		

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
A1			2
Ax			
B1			2
Bx			
C1			2
C2			2
Cx			

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
A1	1	Rahtmullen Road (E)			100.00	✓	Sum of lanes	9999	✓		Normal	
Ax	1	Rathmullen Road (E)			100.00	✓	Sum of lanes	1800			Normal	
B1	1	Marleys Lane			100.00	✓	Sum of lanes	1800	✓	✓	Normal	
Bx	1	Marleys Lane			100.00	✓	Sum of lanes	1800			Normal	
C1	1	Rathmullen Road (W)			30.00	✓	Sum of lanes	1800	✓	✓	Normal	
C2	1	Rathmullen Road (W)			30.00	✓	Sum of lanes	1800	✓		Normal	
Cx	1	Rathmullen Road (W)			100.00	✓	Sum of lanes	1800			Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Saturation flow (PCU/hr)
A1	1	1				9999
Ax	1	1				1800
B1	1	1				1800
Bx	1	1				1800
C1	1	1				1800
C2	1	1				1800
Cx	1	1				1800

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
A1	1	NetworkDefault	100	100	100		0.00		
Ax	1	NetworkDefault	100	100	100		0.00		
B1	1	NetworkDefault	100	100	100		0.00		
Bx	1	NetworkDefault	100	100	100		0.00		
C1	1	Flare	100	100	100		0.00		
C2	1	Flare	100	100	100		0.00		
Cx	1	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
(ALL)	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100

Normal - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	1	100	100

Flows

Arm	Traffic Stream	Total Flow (Veh/hr)	Normal Flow (Veh/hr)
A1	1	432	432
Ax	1	487	487
B1	1	348	348
Bx	1	594	594
C1	1	373	373
C2	1	317	317
Cx	1	389	389

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled	Second phase
A1	1	1	A		
B1	1	1	C		
C1	1	1	B		
C2	1	1	A	✓	B

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
A1	1	12.00	30.00
B1	1	12.00	30.00
C1	1	3.60	30.00
C2	1	3.60	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	1	1	B1/1	Ax/1	12.00	30.00	✓	Offside	45.00
Bx	1	1	A1/1	Bx/1	12.00	30.00	✓	Nearside	20.00
Cx	1	1	A1/1	Cx/1	12.00	30.00	✓	Straight	Straight Movement
Ax	1	2	C2/1	Ax/1	12.00	30.00	✓	Straight	Straight Movement
Bx	1	2	C1/1	Bx/1	12.00	30.00	✓	Offside	35.00
Cx	1	2	B1/1	Cx/1	12.00	30.00	✓	Nearside	20.00

Give Way Data

Arm	Traffic Stream	Opposed traffic	Use Step-wise Opposed Turn Model	Visibility restricted

(ALL)	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 (%)
B1	1	1	Cx/1	574	1800	100
		2	Ax/1	440	1800	100
C1	1	1	Bx/1	574	1800	100

Give Way Data - Movements - Conflicts

Arm	Traffic Stream	Movement	Destination traffic stream	Description	Controlling type	Controlling from traffic stream	Controlling to traffic stream	Percentage opposing (%)	Slope coefficient	Upstream signals visible	Conflict shift	Conflict duration
B1	1	1	Cx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.09		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0
		2	Ax/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.08		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.20		0	0
				T-junction opposing flow	TrafficStreamMovement	C2/1	Ax/1	100	0.13		0	0
				T-junction opposing flow	TrafficStreamMovement	C1/1	Bx/1	100	0.29		0	0
C1	1	1	Bx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.22		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
(ALL)	(untitled)				Farside	3.00	2.00	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	D	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(ALL)	11000

Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	100	100		0.00		

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
1	Library		✓	TrafficStream	Two-Way	A1/1	A1/1	Ax/1	Two-Way	B1/1	B1/1	Bx/1	Two-Way	C2/1	C1/1	Cx/1	✓

T-Junction Majors

T-Junction	Left Carriageway Width (m)	Right Carriageway Width (m)	Kerbed Central Reserve Width (m)	Width for C-B traffic (m)	Visibility for C-B traffic (m)
1	6.00	6.00	0.00	2.20	0.00

T-Junction Minors

T-Junction	B-C Lane Width (m)	B-A Lane Width (m)	B-C Visibility (m)	B-A Visibility (m)
1	2.20	2.20	0.00	0.00

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
1	574	0.09	0.22	440	0.08	0.20	0.13	0.29	574	0.22	0.22

Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1		✓	✓	Lane Balancing			✓			✓	1.25		

Normal Input Flows (Veh/hr)

From	To 1	To 2	To 3
1	0	221	211
2	170	0	178
3	317	373	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
1	1		A1/1	Ax/1	#0000FF
	2		B1/1	Bx/1	#FF0000
	3		C2/1, C1/1	Cx/1	#00FF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (Veh/hr)
1	1		1	2	A1/1, Bx/1	Normal	221
	2		1	3	A1/1, Cx/1	Normal	211
	3		2	3	B1/1, Cx/1	Normal	178
	4		2	1	B1/1, Ax/1	Normal	170
	5		3	1	C2/1, Ax/1	Normal	317
	6		3	2	C1/1, Bx/1	Normal	373

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (Veh)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	A1	1	20	409	432	9999	21	32.02	9.74	56.03	54.56	4.33	58.90
	Ax	1	27	270	487	1800	100	0.37	0.05	0.29	0.71	0.00	0.71
	B1	1	72	40	348	1800	26	42.16	9.58	55.10	57.88	4.25	62.13
	Bx	1	33	203	594	1800	100	0.72	4.25	24.46	1.68	0.83	2.51
	C1	1	67	50	373	1800	30	36.44	7.81	156.27	53.61	4.26	57.87
	C2	1	33	201	317	1800	51	9.26	3.16	63.29	11.58	2.19	13.76
	Cx	1	22	363	389	1800	100	0.52	3.76	21.62	0.80	0.65	1.45

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Calculated sat flow (Veh/hr)	Calculated capacity (Veh/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
08:00-09:00	A1	1	432	432	0		9999	2200	20		409	0.00	21	22
	Ax	1	487	487	0		1800	1800	27		270	0.54	100	100
	B1	1	348	348	0		1800	486	72		40	0.00	26	27
	Bx	1	594	594	0		1800	1800	33		203	0.99	100	100
	C1	1	373	373	0		1800	558	67		50	0.00	30	31
	C2	1	317	317	0		1800	954	33		201	0.00	51	53
	Cx	1	389	389	0		1800	1800	22		363	1.04	100	100

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	A1	1	12.00	32.02	3.82	0.02	54.56	54.56	80.02	344.81	0.86	4.33	4.33
	Ax	1	12.00	0.37	0.00	0.05	0.71	0.71	0.00	0.00	0.00	0.00	0.00
	B1	1	12.00	42.16	3.19	0.88	57.88	57.88	97.43	307.99	31.05	4.25	4.25
	Bx	1	12.00	0.72	0.04	0.08	1.68	1.68	11.20	63.64	2.92	0.83	0.83
	C1	1	3.60	36.44	3.11	0.66	53.61	53.61	91.07	316.16	23.54	4.26	4.26
	C2	1	3.60	9.26	0.73	0.08	11.58	11.58	54.98	168.37	5.92	2.19	2.19
	Cx	1	12.00	0.52	0.03	0.03	0.80	0.80	13.23	50.39	1.07	0.65	0.65

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (Veh)	Mean max queue (Veh)	Max queue storage (Veh)	Utilised storage (%)	Average storage excess queue (Veh)	Average limit excess queue (Veh)	Excess queue penalty (£ per hr)	Max end of green queue (Veh)	Max end of red queue (Veh)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))	Estimated blocking
08:00-09:00	A1	1	0.00	9.74	17.39	56.03	0.00	0.00	0.00	0.02	9.38	0.00	0.00	0.00	
	Ax	1	0.00	0.05	17.39	0.29	0.00	0.00	0.00			7.00	0.00	7.00	
	B1	1	0.00	9.58	17.39	55.10	0.00	0.00	0.00	0.88	7.94	0.00	0.00	0.00	
	Bx	1	0.00	4.25	17.39	24.46	0.00	0.00	0.00			35.00	0.00	35.00	
	C1	1	0.00	7.81	5.00	156.27	0.48	0.00	0.00	0.66	7.81	0.00	0.00	0.00	
	C2	1	0.00	3.16	5.00	63.29	0.00	0.00	0.00	0.08	3.16	0.00	0.00	0.00	
	Cx	1	0.00	3.76	17.39	21.62	0.00	0.00	0.00			44.00	0.00	44.00	

Traffic Stream Results: Journey times

Time Segment	Arm	Traffic Stream	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	A1	1	43.20	5.28	8.18	44.02
	Ax	1	48.70	1.67	29.10	12.37
	B1	1	34.80	5.24	6.65	54.16
	Bx	1	59.40	2.10	28.31	12.72
	C1	1	11.19	4.15	2.70	40.04
	C2	1	9.51	1.13	8.40	12.86
	Cx	1	38.90	1.35	28.74	12.52

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	Mean Max Queue EoTS (Veh)	Max End of Green Queue EoTS (Veh)	Max End of Red Queue EoTS (Veh)	PCU Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	A1	1	0.00	0.00	✓	0.00	9.74	0.02	9.38	1.00	0.00	58.90	58.90
	Ax	1	0.00	0.00	✓	0.00	0.05			1.00	0.00	0.71	0.71
	B1	1	0.00	0.00	✓	0.00	9.59	0.89	7.95	1.00	0.00	62.13	62.13
	Bx	1	0.00	0.00	✓	0.00	4.25			1.00	0.00	2.51	2.51
	C1	1	0.00	0.00	✓	0.00	7.82	0.67	7.82	1.00	0.00	57.87	57.87
	C2	1	0.00	0.00	✓	0.00	3.16	0.08	3.16	1.00	0.00	13.76	13.76
	Cx	1	0.00	0.00	✓	0.00	3.76			1.00	0.00	1.45	1.45

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
08:00-09:00	(ALL)	(ALL)	0	0	0		11000	770	0		Unrestricted	0.00	7	7

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Uniform delay (Ped-min/min)	Random plus oversat delay (Ped-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)
08:00-09:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Average storage excess queue (Ped)	Average limit excess queue (Ped)	Excess queue penalty (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Journey times

Time Segment	Crossing	Side	Distance travelled (Ped-km/hr)	Time spent (Ped-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	(ALL)	(ALL)	0.00	0.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-min/min)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
7	20/12/2018 09:34:39	20/12/2018 09:34:39	08:00	100	197.34	12.73	71.60	B1/1	0	0	B1/1	Bx/1	B1/1	✓

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	72	0	2940	428	15.59	180.83	16.51	197.34

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	0	0	42	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))	Effective green (s (per cycle))
08:00-09:00	2940	2940	0		72		40	470	475

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	10.03	15.59	10.92	1.81	180.83	180.83	44.79	1251.36	65.36	16.51	16.51

Network Results: Queues and blocking

Time Segment	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))
08:00-09:00	156.27	0.00	86.00	0.00	86.00

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
08:00-09:00	245.70	20.92	11.74

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	PCU Factor	Cost of traffic penalties (£ per hr)	Controller stream penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	0.00	0.00	✓	0.00	1.00	0.00	0.00	197.34	197.34

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

From	To 1	To 2	To 3
1	0.0	57.1	56.8
2	66.5	0.0	66.4
3	25.2	52.5	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (Veh/hr)	Normal journey time (s)	Calculated Total Flow (Veh/hr)	Avg journey time (s)
1	1	2	221	57.12	221	57.12
2	1	3	211	56.76	211	56.76
3	2	3	178	66.44	178	66.44
4	2	1	170	66.54	170	66.54
5	3	1	317	25.23	317	25.23
6	3	2	373	52.53	373	52.53

Final Prediction Table

Traffic Stream Results

				SIGNALS			FLOWS		PERFORMANCE				PER PCU			QUEUES		WEIGHTS		PENALTIES	P.I.
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Second phase	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	Journey Time (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (Veh)	Max end of red queue (Veh)	Delay weighting multiplier (%)	Stop weighting multiplier (%)	Cost of traffic penalties (£ per hr)	P.I.
A1	1	Rathmullen Road (E)	2	1	A		432	9999	21	0.00	20	409	44.02	32.02	80.02	9.74	9.38	100	100	0.00	58.90

Ax	1	Rathmullen Road (E)					487	1800	100	7.00	27	270	12.37	0.37	0.00	0.05		100	100	0.00	0.71
B1	1	Marleys Lane	2	1	C		348	1800	26	0.00	72	40	54.16	42.16	97.43	9.58	7.94	100	100	0.00	62.13
Bx	1	Marleys Lane					594	1800	100	35.00	33	203	12.72	0.72	11.20	4.25		100	100	0.00	2.51
C1	1	Rathmullen Road (W)	2	1	B		373<	1800	30	0.00	67	50	40.04	36.44	91.07	7.81+	7.81	100	100	0.00	57.87
C2	1	Rathmullen Road (W)	2	1	A	B	317	1800	51	0.00	33	201	12.86	9.26	54.98	3.16	3.16	100	100	0.00	13.76
Cx	1	Rathmullen Road (W)					389	1800	100	44.00	22	363	12.52	0.52	13.23	3.76		100	100	0.00	1.45

Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE			PER PED		QUEUES	WEIGHTS	PENALTIES	P.I.
Pedestrian	Side	Name	Traffic node	Controller stream	Phase	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Degree of saturation (%)	Practical reserve capacity	Journey Time (s)	Mean Delay per Ped (s)	Mean max queue (Ped)	Delay weighting (%)	Cost of traffic penalties (£ per hr)	P.I.
(ALL)	(ALL)	(untitled)		1	D	0	11000	7	0	Unrestricted	0.00	0.00	0.00	100	0.00	0.00

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	245.70	20.92	11.74	10.92	1.81	180.83	16.51	0.00	197.34
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	245.70	20.92	11.74	10.92	1.81	180.83	16.51	0.00	197.34

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

A8 - 2023 - OPENING YEAR - BASE + DEV + COM(PHASE 1) - PM

D8 - 2023 - OPENING YEAR - BASE + DEV + COM(PHASE 1) - PM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-min/min)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
8	20/12/2018 09:34:42	20/12/2018 09:34:43	17:00	100	209.60	13.45	68.03	B1/1	0	0	B1/1	Ax/1	B1/1	✓

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2023 - OPENING YEAR - BASE + DEV + COM(PHASE 1) - PM		D8	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2023 - OPENING YEAR - BASE + DEV + COM(PHASE 1) - PM				17:00	

Network Options

Network timings

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

Signals options

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

Advanced

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

Traffic options

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

Advanced

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

Normal Traffic parameters

Dispersion type	Dispersion coefficient
Default	35

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Bus	1.00	70	15	0.47	30	85

Tram parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Tram	1.00	70	15	0.47	30	85

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order
Hill Climb (Fast)	15, 40, -1, 15, 40, 1, -1, 1	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05		✓	1

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
2		

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
A1			2
Ax			
B1			2
Bx			
C1			2
C2			2
Cx			

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
A1	1	Rahtmullen Road (E)			100.00	✓	Sum of lanes	9999	✓		Normal	
Ax	1	Rathmullen Road (E)			100.00	✓	Sum of lanes	1800			Normal	
B1	1	Marleys Lane			100.00	✓	Sum of lanes	1800	✓	✓	Normal	
Bx	1	Marleys Lane			100.00	✓	Sum of lanes	1800			Normal	
C1	1	Rathmullen Road (W)			30.00	✓	Sum of lanes	1800	✓	✓	Normal	
C2	1	Rathmullen Road (W)			30.00	✓	Sum of lanes	1800	✓		Normal	
Cx	1	Rathmullen Road (W)			100.00	✓	Sum of lanes	1800			Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Saturation flow (PCU/hr)
A1	1	1				9999
Ax	1	1				1800
B1	1	1				1800
Bx	1	1				1800
C1	1	1				1800
C2	1	1				1800
Cx	1	1				1800

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
A1	1	NetworkDefault	100	100	100		0.00		
Ax	1	NetworkDefault	100	100	100		0.00		
B1	1	NetworkDefault	100	100	100		0.00		
Bx	1	NetworkDefault	100	100	100		0.00		
C1	1	Flare	100	100	100		0.00		
C2	1	Flare	100	100	100		0.00		
Cx	1	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
(ALL)	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100

Normal - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	1	100	100

Flows

Arm	Traffic Stream	Total Flow (Veh/hr)	Normal Flow (Veh/hr)
A1	1	472	472
Ax	1	550	550
B1	1	649	649
Bx	1	402	402
C1	1	179	179
C2	1	186	186
Cx	1	534	534

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled	Second phase
A1	1	1	A		
B1	1	1	C		
C1	1	1	B		
C2	1	1	A	✓	B

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
A1	1	12.00	30.00
B1	1	12.00	30.00
C1	1	3.60	30.00
C2	1	3.60	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	1	1	B1/1	Ax/1	12.00	30.00	✓	Offside	45.00
Bx	1	1	A1/1	Bx/1	12.00	30.00	✓	Nearside	20.00
Cx	1	1	A1/1	Cx/1	12.00	30.00	✓	Straight	Straight Movement
Ax	1	2	C2/1	Ax/1	12.00	30.00	✓	Straight	Straight Movement
Bx	1	2	C1/1	Bx/1	12.00	30.00	✓	Offside	35.00
Cx	1	2	B1/1	Cx/1	12.00	30.00	✓	Nearside	20.00

Give Way Data

Arm	Traffic Stream	Opposed traffic	Use Step-wise Opposed Turn Model	Visibility restricted

(ALL)	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 (%)
B1	1	1	Cx/1	574	1800	100
		2	Ax/1	440	1800	100
C1	1	1	Bx/1	574	1800	100

Give Way Data - Movements - Conflicts

Arm	Traffic Stream	Movement	Destination traffic stream	Description	Controlling type	Controlling from traffic stream	Controlling to traffic stream	Percentage opposing (%)	Slope coefficient	Upstream signals visible	Conflict shift	Conflict duration
B1	1	1	Cx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.09		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0
		2	Ax/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.08		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.20		0	0
				T-junction opposing flow	TrafficStreamMovement	C2/1	Ax/1	100	0.13		0	0
				T-junction opposing flow	TrafficStreamMovement	C1/1	Bx/1	100	0.29		0	0
C1	1	1	Bx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.22		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
(ALL)	(untitled)				Farside	3.00	2.00	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	D	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(ALL)	11000

Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	100	100		0.00		

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
1	Library		✓	TrafficStream	Two-Way	A1/1	A1/1	Ax/1	Two-Way	B1/1	B1/1	Bx/1	Two-Way	C2/1	C1/1	Cx/1	✓

T-Junction Majors

T-Junction	Left Carriageway Width (m)	Right Carriageway Width (m)	Kerbed Central Reserve Width (m)	Width for C-B traffic (m)	Visibility for C-B traffic (m)
1	6.00	6.00	0.00	2.20	0.00

T-Junction Minors

T-Junction	B-C Lane Width (m)	B-A Lane Width (m)	B-C Visibility (m)	B-A Visibility (m)
1	2.20	2.20	0.00	0.00

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
1	574	0.09	0.22	440	0.08	0.20	0.13	0.29	574	0.22	0.22

Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1		✓	✓	Lane Balancing			✓			✓	1.25		

Normal Input Flows (Veh/hr)

From	To 1	To 2	To 3
1	0	223	249
2	364	0	285
3	186	179	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
1	1		A1/1	Ax/1	#0000FF
	2		B1/1	Bx/1	#FF0000
	3		C2/1, C1/1	Cx/1	#00FF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (Veh/hr)
1	1		1	2	A1/1, Bx/1	Normal	223
	2		1	3	A1/1, Cx/1	Normal	249
	3		2	3	B1/1, Cx/1	Normal	285
	4		2	1	B1/1, Ax/1	Normal	364
	5		3	1	C2/1, Ax/1	Normal	186
	6		3	2	C1/1, Bx/1	Normal	179

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (Veh)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	A1	1	43	133	472	9999	10	42.82	12.35	71.04	79.72	5.51	85.23
	Ax	1	31	227	550	1800	100	0.44	0.07	0.39	0.95	0.00	0.95
	B1	1	68	47	649	1800	52	21.25	13.88	79.80	54.41	6.09	60.50
	Bx	1	22	348	402	1800	100	0.83	5.22	30.02	1.32	1.15	2.46
	C1	1	62	61	179	1800	15	49.24	4.68	93.53	34.77	2.28	37.04
	C2	1	38	161	186	1800	25	23.85	3.27	65.40	17.50	1.92	19.42
	Cx	1	30	237	534	1800	100	1.13	6.17	35.46	2.37	1.63	4.00

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Calculated sat flow (Veh/hr)	Calculated capacity (Veh/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
17:00-18:00	A1	1	472	472	0		9999	1100	43		133	0.00	10	11
	Ax	1	550	550	0		1800	1800	31		227	0.57	100	100
	B1	1	649	649	0		1800	954	68		47	0.00	52	53
	Bx	1	402	402	0		1800	1800	22		348	1.27	100	100
	C1	1	179	179	0		1800	288	62		61	0.00	15	16
	C2	1	186	186	0		1800	486	38		161	0.00	25	27
	Cx	1	534	534	0		1800	1800	30		237	0.84	100	100

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	A1	1	12.00	42.82	5.45	0.16	79.72	79.72	93.04	433.36	5.78	5.51	5.51
	Ax	1	12.00	0.44	0.00	0.07	0.95	0.95	0.00	0.00	0.00	0.00	0.00
	B1	1	12.00	21.25	3.11	0.72	54.41	54.41	74.88	460.42	25.56	6.09	6.09
	Bx	1	12.00	0.83	0.06	0.03	1.32	1.32	22.75	90.30	1.15	1.15	1.15
	C1	1	3.60	49.24	1.95	0.50	34.77	34.77	101.39	163.93	17.56	2.28	2.28
	C2	1	3.60	23.85	1.11	0.12	17.50	17.50	82.14	144.35	8.42	1.92	1.92
	Cx	1	12.00	1.13	0.10	0.06	2.37	2.37	24.27	127.38	2.25	1.63	1.63

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (Veh)	Mean max queue (Veh)	Max queue storage (Veh)	Utilised storage (%)	Average storage excess queue (Veh)	Average limit excess queue (Veh)	Excess queue penalty (£ per hr)	Max end of green queue (Veh)	Max end of red queue (Veh)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))	Estimated blocking
17:00-18:00	A1	1	0.00	12.35	17.39	71.04	0.00	0.00	0.00	0.16	11.83	0.00	0.00	0.00	
	Ax	1	0.00	0.07	17.39	0.39	0.00	0.00	0.00			6.00	0.00	6.00	
	B1	1	0.00	13.88	17.39	79.80	0.00	0.00	0.00	0.72	9.19	0.00	0.00	0.00	
	Bx	1	0.00	5.22	17.39	30.02	0.00	0.00	0.00			57.00	0.00	57.00	
	C1	1	0.00	4.68	5.00	93.53	0.00	0.00	0.00	0.50	4.68	0.00	0.00	0.00	
	C2	1	0.00	3.27	5.00	65.40	0.00	0.00	0.00	0.12	3.27	0.00	0.00	0.00	
	Cx	1	0.00	6.17	17.39	35.46	0.00	0.00	0.00			29.00	0.00	29.00	

Traffic Stream Results: Journey times

Time Segment	Arm	Traffic Stream	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
17:00-18:00	A1	1	47.20	7.19	6.57	54.82
	Ax	1	55.00	1.90	28.94	12.44
	B1	1	64.90	5.99	10.83	33.25
	Bx	1	40.20	1.43	28.06	12.83
	C1	1	5.37	2.63	2.04	52.84
	C2	1	5.58	1.42	3.93	27.45
	Cx	1	53.40	1.95	27.43	13.13

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	Mean Max Queue EoTS (Veh)	Max End of Green Queue EoTS (Veh)	Max End of Red Queue EoTS (Veh)	PCU Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
17:00-18:00	A1	1	0.00	0.00	✓	0.00	12.35	0.16	11.83	1.00	0.00	85.23	85.23
	Ax	1	0.00	0.00	✓	0.00	0.07			1.00	0.00	0.95	0.95
	B1	1	0.00	0.00	✓	0.00	13.88	0.72	9.19	1.00	0.00	60.50	60.50
	Bx	1	0.00	0.00	✓	0.00	5.22			1.00	0.00	2.46	2.46
	C1	1	0.00	0.00	✓	0.00	4.68	0.51	4.68	1.00	0.00	37.04	37.04
	C2	1	0.00	0.00	✓	0.00	3.27	0.12	3.27	1.00	0.00	19.42	19.42
	Cx	1	0.00	0.00	✓	0.00	6.17			1.00	0.00	4.00	4.00

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
17:00-18:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
17:00-18:00	(ALL)	(ALL)	0	0	0		11000	770	0		Unrestricted	0.00	7	7

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Uniform delay (Ped-min/min)	Random plus oversat delay (Ped-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)
17:00-18:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Average storage excess queue (Ped)	Average limit excess queue (Ped)	Excess queue penalty (£ per hr)
17:00-18:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Journey times

Time Segment	Crossing	Side	Distance travelled (Ped-km/hr)	Time spent (Ped-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
17:00-18:00	(ALL)	(ALL)	0.00	0.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
17:00-18:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-min/min)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
8	20/12/2018 09:34:42	20/12/2018 09:34:43	17:00	100	209.60	13.45	68.03	B1/1	0	0	B1/1	Ax/1	B1/1	✓

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	68	0	2972	402	16.30	191.04	18.56	209.60

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
17:00-18:00	0	0	42	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))	Effective green (s (per cycle))
17:00-18:00	2972	2972	0		68		47	444	449

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	10.97	16.30	11.79	1.66	191.04	191.04	49.81	1419.74	60.72	18.56	18.56

Network Results: Queues and blocking

Time Segment	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))
17:00-18:00	93.53	0.00	92.00	0.00	92.00

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
17:00-18:00	271.65	22.51	12.07

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	PCU Factor	Cost of traffic penalties (£ per hr)	Controller stream penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
17:00-18:00	0.00	0.00	✓	0.00	1.00	0.00	0.00	209.60	209.60

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

From	To 1	To 2	To 3
1	0.0	68.1	68.8
2	45.7	0.0	45.7
3	39.9	65.1	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (Veh/hr)	Normal journey time (s)	Calculated Total Flow (Veh/hr)	Avg journey time (s)
1	1	2	223	68.08	223	68.08
2	1	3	249	68.75	249	68.75
3	2	3	285	45.68	285	45.68
4	2	1	364	45.69	364	45.69
5	3	1	186	39.89	186	39.89
6	3	2	179	65.13	179	65.13

Final Prediction Table

Traffic Stream Results

				SIGNALS			FLOWS		PERFORMANCE				PER PCU			QUEUES		WEIGHTS		PENALTIES	P.I.
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Second phase	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (Veh)	Max end of red queue (Veh)	Delay weighting multiplier (%)	Stop weighting multiplier (%)	Cost of traffic penalties (£ per hr)	P.I.
A1	1	Rathmullen Road (E)	2	1	A		472	9999	10	0.00	43	133	54.82	42.82	93.04	12.35	11.83	100	100	0.00	85.23
Ax	1	Rathmullen Road (E)					550	1800	100	6.00	31	227	12.44	0.44	0.00	0.07		100	100	0.00	0.95
B1	1	Marleys Lane	2	1	C		649	1800	52	0.00	68	47	33.25	21.25	74.88	13.88	9.19	100	100	0.00	60.50
Bx	1	Marleys Lane					402	1800	100	57.00	22	348	12.83	0.83	22.75	5.22		100	100	0.00	2.46
C1	1	Rathmullen Road (W)	2	1	B		179	1800	15	0.00	62	61	52.84	49.24	101.39	4.68	4.68	100	100	0.00	37.04
C2	1	Rathmullen Road (W)	2	1	A	B	186	1800	25	0.00	38	161	27.45	23.85	82.14	3.27	3.27	100	100	0.00	19.42
Cx	1	Rathmullen Road (W)					534	1800	100	29.00	30	237	13.13	1.13	24.27	6.17		100	100	0.00	4.00

Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE			PER PED		QUEUES	WEIGHTS	PENALTIES	P.I.
Pedestrian	Side	Name	Traffic node	Controller stream	Phase	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Degree of saturation (%)	Practical reserve capacity	Journey Time (s)	Mean Delay per Ped (s)	Mean max queue (Ped)	Delay weighting (%)	Cost of traffic penalties (£ per hr)	P.I.
(ALL)	(ALL)	(untitled)		1	D	0	11000	7	0	Unrestricted	0.00	0.00	0.00	100	0.00	0.00

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	271.65	22.51	12.07	11.79	1.66	191.04	18.56	0.00	209.60
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	271.65	22.51	12.07	11.79	1.66	191.04	18.56	0.00	209.60

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

A9 - 2028 - BASE - AM
D9 - 2028 - BASE - AM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-min/min)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
9	20/12/2018 09:34:45	20/12/2018 09:34:46	08:00	100	148.30	9.57	59.77	B1/1	0	0	B1/1	Bx/1	B1/1	✓

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2028 - BASE - AM		D9	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2028 - BASE - AM				08:00	

Network Options

Network timings

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

Signals options

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

Advanced

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

Traffic options

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

Advanced

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

Normal Traffic parameters

Dispersion type	Dispersion coefficient
Default	35

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Bus	1.00	70	15	0.47	30	85

Tram parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Tram	1.00	70	15	0.47	30	85

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order
Hill Climb (Fast)	15, 40, -1, 15, 40, 1, -1, 1	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05		✓	1

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
2		

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
A1			2
Ax			

B1			2
Bx			
C1			2
C2			2
Cx			

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
A1	1	Rahtmullen Road (E)			100.00	✓	Sum of lanes	9999	✓		Normal	
Ax	1	Rathmullen Road (E)			100.00	✓	Sum of lanes	1800			Normal	
B1	1	Marleys Lane			100.00	✓	Sum of lanes	1800	✓	✓	Normal	
Bx	1	Marleys Lane			100.00	✓	Sum of lanes	1800			Normal	
C1	1	Rathmullen Road (W)			30.00	✓	Sum of lanes	1800	✓	✓	Normal	
C2	1	Rathmullen Road (W)			30.00	✓	Sum of lanes	1800	✓		Normal	
Cx	1	Rathmullen Road (W)			100.00	✓	Sum of lanes	1800			Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Saturation flow (PCU/hr)
A1	1	1				9999
Ax	1	1				1800
B1	1	1				1800
Bx	1	1				1800
C1	1	1				1800
C2	1	1				1800
Cx	1	1				1800

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
A1	1	NetworkDefault	100	100	100		0.00		
Ax	1	NetworkDefault	100	100	100		0.00		
B1	1	NetworkDefault	100	100	100		0.00		
Bx	1	NetworkDefault	100	100	100		0.00		
C1	1	Flare	100	100	100		0.00		
C2	1	Flare	100	100	100		0.00		
Cx	1	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
(ALL)	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100

Normal - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	1	100	100

Flows

Arm	Traffic Stream	Total Flow (Veh/hr)	Normal Flow (Veh/hr)
A1	1	399	399
Ax	1	374	374
B1	1	312	312
Bx	1	485	485
C1	1	255	255
C2	1	197	197
Cx	1	304	304

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled	Second phase
A1	1	1	A		
B1	1	1	C		
C1	1	1	B		
C2	1	1	A	✓	B

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
A1	1	12.00	30.00
B1	1	12.00	30.00
C1	1	3.60	30.00
C2	1	3.60	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	1	1	B1/1	Ax/1	12.00	30.00	✓	Offside	45.00
Bx	1	1	A1/1	Bx/1	12.00	30.00	✓	Nearside	20.00
Cx	1	1	A1/1	Cx/1	12.00	30.00	✓	Straight	Straight Movement
Ax	1	2	C2/1	Ax/1	12.00	30.00	✓	Straight	Straight Movement
Bx	1	2	C1/1	Bx/1	12.00	30.00	✓	Offside	35.00
Cx	1	2	B1/1	Cx/1	12.00	30.00	✓	Nearside	20.00

Give Way Data

Arm	Traffic Stream	Opposed traffic	Use Step-wise Opposed Turn Model	Visibility restricted
(ALL)	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 (%)
B1	1	1	Cx/1	574	1800	100
		2	Ax/1	440	1800	100

C1	1	1	Bx/1	574	1800	100

Give Way Data - Movements - Conflicts

Arm	Traffic Stream	Movement	Destination traffic stream	Description	Controlling type	Controlling from traffic stream	Controlling to traffic stream	Percentage opposing (%)	Slope coefficient	Upstream signals visible	Conflict shift	Conflict duration
B1	1	1	Cx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.09		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0
		2	Ax/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.08		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.20		0	0
				T-junction opposing flow	TrafficStreamMovement	C2/1	Ax/1	100	0.13		0	0
				T-junction opposing flow	TrafficStreamMovement	C1/1	Bx/1	100	0.29		0	0
C1	1	1	Bx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.22		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
(ALL)	(untitled)				Farside	3.00	2.00	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	D	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(ALL)	11000

Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	100	100		0.00		

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
1	Library		✓	TrafficStream	Two-Way	A1/1	A1/1	Ax/1	Two-Way	B1/1	B1/1	Bx/1	Two-Way	C2/1	C1/1	Cx/1	✓

T-Junction Majors

T-Junction	Left Carriageway Width (m)	Right Carriageway Width (m)	Kerbed Central Reserve Width (m)	Width for C-B traffic (m)	Visibility for C-B traffic (m)
1	6.00	6.00	0.00	2.20	0.00

T-Junction Minors

T-Junction	B-C Lane Width (m)	B-A Lane Width (m)	B-C Visibility (m)	B-A Visibility (m)
1	2.20	2.20	0.00	0.00

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
1	574	0.09	0.22	440	0.08	0.20	0.13	0.29	574	0.22	0.22

Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1		✓	✓	Lane Balancing			✓			✓	1.25		

Normal Input Flows (Veh/hr)

From	To 1	To 2	To 3
1	0	230	169
2	177	0	135
3	197	255	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour

1	1		A1/1	Ax/1	#0000FF
	2		B1/1	Bx/1	#FF0000
	3		C2/1, C1/1	Cx/1	#00FF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (Veh/hr)
1	1		1	2	A1/1, Bx/1	Normal	230
	2		1	3	A1/1, Cx/1	Normal	169
	3		2	3	B1/1, Cx/1	Normal	135
	4		2	1	B1/1, Ax/1	Normal	177
	5		3	1	C2/1, Ax/1	Normal	197
	6		3	2	C1/1, Bx/1	Normal	255

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (Veh)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	A1	1	16	527	399	9999	24	29.44	8.66	49.80	46.34	3.84	50.18
	Ax	1	21	381	374	1800	100	0.26	0.03	0.16	0.39	0.00	0.39
	B1	1	60	67	312	1800	28	35.57	7.81	44.89	43.77	3.47	47.24
	Bx	1	27	271	485	1800	100	0.69	4.24	24.37	1.32	0.91	2.23
	C1	1	54	84	255	1800	25	36.47	5.57	111.30	36.68	2.84	39.53
	C2	1	21	366	197	1800	49	9.05	2.05	41.08	7.03	1.30	8.33
	Cx	1	17	492	304	1800	100	0.25	1.61	9.25	0.30	0.11	0.41

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Calculated sat flow (Veh/hr)	Calculated capacity (Veh/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
08:00-09:00	A1	1	399	399	0		9999	2500	16		527	0.00	24	25
	Ax	1	374	374	0		1800	1800	21		381	0.65	100	100
	B1	1	312	312	0		1800	522	60		67	0.00	28	29
	Bx	1	485	485	0		1800	1800	27		271	1.04	100	100
	C1	1	255	255	0		1800	468	54		84	0.00	25	26
	C2	1	197	197	0		1800	918	21		366	0.00	49	51
	Cx	1	304	304	0		1800	1800	17		492	1.01	100	100

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise	Mean Dela	Uniform delay (Veh-	Random plus oversat	Unweighted cost of	Weighted cost of delay	Mean stop	Uniform stops	Random stops	Unweighted cost of	Weighted cost of stops
08:00-09:00	A1	1	12.00	29.44	3.25	0.02	46.34	46.34	76.75	305.68	0.55	3.84	3.84
	Ax	1	12.00	0.26	0.00	0.03	0.39	0.39	0.00	0.00	0.00	0.00	0.00
	B1	1	12.00	35.57	2.64	0.44	43.77	43.77	88.72	261.17	15.63	3.47	3.47
	Bx	1	12.00	0.69	0.04	0.05	1.32	1.32	14.97	70.81	1.79	0.91	0.91
	C1	1	3.60	36.47	2.26	0.32	36.68	36.68	88.92	215.22	11.51	2.84	2.84
	C2	1	3.60	9.05	0.47	0.03	7.03	7.03	52.48	101.27	2.10	1.30	1.30
	Cx	1	12.00	0.25	0.00	0.02	0.30	0.30	2.80	7.90	0.62	0.11	0.11

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (Veh)	Mean max queue (Veh)	Max queue storage (Veh)	Utilised storage (%)	Average storage excess queue (Veh)	Average limit excess queue (Veh)	Excess queue penalty (£ per hr)	Max end of green queue (Veh)	Max end of red queue (Veh)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))	Estimated blocking
08:00-09:00	A1	1	0.00	8.66	17.39	49.80	0.00	0.00	0.00	0.02	8.33	0.00	0.00	0.00	
	Ax	1	0.00	0.03	17.39	0.16	0.00	0.00	0.00			10.00	0.00	10.00	
	B1	1	0.00	7.81	17.39	44.89	0.00	0.00	0.00	0.44	6.59	0.00	0.00	0.00	
	Bx	1	0.00	4.24	17.39	24.37	0.00	0.00	0.00			38.00	0.00	38.00	
	C1	1	0.00	5.57	5.00	111.30	0.03	0.00	0.00	0.32	5.57	0.00	0.00	0.00	
	C2	1	0.00	2.05	5.00	41.08	0.00	0.00	0.00	0.03	2.05	0.00	0.00	0.00	
	Cx	1	0.00	1.61	17.39	9.25	0.00	0.00	0.00			41.00	0.00	41.00	

Traffic Stream Results: Journey times

Time Segment	Arm	Traffic Stream	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	A1	1	39.90	4.59	8.69	41.44
	Ax	1	37.40	1.27	29.36	12.26
	B1	1	31.20	4.12	7.57	47.57
	Bx	1	48.50	1.71	28.37	12.69
	C1	1	7.65	2.84	2.70	40.07
	C2	1	5.91	0.69	8.54	12.65
	Cx	1	30.40	1.03	29.39	12.25

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	Mean Max Queue EoTS (Veh)	Max End of Green Queue EoTS (Veh)	Max End of Red Queue EoTS (Veh)	PCU Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	A1	1	0.00	0.00	✓	0.00	8.66	0.02	8.33	1.00	0.00	50.18	50.18
	Ax	1	0.00	0.00	✓	0.00	0.03			1.00	0.00	0.39	0.39

	B1	1	0.00	0.00	✓	0.00	7.81	0.44	6.60	1.00	0.00	47.24	47.24
	Bx	1	0.00	0.00	✓	0.00	4.24			1.00	0.00	2.23	2.23
	C1	1	0.00	0.00	✓	0.00	5.57	0.32	5.57	1.00	0.00	39.53	39.53
	C2	1	0.00	0.00	✓	0.00	2.05	0.03	2.05	1.00	0.00	8.33	8.33
	Cx	1	0.00	0.00	✓	0.00	1.61			1.00	0.00	0.41	0.41

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
08:00-09:00	(ALL)	(ALL)	0	0	0		11000	770	0		Unrestricted	0.00	7	7

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Uniform delay (Ped-min/min)	Random plus oversat delay (Ped-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)
08:00-09:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Average storage excess queue (Ped)	Average limit excess queue (Ped)	Excess queue penalty (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Journey times

Time Segment	Crossing	Side	Distance travelled (Ped-km/hr)	Time spent (Ped-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	(ALL)	(ALL)	0.00	0.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-min/min)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
9	20/12/2018 09:34:45	20/12/2018 09:34:46	08:00	100	148.30	9.57	59.77	B1/1	0	0	B1/1	Bx/1	B1/1	✓

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	60	0	2326	426	14.80	135.83	12.47	148.30

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	0	0	42	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))	Effective green (s (per cycle))
08:00-09:00	2326	2326	0		60		67	468	473

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	10.37	14.80	8.66	0.90	135.83	135.83	42.75	962.06	32.20	12.47	12.47

Network Results: Queues and blocking

Time Segment	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))
08:00-09:00	111.30	0.00	89.00	0.00	89.00

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
08:00-09:00	200.96	16.26	12.36

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	PCU Factor	Cost of traffic penalties (£ per hr)	Controller stream penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	0.00	0.00	✓	0.00	1.00	0.00	0.00	148.30	148.30

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

From	To 1	To 2	To 3
1	0.0	54.5	53.7
2	59.8	0.0	59.8
3	24.9	52.4	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (Veh/hr)	Normal journey time (s)	Calculated Total Flow (Veh/hr)	Avg journey time (s)
1	1	2	230	54.48	230	54.48
2	1	3	169	53.73	169	53.73
3	2	3	135	59.77	135	59.77
4	2	1	177	59.83	177	59.83
5	3	1	197	24.91	197	24.91
6	3	2	255	52.44	255	52.44

Final Prediction Table

Traffic Stream Results

				SIGNALS			FLOWS		PERFORMANCE				PER PCU			QUEUES		WEIGHTS		PENALTIES	P.I.
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Second phase	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	Journey Time (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (Veh)	Max end of red queue (Veh)	Delay weighting multiplier (%)	Stop weighting multiplier (%)	Cost of traffic penalties (£ per hr)	P.I.
A1	1	Rathmullen Road (E)	2	1	A		399	9999	24	0.00	16	527	41.44	29.44	76.75	8.66	8.33	100	100	0.00	50.18
Ax	1	Rathmullen Road (E)					374	1800	100	10.00	21	381	12.26	0.26	0.00	0.03		100	100	0.00	0.39
B1	1	Marleys Lane	2	1	C		312	1800	28	0.00	60	67	47.57	35.57	88.72	7.81	6.59	100	100	0.00	47.24
Bx	1	Marleys Lane					485	1800	100	38.00	27	271	12.69	0.69	14.97	4.24		100	100	0.00	2.23
C1	1	Rathmullen Road (W)	2	1	B		255 <	1800	25	0.00	54	84	40.07	36.47	88.92	5.57 +	5.57	100	100	0.00	39.53
C2	1	Rathmullen Road (W)	2	1	A	B	197	1800	49	0.00	21	366	12.65	9.05	52.48	2.05	2.05	100	100	0.00	8.33
Cx	1	Rathmullen Road (W)					304	1800	100	41.00	17	492	12.25	0.25	2.80	1.61		100	100	0.00	0.41

Pedestrian Crossing Results

Pedestrian	Side	Name	Traffic node	SIGNALS Controller stream	SIGNALS Phase	FLOWS Calculated Flow Entering (Ped/hr)	FLOWS Calculated sat flow (Ped/hr)	PERFORMANCE Actual green (s (per cycle))	PERFORMANCE Degree of saturation (%)	PERFORMANCE Practical reserve capacity	PER PED Journey Time (s)	PER PED Mean Delay per Ped (s)	QUEUES Mean max queue (Ped)	WEIGHTS Delay weighting (%)	PENALTIES Cost of traffic penalties (£ per hr)	P.I.
(ALL)	(ALL)	(untitled)		1	D	0	11000	7	0	Unrestricted	0.00	0.00	0.00	100	0.00	0.00

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	200.96	16.26	12.36	8.66	0.90	135.83	12.47	0.00	148.30
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	200.96	16.26	12.36	8.66	0.90	135.83	12.47	0.00	148.30

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

A10 - 2028 - BASE - PM
D10 - 2028 - BASE - PM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst over	Network within capacity

						min/ min)							all PRC	
10	20/12/2018 09:34:49	20/12/2018 09:34:50	17:00	100	147.05	9.44	57.30	B1/1	0	0	B1/1	Ax/1	B1/1	✓

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2028 - BASE - PM		D10	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2028 - BASE - PM				17:00	

Network Options

Network timings

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

Signals options

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

Advanced

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

Traffic options

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

Advanced

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

Normal Traffic parameters

Dispersion type	Dispersion coefficient
Default	35

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Bus	1.00	70	15	0.47	30	85

Tram parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Tram	1.00	70	15	0.47	30	85

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order
Hill Climb (Fast)	15, 40, -1, 15, 40, 1, -1, 1	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05		✓	1

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
2		

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
A1			2
Ax			
B1			2
Bx			
C1			2
C2			2
Cx			

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
A1	1	Rahtmullen Road (E)			100.00	✓	Sum of lanes	9999	✓		Normal	
Ax	1	Rathmullen Road (E)			100.00	✓	Sum of lanes	1800			Normal	
B1	1	Marleys Lane			100.00	✓	Sum of lanes	1800	✓	✓	Normal	
Bx	1	Marleys Lane			100.00	✓	Sum of lanes	1800			Normal	
C1	1	Rathmullen Road (W)			30.00	✓	Sum of lanes	1800	✓	✓	Normal	
C2	1	Rathmullen Road (W)			30.00	✓	Sum of lanes	1800	✓		Normal	
Cx	1	Rathmullen Road (W)			100.00	✓	Sum of lanes	1800			Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Saturation flow (PCU/hr)
A1	1	1				9999
Ax	1	1				1800
B1	1	1				1800
Bx	1	1				1800
C1	1	1				1800
C2	1	1				1800
Cx	1	1				1800

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
A1	1	NetworkDefault	100	100	100		0.00		
Ax	1	NetworkDefault	100	100	100		0.00		
B1	1	NetworkDefault	100	100	100		0.00		
Bx	1	NetworkDefault	100	100	100		0.00		
C1	1	Flare	100	100	100		0.00		
C2	1	Flare	100	100	100		0.00		
Cx	1	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
(ALL)	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100

Normal - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	1	100	100

Flows

Arm	Traffic Stream	Total Flow (Veh/hr)	Normal Flow (Veh/hr)
A1	1	373	373
Ax	1	504	504
B1	1	557	557
Bx	1	350	350
C1	1	118	118
C2	1	125	125
Cx	1	319	319

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled	Second phase
A1	1	1	A		
B1	1	1	C		
C1	1	1	B		
C2	1	1	A	✓	B

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
A1	1	12.00	30.00
B1	1	12.00	30.00
C1	1	3.60	30.00
C2	1	3.60	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	1	1	B1/1	Ax/1	12.00	30.00	✓	Offside	45.00
Bx	1	1	A1/1	Bx/1	12.00	30.00	✓	Nearside	20.00
Cx	1	1	A1/1	Cx/1	12.00	30.00	✓	Straight	Straight Movement
Ax	1	2	C2/1	Ax/1	12.00	30.00	✓	Straight	Straight Movement
Bx	1	2	C1/1	Bx/1	12.00	30.00	✓	Offside	35.00
Cx	1	2	B1/1	Cx/1	12.00	30.00	✓	Nearside	20.00

Give Way Data

Arm	Traffic Stream	Opposed traffic	Use Step-wise Opposed Turn Model	Visibility restricted
(ALL)	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 (%)
B1	1	1	Cx/1	574	1800	100
		2	Ax/1	440	1800	100
C1	1	1	Bx/1	574	1800	100

Give Way Data - Movements - Conflicts

Arm	Traffic Stream	Movement	Destination traffic stream	Description	Controlling type	Controlling from traffic stream	Controlling to traffic stream	Percentage opposing (%)	Slope coefficient	Upstream signals visible	Conflict shift	Conflict duration

B1	1	1	Cx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.09		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0
		2	Ax/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.08		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.20		0	0
				T-junction opposing flow	TrafficStreamMovement	C2/1	Ax/1	100	0.13		0	0
				T-junction opposing flow	TrafficStreamMovement	C1/1	Bx/1	100	0.29		0	0
C1	1	1	Bx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.22		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
(ALL)	(untitled)				Farside	3.00	2.00	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	D	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(ALL)	11000

Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	100	100		0.00		

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
1	Library		✓	TrafficStream	Two-Way	A1/1	A1/1	Ax/1	Two-Way	B1/1	B1/1	Bx/1	Two-Way	C2/1	C1/1	Cx/1	✓

T-Junction Majors

T-Junction	Left Carriageway Width (m)	Right Carriageway Width (m)	Kerbed Central Reserve Width (m)	Width for C-B traffic (m)	Visibility for C-B traffic (m)
1	6.00	6.00	0.00	2.20	0.00

T-Junction Minors

T-Junction	B-C Lane Width (m)	B-A Lane Width (m)	B-C Visibility (m)	B-A Visibility (m)
1	2.20	2.20	0.00	0.00

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
1	574	0.09	0.22	440	0.08	0.20	0.13	0.29	574	0.22	0.22

Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1		✓	✓	Lane Balancing			✓			✓	1.25		

Normal Input Flows (Veh/hr)

From	To 1	To 2	To 3
1	0	232	141
2	379	0	178
3	125	118	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
1	1		A1/1	Ax/1	#0000FF
	2		B1/1	Bx/1	#FF0000
	3		C2/1, C1/1	Cx/1	#00FF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (Veh/hr)
1	1		1	2	A1/1, Bx/1	Normal	232
	2		1	3	A1/1, Cx/1	Normal	141
	3		2	3	B1/1, Cx/1	Normal	178
	4		2	1	B1/1, Ax/1	Normal	379
	5		3	1	C2/1, Ax/1	Normal	125
	6		3	2	C1/1, Bx/1	Normal	118

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (Veh)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	A1	1	29	248	373	9999	12	39.90	9.38	53.95	58.70	4.18	62.88
	Ax	1	28	257	504	1800	100	0.39	0.05	0.31	0.77	0.00	0.77
	B1	1	57	75	557	1800	53	17.80	10.59	60.92	39.10	4.66	43.76
	Bx	1	19	414	350	1800	100	1.09	5.29	30.44	1.51	1.38	2.89
	C1	1	50	98	118	1800	12	48.23	3.10	62.10	22.45	1.47	23.91
	C2	1	27	274	125	1800	24	22.85	2.20	44.03	11.27	1.21	12.47
	Cx	1	18	464	319	1800	100	0.24	1.54	8.87	0.30	0.06	0.36

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Calculated sat flow (Veh/hr)	Calculated capacity (Veh/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
17:00-18:00	A1	1	373	373	0		9999	1300	29		248	0.00	12	13
	Ax	1	504	504	0		1800	1800	28		257	0.62	100	100
	B1	1	557	557	0		1800	972	57		75	0.00	53	54
	Bx	1	350	350	0		1800	1800	19		414	1.32	100	100
	C1	1	118	118	0		1800	234	50		98	0.00	12	13
	C2	1	125	125	0		1800	468	27		274	0.00	24	26
	Cx	1	319	319	0		1800	1800	18		464	0.83	100	100

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	A1	1	12.00	39.90	4.08	0.06	58.70	58.70	89.37	331.29	2.07	4.18	4.18
	Ax	1	12.00	0.39	0.00	0.05	0.77	0.77	0.00	0.00	0.00	0.00	0.00
	B1	1	12.00	17.80	2.37	0.38	39.10	39.10	66.69	357.75	13.70	4.66	4.66
	Bx	1	12.00	1.09	0.08	0.02	1.51	1.51	31.39	109.02	0.84	1.38	1.38
	C1	1	3.60	48.23	1.33	0.25	22.45	22.45	99.02	107.90	8.94	1.47	1.47
	C2	1	3.60	22.85	0.74	0.05	11.27	11.27	77.03	94.54	1.74	1.21	1.21
	Cx	1	12.00	0.24	0.00	0.02	0.30	0.30	1.43	3.87	0.69	0.06	0.06

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (Veh)	Mean max queue (Veh)	Max queue storage (Veh)	Utilised storage (%)	Average storage excess queue (Veh)	Average limit excess queue (Veh)	Excess queue penalty (£ per hr)	Max end of green queue (Veh)	Max end of red queue (Veh)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))	Estimated blocking
17:00-18:00	A1	1	0.00	9.38	17.39	53.95	0.00	0.00	0.00	0.06	9.07	0.00	0.00	0.00	
	Ax	1	0.00	0.05	17.39	0.31	0.00	0.00	0.00			7.00	0.00	7.00	
	B1	1	0.00	10.59	17.39	60.92	0.00	0.00	0.00	0.38	7.50	0.00	0.00	0.00	
	Bx	1	0.00	5.29	17.39	30.44	0.00	0.00	0.00			60.00	0.00	60.00	
	C1	1	0.00	3.10	5.00	62.10	0.00	0.00	0.00	0.25	3.10	0.00	0.00	0.00	
	C2	1	0.00	2.20	5.00	44.03	0.00	0.00	0.00	0.05	2.20	0.00	0.00	0.00	
	Cx	1	0.00	1.54	17.39	8.87	0.00	0.00	0.00			27.00	0.00	27.00	

Traffic Stream Results: Journey times

Time Segment	Arm	Traffic Stream	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
17:00-18:00	A1	1	37.30	5.38	6.94	51.90
	Ax	1	50.40	1.73	29.06	12.39
	B1	1	55.70	4.61	12.08	29.80
	Bx	1	35.00	1.27	27.49	13.09
	C1	1	3.54	1.70	2.08	51.83
	C2	1	3.75	0.92	4.08	26.45
	Cx	1	31.90	1.08	29.42	12.24

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	Mean Max Queue EoTS (Veh)	Max End of Green Queue EoTS (Veh)	Max End of Red Queue EoTS (Veh)	PCU Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
17:00-18:00	A1	1	0.00	0.00	✓	0.00	9.38	0.06	9.07	1.00	0.00	62.88	62.88
	Ax	1	0.00	0.00	✓	0.00	0.05			1.00	0.00	0.77	0.77
	B1	1	0.00	0.00	✓	0.00	10.60	0.38	7.50	1.00	0.00	43.76	43.76
	Bx	1	0.00	0.00	✓	0.00	5.29			1.00	0.00	2.89	2.89

	C1	1	0.00	0.00	✓	0.00	3.11	0.25	3.11	1.00	0.00	23.91	23.91
	C2	1	0.00	0.00	✓	0.00	2.20	0.05	2.20	1.00	0.00	12.47	12.47
	Cx	1	0.00	0.00	✓	0.00	1.54			1.00	0.00	0.36	0.36

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
17:00-18:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
17:00-18:00	(ALL)	(ALL)	0	0	0		11000	770	0		Unrestricted	0.00	7	7

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Uniform delay (Ped-min/min)	Random plus oversat delay (Ped-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)
17:00-18:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Average storage excess queue (Ped)	Average limit excess queue (Ped)	Excess queue penalty (£ per hr)
17:00-18:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Journey times

Time Segment	Crossing	Side	Distance travelled (Ped-km/hr)	Time spent (Ped-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
17:00-18:00	(ALL)	(ALL)	0.00	0.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
17:00-18:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-min/min)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
10	20/12/2018 09:34:49	20/12/2018 09:34:50	17:00	100	147.05	9.44	57.30	B1/1	0	0	B1/1	Ax/1	B1/1	✓

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	57	0	2346	401	14.49	134.10	12.94	147.05

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
17:00-18:00	0	0	42	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))	Effective green (s (per cycle))
17:00-18:00	2346	2346	0		57		75	443	448

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	11.13	14.49	8.60	0.84	134.10	134.10	44.00	1004.37	27.98	12.94	12.94

Network Results: Queues and blocking

Time Segment	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))
17:00-18:00	62.10	0.00	94.00	0.00	94.00

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
17:00-18:00	217.59	16.70	13.03

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	PCU Factor	Cost of traffic penalties (£ per hr)	Controller stream penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
17:00-18:00	0.00	0.00	✓	0.00	1.00	0.00	0.00	147.05	147.05

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

From	To 1	To 2	To 3
1	0.0	65.4	64.2
2	42.2	0.0	42.0
3	38.8	64.1	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (Veh/hr)	Normal journey time (s)	Calculated Total Flow (Veh/hr)	Avg journey time (s)
1	1	2	232	65.42	232	65.42
2	1	3	141	64.16	141	64.16
3	2	3	178	42.01	178	42.01
4	2	1	379	42.19	379	42.19
5	3	1	125	38.84	125	38.84
6	3	2	118	64.08	118	64.08

Final Prediction Table

Traffic Stream Results

				SIGNALS			FLOWS		PERFORMANCE				PER PCU			QUEUES		WEIGHTS		PENALTIES	P.I.
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Second phase	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (Veh)	Max end of red queue (Veh)	Delay weighting multiplier (%)	Stop weighting multiplier (%)	Cost of traffic penalties (£ per hr)	P.I.
A1	1	Rathmullen Road (E)	2	1	A		373	9999	12	0.00	29	248	51.90	39.90	89.37	9.38	9.07	100	100	0.00	62.88
Ax	1	Rathmullen Road (E)					504	1800	100	7.00	28	257	12.39	0.39	0.00	0.05		100	100	0.00	0.77
B1	1	Marleys Lane	2	1	C		557	1800	53	0.00	57	75	29.80	17.80	66.69	10.59	7.50	100	100	0.00	43.76
Bx	1	Marleys Lane					350	1800	100	60.00	19	414	13.09	1.09	31.39	5.29		100	100	0.00	2.89
C1	1	Rathmullen Road (W)	2	1	B		118	1800	12	0.00	50	98	51.83	48.23	99.02	3.10	3.10	100	100	0.00	23.91
C2	1	Rathmullen Road (W)	2	1	A	B	125	1800	24	0.00	27	274	26.45	22.85	77.03	2.20	2.20	100	100	0.00	12.47
Cx	1	Rathmullen Road (W)					319	1800	100	27.00	18	464	12.24	0.24	1.43	1.54		100	100	0.00	0.36

Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE			PER PED		QUEUES	WEIGHTS	PENALTIES	P.I.
Pedestrian	Side	Name	Traffic node	Controller stream	Phase	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Degree of saturation (%)	Practical reserve capacity	Journey Time (s)	Mean Delay per Ped (s)	Mean max queue (Ped)	Delay weighting (%)	Cost of traffic penalties (£ per hr)	P.I.
(ALL)	(ALL)	(untitled)		1	D	0	11000	7	0	Unrestricted	0.00	0.00	0.00	100	0.00	0.00

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	217.59	16.70	13.03	8.60	0.84	134.10	12.94	0.00	147.05
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	217.59	16.70	13.03	8.60	0.84	134.10	12.94	0.00	147.05

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

A11 - 2028 - BASE + DEV - AM
D11 - 2028 - BASE + 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)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst over	Network within capacity

						min/ min)							all PRC	
11	20/12/2018 09:34:52	20/12/2018 09:34:53	08:00	100	194.53	12.55	69.64	B1/1	0	0	B1/1	Bx/1	B1/1	✓

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2028 - BASE + DEV - AM		D11	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2028 - BASE + DEV - AM				08:00	

Network Options

Network timings

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

Signals options

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

Advanced

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

Traffic options

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

Advanced

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

Normal Traffic parameters

Dispersion type	Dispersion coefficient
Default	35

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Bus	1.00	70	15	0.47	30	85

Tram parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Tram	1.00	70	15	0.47	30	85

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order
Hill Climb (Fast)	15, 40, -1, 15, 40, 1, -1, 1	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05		✓	1

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
2		

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
A1			2
Ax			
B1			2
Bx			
C1			2
C2			2
Cx			

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
A1	1	Rahtmullen Road (E)			100.00	✓	Sum of lanes	9999	✓		Normal	
Ax	1	Rathmullen Road (E)			100.00	✓	Sum of lanes	1800			Normal	
B1	1	Marleys Lane			100.00	✓	Sum of lanes	1800	✓	✓	Normal	
Bx	1	Marleys Lane			100.00	✓	Sum of lanes	1800			Normal	
C1	1	Rathmullen Road (W)			30.00	✓	Sum of lanes	1800	✓	✓	Normal	
C2	1	Rathmullen Road (W)			30.00	✓	Sum of lanes	1800	✓		Normal	
Cx	1	Rathmullen Road (W)			100.00	✓	Sum of lanes	1800			Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Saturation flow (PCU/hr)
A1	1	1				9999
Ax	1	1				1800
B1	1	1				1800
Bx	1	1				1800
C1	1	1				1800
C2	1	1				1800
Cx	1	1				1800

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
A1	1	NetworkDefault	100	100	100		0.00		
Ax	1	NetworkDefault	100	100	100		0.00		
B1	1	NetworkDefault	100	100	100		0.00		
Bx	1	NetworkDefault	100	100	100		0.00		
C1	1	Flare	100	100	100		0.00		
C2	1	Flare	100	100	100		0.00		
Cx	1	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
(ALL)	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100

Normal - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	1	100	100

Flows

Arm	Traffic Stream	Total Flow (Veh/hr)	Normal Flow (Veh/hr)
A1	1	438	438
Ax	1	477	477
B1	1	351	351
Bx	1	589	589
C1	1	359	359
C2	1	300	300
Cx	1	382	382

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled	Second phase
A1	1	1	A		
B1	1	1	C		
C1	1	1	B		
C2	1	1	A	✓	B

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
A1	1	12.00	30.00
B1	1	12.00	30.00
C1	1	3.60	30.00
C2	1	3.60	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	1	1	B1/1	Ax/1	12.00	30.00	✓	Offside	45.00
Bx	1	1	A1/1	Bx/1	12.00	30.00	✓	Nearside	20.00
Cx	1	1	A1/1	Cx/1	12.00	30.00	✓	Straight	Straight Movement
Ax	1	2	C2/1	Ax/1	12.00	30.00	✓	Straight	Straight Movement
Bx	1	2	C1/1	Bx/1	12.00	30.00	✓	Offside	35.00
Cx	1	2	B1/1	Cx/1	12.00	30.00	✓	Nearside	20.00

Give Way Data

Arm	Traffic Stream	Opposed traffic	Use Step-wise Opposed Turn Model	Visibility restricted
(ALL)	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 (%)
B1	1	1	Cx/1	574	1800	100
		2	Ax/1	440	1800	100
C1	1	1	Bx/1	574	1800	100

Give Way Data - Movements - Conflicts

Arm	Traffic Stream	Movement	Destination traffic stream	Description	Controlling type	Controlling from traffic stream	Controlling to traffic stream	Percentage opposing (%)	Slope coefficient	Upstream signals visible	Conflict shift	Conflict duration

B1	1	1	Cx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.09		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0
		2	Ax/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.08		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.20		0	0
				T-junction opposing flow	TrafficStreamMovement	C2/1	Ax/1	100	0.13		0	0
				T-junction opposing flow	TrafficStreamMovement	C1/1	Bx/1	100	0.29		0	0
C1	1	1	Bx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.22		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
(ALL)	(untitled)				Farside	3.00	2.00	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	D	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(ALL)	11000

Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	100	100		0.00		

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
1	Library		✓	TrafficStream	Two-Way	A1/1	A1/1	Ax/1	Two-Way	B1/1	B1/1	Bx/1	Two-Way	C2/1	C1/1	Cx/1	✓

T-Junction Majors

T-Junction	Left Carriageway Width (m)	Right Carriageway Width (m)	Kerbed Central Reserve Width (m)	Width for C-B traffic (m)	Visibility for C-B traffic (m)
1	6.00	6.00	0.00	2.20	0.00

T-Junction Minors

T-Junction	B-C Lane Width (m)	B-A Lane Width (m)	B-C Visibility (m)	B-A Visibility (m)
1	2.20	2.20	0.00	0.00

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
1	574	0.09	0.22	440	0.08	0.20	0.13	0.29	574	0.22	0.22

Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1		✓	✓	Lane Balancing			✓			✓	1.25		

Normal Input Flows (Veh/hr)

From	To 1	To 2	To 3
1	0	230	208
2	177	0	174
3	300	359	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
1	1		A1/1	Ax/1	#0000FF
	2		B1/1	Bx/1	#FF0000
	3		C2/1, C1/1	Cx/1	#00FF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (Veh/hr)
1	1		1	2	A1/1, Bx/1	Normal	230
	2		1	3	A1/1, Cx/1	Normal	208
	3		2	3	B1/1, Cx/1	Normal	174
	4		2	1	B1/1, Ax/1	Normal	177
	5		3	1	C2/1, Ax/1	Normal	300
	6		3	2	C1/1, Bx/1	Normal	359

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (Veh)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	A1	1	20	402	438	9999	21	32.04	9.88	56.81	55.36	4.39	59.76
	Ax	1	27	277	477	1800	100	0.36	0.05	0.27	0.68	0.00	0.68
	B1	1	70	44	351	1800	27	40.24	9.46	54.40	55.71	4.20	59.91
	Bx	1	33	206	589	1800	100	0.77	4.64	26.69	1.78	0.96	2.74
	C1	1	66	50	359	1800	29	37.13	7.63	152.61	52.57	4.13	56.71
	C2	1	32	212	300	1800	50	9.56	3.08	61.51	11.31	2.09	13.40
	Cx	1	21	371	382	1800	100	0.50	3.70	21.30	0.75	0.59	1.34

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Calculated sat flow (Veh/hr)	Calculated capacity (Veh/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
08:00-09:00	A1	1	438	438	0		9999	2200	20		402	0.00	21	22
	Ax	1	477	477	0		1800	1800	27		277	0.56	100	100
	B1	1	351	351	0		1800	504	70		44	0.00	27	28
	Bx	1	589	589	0		1800	1800	33		206	1.00	100	100
	C1	1	359	359	0		1800	540	66		50	0.00	29	30
	C2	1	300	300	0		1800	936	32		212	0.00	50	52
	Cx	1	382	382	0		1800	1800	21		371	1.03	100	100

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	A1	1	12.00	32.04	3.87	0.02	55.36	55.36	80.02	349.60	0.89	4.39	4.39
	Ax	1	12.00	0.36	0.00	0.05	0.68	0.68	0.00	0.00	0.00	0.00	0.00
	B1	1	12.00	40.24	3.14	0.78	55.71	55.71	95.34	306.98	27.65	4.20	4.20
	Bx	1	12.00	0.77	0.05	0.08	1.78	1.78	13.02	73.84	2.86	0.96	0.96
	C1	1	3.60	37.13	3.05	0.65	52.57	52.57	91.86	306.74	23.02	4.13	4.13
	C2	1	3.60	9.56	0.72	0.08	11.31	11.31	55.64	161.51	5.41	2.09	2.09
	Cx	1	12.00	0.50	0.02	0.03	0.75	0.75	12.37	46.22	1.03	0.59	0.59

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (Veh)	Mean max queue (Veh)	Max queue storage (Veh)	Utilised storage (%)	Average storage excess queue (Veh)	Average limit excess queue (Veh)	Excess queue penalty (£ per hr)	Max end of green queue (Veh)	Max end of red queue (Veh)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))	Estimated blocking
08:00-09:00	A1	1	0.00	9.88	17.39	56.81	0.00	0.00	0.00	0.02	9.51	0.00	0.00	0.00	
	Ax	1	0.00	0.05	17.39	0.27	0.00	0.00	0.00			7.00	0.00	7.00	
	B1	1	0.00	9.46	17.39	54.40	0.00	0.00	0.00	0.78	7.80	0.00	0.00	0.00	
	Bx	1	0.00	4.64	17.39	26.69	0.00	0.00	0.00			36.00	0.00	36.00	
	C1	1	0.00	7.63	5.00	152.61	0.43	0.00	0.00	0.65	7.63	0.00	0.00	0.00	
	C2	1	0.00	3.08	5.00	61.51	0.00	0.00	0.00	0.08	3.08	0.00	0.00	0.00	
	Cx	1	0.00	3.70	17.39	21.30	0.00	0.00	0.00			44.00	0.00	44.00	

Traffic Stream Results: Journey times

Time Segment	Arm	Traffic Stream	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	A1	1	43.80	5.36	8.17	44.04
	Ax	1	47.70	1.64	29.13	12.36
	B1	1	35.10	5.09	6.89	52.24
	Bx	1	58.90	2.09	28.20	12.77
	C1	1	10.77	4.06	2.65	40.73
	C2	1	9.00	1.10	8.21	13.16
	Cx	1	38.20	1.33	28.81	12.50

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	Mean Max Queue EoTS (Veh)	Max End of Green Queue EoTS (Veh)	Max End of Red Queue EoTS (Veh)	PCU Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	A1	1	0.00	0.00	✓	0.00	9.88	0.02	9.51	1.00	0.00	59.76	59.76
	Ax	1	0.00	0.00	✓	0.00	0.05			1.00	0.00	0.68	0.68
	B1	1	0.00	0.00	✓	0.00	9.47	0.79	7.81	1.00	0.00	59.91	59.91
	Bx	1	0.00	0.00	✓	0.00	4.64			1.00	0.00	2.74	2.74
	C1	1	0.00	0.00	✓	0.00	7.64	0.65	7.64	1.00	0.00	56.71	56.71

	C2	1	0.00	0.00	✓	0.00	3.08	0.08	3.08	1.00	0.00	13.40	13.40
	Cx	1	0.00	0.00	✓	0.00	3.70			1.00	0.00	1.34	1.34

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
08:00-09:00	(ALL)	(ALL)	0	0	0		11000	770	0		Unrestricted	0.00	7	7

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Uniform delay (Ped-min/min)	Random plus oversat delay (Ped-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)
08:00-09:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Average storage excess queue (Ped)	Average limit excess queue (Ped)	Excess queue penalty (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Journey times

Time Segment	Crossing	Side	Distance travelled (Ped-km/hr)	Time spent (Ped-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	(ALL)	(ALL)	0.00	0.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-min/min)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
11	20/12/2018 09:34:52	20/12/2018 09:34:53	08:00	100	194.53	12.55	69.64	B1/1	0	0	B1/1	Bx/1	B1/1	✓

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	70	0	2896	427	15.60	178.16	16.37	194.53

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	0	0	42	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))	Effective green (s (per cycle))
08:00-09:00	2896	2896	0		70		44	469	474

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	10.09	15.60	10.86	1.69	178.16	178.16	45.09	1244.89	60.86	16.37	16.37

Network Results: Queues and blocking

Time Segment	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))
08:00-09:00	152.61	0.00	87.00	0.00	87.00

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
08:00-09:00	243.47	20.66	11.78

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	PCU Factor	Cost of traffic penalties (£ per hr)	Controller stream penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	0.00	0.00	✓	0.00	1.00	0.00	0.00	194.53	194.53

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

From	To 1	To 2	To 3
1	0.0	57.2	56.7
2	64.6	0.0	64.5
3	25.5	53.2	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (Veh/hr)	Normal journey time (s)	Calculated Total Flow (Veh/hr)	Avg journey time (s)
1	1	2	230	57.25	230	57.25
2	1	3	208	56.73	208	56.73
3	2	3	174	64.51	174	64.51
4	2	1	177	64.60	177	64.60
5	3	1	300	25.52	300	25.52
6	3	2	359	53.21	359	53.21

Final Prediction Table

Traffic Stream Results

				SIGNALS			FLOWS		PERFORMANCE				PER PCU			QUEUES		WEIGHTS		PENALTIES	P.I.
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Second phase	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	Journey Time (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (Veh)	Max end of red queue (Veh)	Delay weighting multiplier (%)	Stop weighting multiplier (%)	Cost of traffic penalties (£ per hr)	P.I.
A1	1	Rathmullen Road (E)	2	1	A		438	9999	21	0.00	20	402	44.04	32.04	80.02	9.88	9.51	100	100	0.00	59.76
Ax	1	Rathmullen Road (E)					477	1800	100	7.00	27	277	12.36	0.36	0.00	0.05		100	100	0.00	0.68
B1	1	Marleys Lane	2	1	C		351	1800	27	0.00	70	44	52.24	40.24	95.34	9.46	7.80	100	100	0.00	59.91
Bx	1	Marleys Lane					589	1800	100	36.00	33	206	12.77	0.77	13.02	4.64		100	100	0.00	2.74
C1	1	Rathmullen Road (W)	2	1	B		359 <	1800	29	0.00	66	50	40.73	37.13	91.86	7.63 +	7.63	100	100	0.00	56.71
C2	1	Rathmullen Road (W)	2	1	A	B	300	1800	50	0.00	32	212	13.16	9.56	55.64	3.08	3.08	100	100	0.00	13.40
Cx	1	Rathmullen Road (W)					382	1800	100	44.00	21	371	12.50	0.50	12.37	3.70		100	100	0.00	1.34

Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE			PER PED		QUEUES	WEIGHTS	PENALTIES	P.I.
Pedestrian	Side	Name	Traffic node	Controller stream	Phase	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Degree of saturation (%)	Practical reserve capacity	Journey Time (s)	Mean Delay per Ped (s)	Mean max queue (Ped)	Delay weighting (%)	Cost of traffic penalties (£ per hr)	P.I.
(ALL)	(ALL)	(untitled)		1	D	0	11000	7	0	Unrestricted	0.00	0.00	0.00	100	0.00	0.00

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	243.47	20.66	11.78	10.86	1.69	178.16	16.37	0.00	194.53
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	243.47	20.66	11.78	10.86	1.69	178.16	16.37	0.00	194.53

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

A12 - 2028 - BASE + DEV - PM
D12 - 2028 - BASE + 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)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst over	Network within capacity

						min/min)							all PRC	
12	20/12/2018 09:34:57	20/12/2018 09:34:58	17:00	100	204.16	13.10	68.03	B1/1	0	0	B1/1	Ax/1	B1/1	✓

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2028 - BASE + DEV - PM		D12	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2028 - BASE + DEV - PM				17:00	

Network Options

Network timings

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

Signals options

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

Advanced

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

Traffic options

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

Advanced

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

Normal Traffic parameters

Dispersion type	Dispersion coefficient
Default	35

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Bus	1.00	70	15	0.47	30	85

Tram parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Tram	1.00	70	15	0.47	30	85

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order
Hill Climb (Fast)	15, 40, -1, 15, 40, 1, -1, 1	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05		✓	1

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
2		

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
A1			2
Ax			
B1			2
Bx			
C1			2
C2			2
Cx			

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
A1	1	Rahtmullen Road (E)			100.00	✓	Sum of lanes	9999	✓		Normal	
Ax	1	Rathmullen Road (E)			100.00	✓	Sum of lanes	1800			Normal	
B1	1	Marleys Lane			100.00	✓	Sum of lanes	1800	✓	✓	Normal	
Bx	1	Marleys Lane			100.00	✓	Sum of lanes	1800			Normal	
C1	1	Rathmullen Road (W)			30.00	✓	Sum of lanes	1800	✓	✓	Normal	
C2	1	Rathmullen Road (W)			30.00	✓	Sum of lanes	1800	✓		Normal	
Cx	1	Rathmullen Road (W)			100.00	✓	Sum of lanes	1800			Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Saturation flow (PCU/hr)
A1	1	1				9999
Ax	1	1				1800
B1	1	1				1800
Bx	1	1				1800
C1	1	1				1800
C2	1	1				1800
Cx	1	1				1800

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
A1	1	NetworkDefault	100	100	100		0.00		
Ax	1	NetworkDefault	100	100	100		0.00		
B1	1	NetworkDefault	100	100	100		0.00		
Bx	1	NetworkDefault	100	100	100		0.00		
C1	1	Flare	100	100	100		0.00		
C2	1	Flare	100	100	100		0.00		
Cx	1	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
(ALL)	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100

Normal - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	1	100	100

Flows

Arm	Traffic Stream	Total Flow (Veh/hr)	Normal Flow (Veh/hr)
A1	1	464	464
Ax	1	558	558
B1	1	649	649
Bx	1	403	403
C1	1	171	171
C2	1	179	179
Cx	1	502	502

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled	Second phase
A1	1	1	A		
B1	1	1	C		
C1	1	1	B		
C2	1	1	A	✓	B

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
A1	1	12.00	30.00
B1	1	12.00	30.00
C1	1	3.60	30.00
C2	1	3.60	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	1	1	B1/1	Ax/1	12.00	30.00	✓	Offside	45.00
Bx	1	1	A1/1	Bx/1	12.00	30.00	✓	Nearside	20.00
Cx	1	1	A1/1	Cx/1	12.00	30.00	✓	Straight	Straight Movement
Ax	1	2	C2/1	Ax/1	12.00	30.00	✓	Straight	Straight Movement
Bx	1	2	C1/1	Bx/1	12.00	30.00	✓	Offside	35.00
Cx	1	2	B1/1	Cx/1	12.00	30.00	✓	Nearside	20.00

Give Way Data

Arm	Traffic Stream	Opposed traffic	Use Step-wise Opposed Turn Model	Visibility restricted
(ALL)	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 (%)
B1	1	1	Cx/1	574	1800	100
		2	Ax/1	440	1800	100
C1	1	1	Bx/1	574	1800	100

Give Way Data - Movements - Conflicts

Arm	Traffic Stream	Movement	Destination traffic stream	Description	Controlling type	Controlling from traffic stream	Controlling to traffic stream	Percentage opposing (%)	Slope coefficient	Upstream signals visible	Conflict shift	Conflict duration

B1	1	1	Cx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.09		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0
		2	Ax/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.08		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.20		0	0
				T-junction opposing flow	TrafficStreamMovement	C2/1	Ax/1	100	0.13		0	0
				T-junction opposing flow	TrafficStreamMovement	C1/1	Bx/1	100	0.29		0	0
C1	1	1	Bx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.22		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
(ALL)	(untitled)				Farside	3.00	2.00	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	D	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(ALL)	11000

Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	100	100		0.00		

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
1	Library		✓	TrafficStream	Two-Way	A1/1	A1/1	Ax/1	Two-Way	B1/1	B1/1	Bx/1	Two-Way	C2/1	C1/1	Cx/1	✓

T-Junction Majors

T-Junction	Left Carriageway Width (m)	Right Carriageway Width (m)	Kerbed Central Reserve Width (m)	Width for C-B traffic (m)	Visibility for C-B traffic (m)
1	6.00	6.00	0.00	2.20	0.00

T-Junction Minors

T-Junction	B-C Lane Width (m)	B-A Lane Width (m)	B-C Visibility (m)	B-A Visibility (m)
1	2.20	2.20	0.00	0.00

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
1	574	0.09	0.22	440	0.08	0.20	0.13	0.29	574	0.22	0.22

Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1		✓	✓	Lane Balancing			✓			✓	1.25		

Normal Input Flows (Veh/hr)

From	To 1	To 2	To 3
1	0	232	232
2	379	0	270
3	179	171	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
1	1		A1/1	Ax/1	#0000FF
	2		B1/1	Bx/1	#FF0000
	3		C2/1, C1/1	Cx/1	#00FF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (Veh/hr)
1	1		1	2	A1/1, Bx/1	Normal	232
	2		1	3	A1/1, Cx/1	Normal	232
	3		2	3	B1/1, Cx/1	Normal	270
	4		2	1	B1/1, Ax/1	Normal	379
	5		3	1	C2/1, Ax/1	Normal	179
	6		3	2	C1/1, Bx/1	Normal	171

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (Veh)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	A1	1	42	137	464	9999	10	42.75	12.14	69.81	78.24	5.41	83.65
	Ax	1	31	223	558	1800	100	0.45	0.07	0.40	0.99	0.00	0.99
	B1	1	68	47	649	1800	52	21.25	13.88	79.80	54.41	6.09	60.50
	Bx	1	22	347	403	1800	100	0.97	5.60	32.20	1.54	1.32	2.86
	C1	1	59	68	171	1800	15	47.97	4.42	88.33	32.35	2.14	34.49
	C2	1	37	172	179	1800	25	23.63	3.14	62.80	16.68	1.83	18.52
	Cx	1	28	259	502	1800	100	0.93	5.61	32.26	1.83	1.32	3.15

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Calculated sat flow (Veh/hr)	Calculated capacity (Veh/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
17:00-18:00	A1	1	464	464	0		9999	1100	42		137	0.00	10	11
	Ax	1	558	558	0		1800	1800	31		223	0.57	100	100
	B1	1	649	649	0		1800	954	68		47	0.00	52	53
	Bx	1	403	403	0		1800	1800	22		347	1.28	100	100
	C1	1	171	171	0		1800	288	59		68	0.00	15	16
	C2	1	179	179	0		1800	486	37		172	0.00	25	27
	Cx	1	502	502	0		1800	1800	28		259	0.83	100	100

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	A1	1	12.00	42.75	5.36	0.15	78.24	78.24	92.98	425.93	5.51	5.41	5.41
	Ax	1	12.00	0.45	0.00	0.07	0.99	0.99	0.00	0.00	0.00	0.00	0.00
	B1	1	12.00	21.25	3.11	0.72	54.41	54.41	74.88	460.42	25.56	6.09	6.09
	Bx	1	12.00	0.97	0.08	0.03	1.54	1.54	26.12	104.10	1.16	1.32	1.32
	C1	1	3.60	47.97	1.85	0.43	32.35	32.35	99.59	155.28	15.01	2.14	2.14
	C2	1	3.60	23.63	1.07	0.11	16.68	16.68	81.68	138.58	7.62	1.83	1.83
	Cx	1	12.00	0.93	0.08	0.05	1.83	1.83	20.94	103.18	1.94	1.32	1.32

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (Veh)	Mean max queue (Veh)	Max queue storage (Veh)	Utilised storage (%)	Average storage excess queue (Veh)	Average limit excess queue (Veh)	Excess queue penalty (£ per hr)	Max end of green queue (Veh)	Max end of red queue (Veh)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))	Estimated blocking
17:00-18:00	A1	1	0.00	12.14	17.39	69.81	0.00	0.00	0.00	0.15	11.62	0.00	0.00	0.00	
	Ax	1	0.00	0.07	17.39	0.40	0.00	0.00	0.00			6.00	0.00	6.00	
	B1	1	0.00	13.88	17.39	79.80	0.00	0.00	0.00	0.72	9.19	0.00	0.00	0.00	
	Bx	1	0.00	5.60	17.39	32.20	0.00	0.00	0.00			57.00	0.00	57.00	
	C1	1	0.00	4.42	5.00	88.33	0.00	0.00	0.00	0.43	4.42	0.00	0.00	0.00	
	C2	1	0.00	3.14	5.00	62.80	0.00	0.00	0.00	0.11	3.14	0.00	0.00	0.00	
	Cx	1	0.00	5.61	17.39	32.26	0.00	0.00	0.00			29.00	0.00	29.00	

Traffic Stream Results: Journey times

Time Segment	Arm	Traffic Stream	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
17:00-18:00	A1	1	46.40	7.06	6.58	54.75
	Ax	1	55.80	1.93	28.92	12.45
	B1	1	64.90	5.99	10.83	33.25
	Bx	1	40.30	1.45	27.76	12.97
	C1	1	5.13	2.45	2.09	51.57
	C2	1	5.37	1.35	3.97	27.23
	Cx	1	50.20	1.80	27.85	12.93

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	Mean Max Queue EoTS (Veh)	Max End of Green Queue EoTS (Veh)	Max End of Red Queue EoTS (Veh)	PCU Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
17:00-18:00	A1	1	0.00	0.00	✓	0.00	12.14	0.15	11.62	1.00	0.00	83.65	83.65
	Ax	1	0.00	0.00	✓	0.00	0.07			1.00	0.00	0.99	0.99
	B1	1	0.00	0.00	✓	0.00	13.88	0.72	9.19	1.00	0.00	60.50	60.50

	Bx	1	0.00	0.00	✓	0.00	5.60			1.00	0.00	2.86	2.86
	C1	1	0.00	0.00	✓	0.00	4.42	0.43	4.42	1.00	0.00	34.49	34.49
	C2	1	0.00	0.00	✓	0.00	3.14	0.11	3.14	1.00	0.00	18.52	18.52
	Cx	1	0.00	0.00	✓	0.00	5.61			1.00	0.00	3.15	3.15

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
17:00-18:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
17:00-18:00	(ALL)	(ALL)	0	0	0		11000	770	0		Unrestricted	0.00	7	7

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Uniform delay (Ped-min/min)	Random plus oversat delay (Ped-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)
17:00-18:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Average storage excess queue (Ped)	Average limit excess queue (Ped)	Excess queue penalty (£ per hr)
17:00-18:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Journey times

Time Segment	Crossing	Side	Distance travelled (Ped-km/hr)	Time spent (Ped-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
17:00-18:00	(ALL)	(ALL)	0.00	0.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
17:00-18:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-min/min)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
12	20/12/2018 09:34:57	20/12/2018 09:34:58	17:00	100	204.16	13.10	68.03	B1/1	0	0	B1/1	Ax/1	B1/1	✓

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	68	0	2926	402	16.12	186.05	18.11	204.16

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
17:00-18:00	0	0	42	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))	Effective green (s (per cycle))
17:00-18:00	2926	2926	0		68		47	444	449

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	11.00	16.12	11.54	1.56	186.05	186.05	49.36	1387.49	56.82	18.11	18.11

Network Results: Queues and blocking

Time Segment	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))
17:00-18:00	88.33	0.00	92.00	0.00	92.00

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
17:00-18:00	268.10	22.04	12.17

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	PCU Factor	Cost of traffic penalties (£ per hr)	Controller stream penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
17:00-18:00	0.00	0.00	✓	0.00	1.00	0.00	0.00	204.16	204.16

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

From	To 1	To 2	To 3
1	0.0	68.2	68.3
2	45.7	0.0	45.6
3	39.7	63.9	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (Veh/hr)	Normal journey time (s)	Calculated Total Flow (Veh/hr)	Avg journey time (s)
1	1	2	232	68.22	232	68.22
2	1	3	232	68.30	232	68.30
3	2	3	270	45.64	270	45.64
4	2	1	379	45.70	379	45.70
5	3	1	179	39.68	179	39.68
6	3	2	171	63.86	171	63.86

Final Prediction Table

Traffic Stream Results

				SIGNALS			FLOWS		PERFORMANCE				PER PCU			QUEUES		WEIGHTS		PENALTIES	P.I.
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Second phase	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (Veh)	Max end of red queue (Veh)	Delay weighting multiplier (%)	Stop weighting multiplier (%)	Cost of traffic penalties (£ per hr)	P.I.
A1	1	Rathmullen Road (E)	2	1	A		464	9999	10	0.00	42	137	54.75	42.75	92.98	12.14	11.62	100	100	0.00	83.65
Ax	1	Rathmullen Road (E)					558	1800	100	6.00	31	223	12.45	0.45	0.00	0.07		100	100	0.00	0.99
B1	1	Marleys Lane	2	1	C		649	1800	52	0.00	68	47	33.25	21.25	74.88	13.88	9.19	100	100	0.00	60.50
Bx	1	Marleys Lane					403	1800	100	57.00	22	347	12.97	0.97	26.12	5.60		100	100	0.00	2.86
C1	1	Rathmullen Road (W)	2	1	B		171	1800	15	0.00	59	68	51.57	47.97	99.59	4.42	4.42	100	100	0.00	34.49
C2	1	Rathmullen Road (W)	2	1	A	B	179	1800	25	0.00	37	172	27.23	23.63	81.68	3.14	3.14	100	100	0.00	18.52
Cx	1	Rathmullen Road (W)					502	1800	100	29.00	28	259	12.93	0.93	20.94	5.61		100	100	0.00	3.15

Pedestrian Crossing Results

Pedestrian	Side	Name	Traffic node	SIGNALS Controller stream	SIGNALS Phase	FLOWS Calculated Flow Entering (Ped/hr)	FLOWS Calculated sat flow (Ped/hr)	PERFORMANCE Actual green (s (per cycle))	PERFORMANCE Degree of saturation (%)	PERFORMANCE Practical reserve capacity	PER PED Journey Time (s)	PER PED Mean Delay per Ped (s)	QUEUES Mean max queue (Ped)	WEIGHTS Delay weighting (%)	PENALTIES Cost of traffic penalties (£ per hr)	P.I.
(ALL)	(ALL)	(untitled)		1	D	0	11000	7	0	Unrestricted	0.00	0.00	0.00	100	0.00	0.00

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	268.10	22.04	12.17	11.54	1.56	186.05	18.11	0.00	204.16
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	268.10	22.04	12.17	11.54	1.56	186.05	18.11	0.00	204.16

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

A13 - 2028 - BASE + DEV + COM(PHASES 1 AND 2) - AM
D13 - 2028 - BASE + DEV + COM(PHASES 1 AND 2) - AM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-min/min)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
13	20/12/2018 09:35:01	20/12/2018 09:35:02	08:00	100	219.01	14.13	73.21	B1/1	0	0	B1/1	Bx/1	B1/1	✓

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2028 - BASE + DEV + COM(PHASES 1 AND 2) - AM		D13	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2028 - BASE + DEV + COM(PHASES 1 AND 2) - AM				08:00	

Network Options

Network timings

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

Signals options

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

Advanced

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

Traffic options

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

Advanced

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

Normal Traffic parameters

Dispersion type	Dispersion coefficient
Default	35

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Bus	1.00	70	15	0.47	30	85

Tram parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Tram	1.00	70	15	0.47	30	85

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order
Hill Climb (Fast)	15, 40, -1, 15, 40, 1, -1, 1	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05		✓	1

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
2		

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
A1			2
Ax			
B1			2
Bx			
C1			2
C2			2

Cx			

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
A1	1	Rahtmullen Road (E)			100.00	✓	Sum of lanes	9999	✓		Normal	
Ax	1	Rathmullen Road (E)			100.00	✓	Sum of lanes	1800			Normal	
B1	1	Marleys Lane			100.00	✓	Sum of lanes	1800	✓	✓	Normal	
Bx	1	Marleys Lane			100.00	✓	Sum of lanes	1800			Normal	
C1	1	Rathmullen Road (W)			30.00	✓	Sum of lanes	1800	✓	✓	Normal	
C2	1	Rathmullen Road (W)			30.00	✓	Sum of lanes	1800	✓		Normal	
Cx	1	Rathmullen Road (W)			100.00	✓	Sum of lanes	1800			Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Saturation flow (PCU/hr)
A1	1	1				9999
Ax	1	1				1800
B1	1	1				1800
Bx	1	1				1800
C1	1	1				1800
C2	1	1				1800
Cx	1	1				1800

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
A1	1	NetworkDefault	100	100	100		0.00		
Ax	1	NetworkDefault	100	100	100		0.00		
B1	1	NetworkDefault	100	100	100		0.00		
Bx	1	NetworkDefault	100	100	100		0.00		
C1	1	Flare	100	100	100		0.00		
C2	1	Flare	100	100	100		0.00		
Cx	1	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
(ALL)	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100

Normal - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	1	100	100

Flows

Arm	Traffic Stream	Total Flow (Veh/hr)	Normal Flow (Veh/hr)
A1	1	456	456
Ax	1	523	523
B1	1	369	369
Bx	1	635	635
C1	1	405	405
C2	1	346	346
Cx	1	418	418

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled	Second phase
A1	1	1	A		
B1	1	1	C		
C1	1	1	B		
C2	1	1	A	✓	B

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
A1	1	12.00	30.00
B1	1	12.00	30.00
C1	1	3.60	30.00
C2	1	3.60	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	1	1	B1/1	Ax/1	12.00	30.00	✓	Offside	45.00
Bx	1	1	A1/1	Bx/1	12.00	30.00	✓	Nearside	20.00
Cx	1	1	A1/1	Cx/1	12.00	30.00	✓	Straight	Straight Movement
Ax	1	2	C2/1	Ax/1	12.00	30.00	✓	Straight	Straight Movement
Bx	1	2	C1/1	Bx/1	12.00	30.00	✓	Offside	35.00
Cx	1	2	B1/1	Cx/1	12.00	30.00	✓	Nearside	20.00

Give Way Data

Arm	Traffic Stream	Opposed traffic	Use Step-wise Opposed Turn Model	Visibility restricted
(ALL)	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 (%)
B1	1	1	Cx/1	574	1800	100
		2	Ax/1	440	1800	100
C1	1	1	Bx/1	574	1800	100

Give Way Data - Movements - Conflicts

Arm	Traffic Stream	Movement	Destination traffic stream	Description	Controlling type	Controlling from traffic stream	Controlling to traffic stream	Percentage opposing (%)	Slope coefficient	Upstream signals visible	Conflict shift	Conflict duration
B1	1	1	Cx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.09		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0
		2	Ax/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.08		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.20		0	0
				T-junction opposing flow	TrafficStreamMovement	C2/1	Ax/1	100	0.13		0	0
				T-junction opposing flow	TrafficStreamMovement	C1/1	Bx/1	100	0.29		0	0
C1	1	1	Bx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.22		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
(ALL)	(untitled)				Farside	3.00	2.00	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	D	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(ALL)	11000

Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	100	100		0.00		

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
1	Library		✓	TrafficStream	Two-Way	A1/1	A1/1	Ax/1	Two-Way	B1/1	B1/1	Bx/1	Two-Way	C2/1	C1/1	Cx/1	✓

T-Junction Majors

T-Junction	Left Carriageway Width (m)	Right Carriageway Width (m)	Kerbed Central Reserve Width (m)	Width for C-B traffic (m)	Visibility for C-B traffic (m)
1	6.00	6.00	0.00	2.20	0.00

T-Junction Minors

T-Junction	B-C Lane Width (m)	B-A Lane Width (m)	B-C Visibility (m)	B-A Visibility (m)
1	2.20	2.20	0.00	0.00

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
1	574	0.09	0.22	440	0.08	0.20	0.13	0.29	574	0.22	0.22

Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1		✓	✓	Lane Balancing			✓			✓	1.25		

Normal Input Flows (Veh/hr)

From	To 1	To 2	To 3
1	0	230	226
2	177	0	192
3	346	405	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
1	1		A1/1	Ax/1	#0000FF
	2		B1/1	Bx/1	#FF0000
	3		C2/1, C1/1	Cx/1	#00FF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (Veh/hr)
1	1		1	2	A1/1, Bx/1	Normal	230
	2		1	3	A1/1, Cx/1	Normal	226
	3		2	3	B1/1, Cx/1	Normal	192
	4		2	1	B1/1, Ax/1	Normal	177
	5		3	1	C2/1, Ax/1	Normal	346
	6		3	2	C1/1, Bx/1	Normal	405

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (Veh)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	A1	1	22	360	456	9999	20	32.95	10.42	59.90	59.27	4.63	63.90
	Ax	1	29	244	523	1800	100	0.41	0.06	0.34	0.84	0.00	0.84
	B1	1	73	37	369	1800	27	42.13	10.20	58.66	61.32	4.53	65.85
	Bx	1	35	183	635	1800	100	0.81	4.72	27.11	2.03	0.98	3.01
	C1	1	73	38	405	1800	30	39.07	8.70	174.05	62.42	4.82	67.24
	C2	1	37	171	346	1800	50	10.05	3.57	71.36	13.71	2.49	16.20
	Cx	1	23	331	418	1800	100	0.66	4.56	26.22	1.08	0.87	1.96

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Calculated sat flow (Veh/hr)	Calculated capacity (Veh/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
08:00-09:00	A1	1	456	456	0		9999	2100	22		360	0.00	20	21
	Ax	1	523	523	0		1800	1800	29		244	0.53	100	100
	B1	1	369	369	0		1800	504	73		37	0.00	27	28
	Bx	1	635	635	0		1800	1800	35		183	0.99	100	100
	C1	1	405	405	0		1800	558	73		38	0.00	30	31
	C2	1	346	346	0		1800	936	37		171	0.00	50	52
	Cx	1	418	418	0		1800	1800	23		331	1.03	100	100

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	A1	1	12.00	32.95	4.14	0.03	59.27	59.27	81.05	368.53	1.08	4.63	4.63
	Ax	1	12.00	0.41	0.00	0.06	0.84	0.84	0.00	0.00	0.00	0.00	0.00
	B1	1	12.00	42.13	3.34	0.98	61.32	61.32	97.81	326.60	34.31	4.53	4.53
	Bx	1	12.00	0.81	0.05	0.10	2.03	2.03	12.34	74.91	3.45	0.98	0.98
	C1	1	3.60	39.07	3.46	0.94	62.42	62.42	94.90	351.18	33.15	4.82	4.82
	C2	1	3.60	10.05	0.86	0.11	13.71	13.71	57.44	191.00	7.75	2.49	2.49
	Cx	1	12.00	0.66	0.04	0.04	1.08	1.08	16.68	68.46	1.26	0.87	0.87

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (Veh)	Mean max queue (Veh)	Max queue storage (Veh)	Utilised storage (%)	Average storage excess queue (Veh)	Average limit excess queue (Veh)	Excess queue penalty (£ per hr)	Max end of green queue (Veh)	Max end of red queue (Veh)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))	Estimated blocking
08:00-09:00	A1	1	0.00	10.42	17.39	59.90	0.00	0.00	0.00	0.03	10.04	0.00	0.00	0.00	
	Ax	1	0.00	0.06	17.39	0.34	0.00	0.00	0.00			7.00	0.00	7.00	
	B1	1	0.00	10.20	17.39	58.66	0.00	0.00	0.00	0.98	8.36	0.00	0.00	0.00	
	Bx	1	0.00	4.72	17.39	27.11	0.00	0.00	0.00			35.00	0.00	35.00	
	C1	1	0.00	8.70	5.00	174.05	0.79	0.00	0.00	0.94	8.70	0.00	0.00	0.00	
	C2	1	0.00	3.57	5.00	71.36	0.00	0.00	0.00	0.11	3.57	0.00	0.00	0.00	
	Cx	1	0.00	4.56	17.39	26.22	0.00	0.00	0.00			44.00	0.00	44.00	

Traffic Stream Results: Journey times

Time Segment	Arm	Traffic Stream	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	A1	1	45.60	5.69	8.01	44.95
	Ax	1	52.30	1.80	29.01	12.41
	B1	1	36.90	5.55	6.65	54.13
	Bx	1	63.50	2.26	28.10	12.81
	C1	1	12.15	4.80	2.53	42.67
	C2	1	10.38	1.31	7.91	13.65
	Cx	1	41.80	1.47	28.44	12.66

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	Mean Max Queue EoTS (Veh)	Max End of Green Queue EoTS (Veh)	Max End of Red Queue EoTS (Veh)	PCU Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	A1	1	0.00	0.00	✓	0.00	10.42	0.03	10.04	1.00	0.00	63.90	63.90
	Ax	1	0.00	0.00	✓	0.00	0.06			1.00	0.00	0.84	0.84
	B1	1	0.00	0.00	✓	0.00	10.21	0.99	8.37	1.00	0.00	65.85	65.85

	Bx	1	0.00	0.00	✓	0.00	4.72			1.00	0.00	3.01	3.01
	C1	1	0.00	0.00	✓	0.00	8.71	0.95	8.71	1.00	0.00	67.24	67.24
	C2	1	0.00	0.00	✓	0.00	3.57	0.11	3.57	1.00	0.00	16.20	16.20
	Cx	1	0.00	0.00	✓	0.00	4.56			1.00	0.00	1.96	1.96

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
08:00-09:00	(ALL)	(ALL)	0	0	0		11000	770	0		Unrestricted	0.00	7	7

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Uniform delay (Ped-min/min)	Random plus oversat delay (Ped-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)
08:00-09:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Average storage excess queue (Ped)	Average limit excess queue (Ped)	Excess queue penalty (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Journey times

Time Segment	Crossing	Side	Distance travelled (Ped-km/hr)	Time spent (Ped-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	(ALL)	(ALL)	0.00	0.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-min/min)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
13	20/12/2018 09:35:01	20/12/2018 09:35:02	08:00	100	219.01	14.13	73.21	B1/1	0	0	B1/1	Bx/1	B1/1	✓

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	73	0	3152	427	16.14	200.68	18.33	219.01

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	0	0	42	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))	Effective green (s (per cycle))
08:00-09:00	3152	3152	0		73		37	469	474

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	10.00	16.14	11.89	2.25	200.68	200.68	46.37	1380.68	81.01	18.33	18.33

Network Results: Queues and blocking

Time Segment	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))
08:00-09:00	174.05	0.00	86.00	0.00	86.00

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
08:00-09:00	262.63	22.89	11.48

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	PCU Factor	Cost of traffic penalties (£ per hr)	Controller stream penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	0.00	0.00	✓	0.00	1.00	0.00	0.00	219.01	219.01

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

From	To 1	To 2	To 3
1	0.0	58.2	57.9
2	66.5	0.0	66.4
3	26.1	55.2	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (Veh/hr)	Normal journey time (s)	Calculated Total Flow (Veh/hr)	Avg journey time (s)
1	1	2	230	58.23	230	58.23
2	1	3	226	57.91	226	57.91
3	2	3	192	66.43	192	66.43
4	2	1	177	66.54	177	66.54
5	3	1	346	26.06	346	26.06
6	3	2	405	55.22	405	55.22

Final Prediction Table

Traffic Stream Results

				SIGNALS			FLOWS		PERFORMANCE				PER PCU			QUEUES		WEIGHTS		PENALTIES	P.I.
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Second phase	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	Journey Time (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (Veh)	Max end of red queue (Veh)	Delay weighting multiplier (%)	Stop weighting multiplier (%)	Cost of traffic penalties (£ per hr)	P.I.
A1	1	Rathmullen Road (E)	2	1	A		456	9999	20	0.00	22	360	44.95	32.95	81.05	10.42	10.04	100	100	0.00	63.90
Ax	1	Rathmullen Road (E)					523	1800	100	7.00	29	244	12.41	0.41	0.00	0.06		100	100	0.00	0.84
B1	1	Marleys Lane	2	1	C		369	1800	27	0.00	73	37	54.13	42.13	97.81	10.20	8.36	100	100	0.00	65.85
Bx	1	Marleys Lane					635	1800	100	35.00	35	183	12.81	0.81	12.34	4.72		100	100	0.00	3.01
C1	1	Rathmullen Road (W)	2	1	B		405 <	1800	30	0.00	73	38	42.67	39.07	94.90	8.70 +	8.70	100	100	0.00	67.24
C2	1	Rathmullen Road (W)	2	1	A	B	346	1800	50	0.00	37	171	13.65	10.05	57.44	3.57	3.57	100	100	0.00	16.20
Cx	1	Rathmullen Road (W)					418	1800	100	44.00	23	331	12.66	0.66	16.68	4.56		100	100	0.00	1.96

Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE			PER PED		QUEUES	WEIGHTS	PENALTIES	P.I.
Pedestrian	Side	Name	Traffic node	Controller stream	Phase	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Degree of saturation (%)	Practical reserve capacity	Journey Time (s)	Mean Delay per Ped (s)	Mean max queue (Ped)	Delay weighting (%)	Cost of traffic penalties (£ per hr)	P.I.
(ALL)	(ALL)	(untitled)		1	D	0	11000	7	0	Unrestricted	0.00	0.00	0.00	100	0.00	0.00

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	262.63	22.89	11.48	11.89	2.25	200.68	18.33	0.00	219.01
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	262.63	22.89	11.48	11.89	2.25	200.68	18.33	0.00	219.01

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

A14 - 2028 - BASE + DEV + COM(PHASES 1 AND 2) - PM
D14 - 2028 - BASE + DEV + COM(PHASES 1 AND 2) - PM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-min/min)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
14	20/12/2018 09:35:05	20/12/2018 09:35:06	17:00	100	234.06	15.03	73.72	B1/1	0	0	B1/1	Cx/1	B1/1	✓

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2028 - BASE + DEV + COM(PHASES 1 AND 2) - PM		D14	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2028 - BASE + DEV + COM(PHASES 1 AND 2) - PM				17:00	

Network Options

Network timings

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

Signals options

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

Advanced

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

Traffic options

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

Advanced

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

Normal Traffic parameters

Dispersion type	Dispersion coefficient
Default	35

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Bus	1.00	70	15	0.47	30	85

Tram parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Tram	1.00	70	15	0.47	30	85

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order
Hill Climb (Fast)	15, 40, -1, 15, 40, 1, -1, 1	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05		✓	1

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
2		

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
A1			2
Ax			
B1			2
Bx			
C1			2
C2			2

Cx			

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
A1	1	Rahtmullen Road (E)			100.00	✓	Sum of lanes	9999	✓		Normal	
Ax	1	Rathmullen Road (E)			100.00	✓	Sum of lanes	1800			Normal	
B1	1	Marleys Lane			100.00	✓	Sum of lanes	1800	✓	✓	Normal	
Bx	1	Marleys Lane			100.00	✓	Sum of lanes	1800			Normal	
C1	1	Rathmullen Road (W)			30.00	✓	Sum of lanes	1800	✓	✓	Normal	
C2	1	Rathmullen Road (W)			30.00	✓	Sum of lanes	1800	✓		Normal	
Cx	1	Rathmullen Road (W)			100.00	✓	Sum of lanes	1800			Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Saturation flow (PCU/hr)
A1	1	1				9999
Ax	1	1				1800
B1	1	1				1800
Bx	1	1				1800
C1	1	1				1800
C2	1	1				1800
Cx	1	1				1800

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
A1	1	NetworkDefault	100	100	100		0.00		
Ax	1	NetworkDefault	100	100	100		0.00		
B1	1	NetworkDefault	100	100	100		0.00		
Bx	1	NetworkDefault	100	100	100		0.00		
C1	1	Flare	100	100	100		0.00		
C2	1	Flare	100	100	100		0.00		
Cx	1	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
(ALL)	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100

Normal - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	1	100	100

Flows

Arm	Traffic Stream	Total Flow (Veh/hr)	Normal Flow (Veh/hr)
A1	1	505	505
Ax	1	582	582
B1	1	690	690
Bx	1	427	427
C1	1	195	195
C2	1	203	203
Cx	1	584	584

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled	Second phase
A1	1	1	A		
B1	1	1	C		
C1	1	1	B		
C2	1	1	A	✓	B

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
A1	1	12.00	30.00
B1	1	12.00	30.00
C1	1	3.60	30.00
C2	1	3.60	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	1	1	B1/1	Ax/1	12.00	30.00	✓	Offside	45.00
Bx	1	1	A1/1	Bx/1	12.00	30.00	✓	Nearside	20.00
Cx	1	1	A1/1	Cx/1	12.00	30.00	✓	Straight	Straight Movement
Ax	1	2	C2/1	Ax/1	12.00	30.00	✓	Straight	Straight Movement
Bx	1	2	C1/1	Bx/1	12.00	30.00	✓	Offside	35.00
Cx	1	2	B1/1	Cx/1	12.00	30.00	✓	Nearside	20.00

Give Way Data

Arm	Traffic Stream	Opposed traffic	Use Step-wise Opposed Turn Model	Visibility restricted
(ALL)	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 (%)
B1	1	1	Cx/1	574	1800	100
		2	Ax/1	440	1800	100
C1	1	1	Bx/1	574	1800	100

Give Way Data - Movements - Conflicts

Arm	Traffic Stream	Movement	Destination traffic stream	Description	Controlling type	Controlling from traffic stream	Controlling to traffic stream	Percentage opposing (%)	Slope coefficient	Upstream signals visible	Conflict shift	Conflict duration
B1	1	1	Cx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.09		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0
		2	Ax/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.08		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.20		0	0
				T-junction opposing flow	TrafficStreamMovement	C2/1	Ax/1	100	0.13		0	0
				T-junction opposing flow	TrafficStreamMovement	C1/1	Bx/1	100	0.29		0	0
C1	1	1	Bx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.22		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
(ALL)	(untitled)				Farside	3.00	2.00	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	D	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(ALL)	11000

Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	100	100		0.00		

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
1	Library		✓	TrafficStream	Two-Way	A1/1	A1/1	Ax/1	Two-Way	B1/1	B1/1	Bx/1	Two-Way	C2/1	C1/1	Cx/1	✓

T-Junction Majors

T-Junction	Left Carriageway Width (m)	Right Carriageway Width (m)	Kerbed Central Reserve Width (m)	Width for C-B traffic (m)	Visibility for C-B traffic (m)
1	6.00	6.00	0.00	2.20	0.00

T-Junction Minors

T-Junction	B-C Lane Width (m)	B-A Lane Width (m)	B-C Visibility (m)	B-A Visibility (m)
1	2.20	2.20	0.00	0.00

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
1	574	0.09	0.22	440	0.08	0.20	0.13	0.29	574	0.22	0.22

Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1		✓	✓	Lane Balancing			✓			✓	1.25		

Normal Input Flows (Veh/hr)

From	To 1	To 2	To 3
1	0	232	273
2	379	0	311
3	203	195	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
1	1		A1/1	Ax/1	#0000FF
	2		B1/1	Bx/1	#FF0000
	3		C2/1, C1/1	Cx/1	#00FF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (Veh/hr)
1	1		1	2	A1/1, Bx/1	Normal	232
	2		1	3	A1/1, Cx/1	Normal	273
	3		2	3	B1/1, Cx/1	Normal	311
	4		2	1	B1/1, Ax/1	Normal	379
	5		3	1	C2/1, Ax/1	Normal	203
	6		3	2	C1/1, Bx/1	Normal	195

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (Veh)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	A1	1	46	118	505	9999	10	43.12	13.24	76.13	85.89	5.90	91.79
	Ax	1	32	209	582	1800	100	0.48	0.08	0.44	1.10	0.00	1.10
	B1	1	74	36	690	1800	51	24.00	15.78	90.72	65.32	6.95	72.27
	Bx	1	24	322	427	1800	100	0.89	5.61	32.23	1.50	1.25	2.75
	C1	1	64	57	195	1800	16	48.75	5.04	100.88	37.50	2.47	39.97
	C2	1	40	148	203	1800	26	23.52	3.52	70.37	18.83	2.09	20.92
	Cx	1	32	208	584	1800	100	1.40	7.14	41.05	3.23	2.03	5.27

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Calculated sat flow (Veh/hr)	Calculated capacity (Veh/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
17:00-18:00	A1	1	505	505	0		9999	1100	46		118	0.00	10	11
	Ax	1	582	582	0		1800	1800	32		209	0.55	100	100
	B1	1	690	690	0		1800	936	74		36	0.00	51	52
	Bx	1	427	427	0		1800	1800	24		322	1.26	100	100
	C1	1	195	195	0		1800	306	64		57	0.00	16	17
	C2	1	203	203	0		1800	504	40		148	0.00	26	28
	Cx	1	584	584	0		1800	1800	32		208	0.82	100	100

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	A1	1	12.00	43.12	5.85	0.19	85.89	85.89	93.20	463.68	6.98	5.90	5.90
	Ax	1	12.00	0.48	0.00	0.08	1.10	1.10	0.00	0.00	0.00	0.00	0.00
	B1	1	12.00	24.00	3.58	1.02	65.32	65.32	80.34	518.15	36.21	6.95	6.95
	Bx	1	12.00	0.89	0.07	0.04	1.50	1.50	23.32	98.23	1.33	1.25	1.25
	C1	1	3.60	48.75	2.09	0.55	37.50	37.50	101.06	177.83	19.24	2.47	2.47
	C2	1	3.60	23.52	1.19	0.14	18.83	18.83	82.19	157.22	9.63	2.09	2.09
	Cx	1	12.00	1.40	0.15	0.08	3.23	3.23	27.78	159.46	2.80	2.03	2.03

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (Veh)	Mean max queue (Veh)	Max queue storage (Veh)	Utilised storage (%)	Average storage excess queue (Veh)	Average limit excess queue (Veh)	Excess queue penalty (£ per hr)	Max end of green queue (Veh)	Max end of red queue (Veh)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))	Estimated blocking
17:00-18:00	A1	1	0.00	13.24	17.39	76.13	0.00	0.00	0.00	0.19	12.68	0.00	0.00	0.00	
	Ax	1	0.00	0.08	17.39	0.44	0.00	0.00	0.00			6.00	0.00	6.00	
	B1	1	0.00	15.78	17.39	90.72	0.00	0.00	0.00	1.02	10.22	0.00	0.00	0.00	
	Bx	1	0.00	5.61	17.39	32.23	0.00	0.00	0.00			55.00	0.00	55.00	
	C1	1	0.00	5.04	5.00	100.88	0.00	0.00	0.00	0.55	5.04	0.00	0.00	0.00	
	C2	1	0.00	3.52	5.00	70.37	0.00	0.00	0.00	0.14	3.52	0.00	0.00	0.00	
	Cx	1	0.00	7.14	17.39	41.05	0.00	0.00	0.00			29.00	0.00	29.00	

Traffic Stream Results: Journey times

Time Segment	Arm	Traffic Stream	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
17:00-18:00	A1	1	50.50	7.73	6.53	55.12
	Ax	1	58.20	2.02	28.85	12.48
	B1	1	69.00	6.90	10.00	36.00
	Bx	1	42.70	1.53	27.92	12.89
	C1	1	5.85	2.84	2.06	52.35
	C2	1	6.09	1.53	3.98	27.12
	Cx	1	58.40	2.17	26.86	13.40

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	Mean Max Queue EoTS (Veh)	Max End of Green Queue EoTS (Veh)	Max End of Red Queue EoTS (Veh)	PCU Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
17:00-18:00	A1	1	0.00	0.00	✓	0.00	13.24	0.19	12.68	1.00	0.00	91.79	91.79
	Ax	1	0.00	0.00	✓	0.00	0.08			1.00	0.00	1.10	1.10
	B1	1	0.00	0.00	✓	0.00	15.78	1.03	10.23	1.00	0.00	72.27	72.27
	Bx	1	0.00	0.00	✓	0.00	5.61			1.00	0.00	2.75	2.75

	C1	1	0.00	0.00	✓	0.00	5.05	0.55	5.05	1.00	0.00	39.97	39.97
	C2	1	0.00	0.00	✓	0.00	3.52	0.14	3.52	1.00	0.00	20.92	20.92
	Cx	1	0.00	0.00	✓	0.00	7.14			1.00	0.00	5.27	5.27

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
17:00-18:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
17:00-18:00	(ALL)	(ALL)	0	0	0		11000	770	0		Unrestricted	0.00	7	7

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Uniform delay (Ped-min/min)	Random plus oversat delay (Ped-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)
17:00-18:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Average storage excess queue (Ped)	Average limit excess queue (Ped)	Excess queue penalty (£ per hr)
17:00-18:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Journey times

Time Segment	Crossing	Side	Distance travelled (Ped-km/hr)	Time spent (Ped-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
17:00-18:00	(ALL)	(ALL)	0.00	0.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
17:00-18:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-min/min)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
14	20/12/2018 09:35:05	20/12/2018 09:35:06	17:00	100	234.06	15.03	73.72	B1/1	0	0	B1/1	Cx/1	B1/1	✓

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	74	0	3186	403	16.98	213.37	20.70	234.06

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
17:00-18:00	0	0	42	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))	Effective green (s (per cycle))
17:00-18:00	3186	3186	0		74		36	445	450

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	10.95	16.98	12.94	2.09	213.37	213.37	51.81	1574.56	76.18	20.70	20.70

Network Results: Queues and blocking

Time Segment	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))
17:00-18:00	100.88	0.00	90.00	0.00	90.00

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
17:00-18:00	290.74	24.72	11.76

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	PCU Factor	Cost of traffic penalties (£ per hr)	Controller stream penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
17:00-18:00	0.00	0.00	✓	0.00	1.00	0.00	0.00	234.06	234.06

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

From	To 1	To 2	To 3
1	0.0	68.5	69.6
2	48.5	0.0	48.5
3	39.6	64.7	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (Veh/hr)	Normal journey time (s)	Calculated Total Flow (Veh/hr)	Avg journey time (s)
1	1	2	232	68.50	232	68.50
2	1	3	273	69.56	273	69.56
3	2	3	311	48.49	311	48.49
4	2	1	379	48.48	379	48.48
5	3	1	203	39.60	203	39.60
6	3	2	195	64.66	195	64.66

Final Prediction Table

Traffic Stream Results

				SIGNALS			FLOWS		PERFORMANCE				PER PCU			QUEUES		WEIGHTS		PENALTIES	P.I.
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Second phase	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (Veh)	Max end of red queue (Veh)	Delay weighting multiplier (%)	Stop weighting multiplier (%)	Cost of traffic penalties (£ per hr)	P.I.
A1	1	Rathmullen Road (E)	2	1	A		505	9999	10	0.00	46	118	55.12	43.12	93.20	13.24	12.68	100	100	0.00	91.79
Ax	1	Rathmullen Road (E)					582	1800	100	6.00	32	209	12.48	0.48	0.00	0.08		100	100	0.00	1.10
B1	1	Marleys Lane	2	1	C		690	1800	51	0.00	74	36	36.00	24.00	80.34	15.78	10.22	100	100	0.00	72.27
Bx	1	Marleys Lane					427	1800	100	55.00	24	322	12.89	0.89	23.32	5.61		100	100	0.00	2.75
C1	1	Rathmullen Road (W)	2	1	B		195 <	1800	16	0.00	64	57	52.35	48.75	101.06	5.04 +	5.04	100	100	0.00	39.97
C2	1	Rathmullen Road (W)	2	1	A	B	203	1800	26	0.00	40	148	27.12	23.52	82.19	3.52	3.52	100	100	0.00	20.92
Cx	1	Rathmullen Road (W)					584	1800	100	29.00	32	208	13.40	1.40	27.78	7.14		100	100	0.00	5.27

Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE			PER PED		QUEUES	WEIGHTS	PENALTIES	P.I.
Pedestrian	Side	Name	Traffic node	Controller stream	Phase	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Degree of saturation (%)	Practical reserve capacity	Journey Time (s)	Mean Delay per Ped (s)	Mean max queue (Ped)	Delay weighting (%)	Cost of traffic penalties (£ per hr)	P.I.
(ALL)	(ALL)	(untitled)		1	D	0	11000	7	0	Unrestricted	0.00	0.00	0.00	100	0.00	0.00

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	290.74	24.72	11.76	12.94	2.09	213.37	20.70	0.00	234.06
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	290.74	24.72	11.76	12.94	2.09	213.37	20.70	0.00	234.06

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

A15 - 2038 - BASE - AM
D15 - 2038 - BASE - AM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst over	Network within capacity

						min/ min)							all PRC	
15	20/12/2018 09:35:09	20/12/2018 09:35:10	08:00	100	167.50	10.79	63.33	B1/1	0	0	B1/1	Bx/1	B1/1	✓

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2038 - BASE - AM		D15	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2038 - BASE - AM				08:00	

Network Options

Network timings

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

Signals options

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

Advanced

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

Traffic options

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

Advanced

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

Normal Traffic parameters

Dispersion type	Dispersion coefficient
Default	35

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Bus	1.00	70	15	0.47	30	85

Tram parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Tram	1.00	70	15	0.47	30	85

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order
Hill Climb (Fast)	15, 40, -1, 15, 40, 1, -1, 1	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05		✓	1

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
2		

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
A1			2
Ax			
B1			2
Bx			
C1			2
C2			2
Cx			

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
A1	1	Rahtmullen Road (E)			100.00	✓	Sum of lanes	9999	✓		Normal	
Ax	1	Rathmullen Road (E)			100.00	✓	Sum of lanes	1800			Normal	
B1	1	Marleys Lane			100.00	✓	Sum of lanes	1800	✓	✓	Normal	
Bx	1	Marleys Lane			100.00	✓	Sum of lanes	1800			Normal	
C1	1	Rathmullen Road (W)			30.00	✓	Sum of lanes	1800	✓	✓	Normal	
C2	1	Rathmullen Road (W)			30.00	✓	Sum of lanes	1800	✓		Normal	
Cx	1	Rathmullen Road (W)			100.00	✓	Sum of lanes	1800			Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Saturation flow (PCU/hr)
A1	1	1				9999
Ax	1	1				1800
B1	1	1				1800
Bx	1	1				1800
C1	1	1				1800
C2	1	1				1800
Cx	1	1				1800

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
A1	1	NetworkDefault	100	100	100		0.00		
Ax	1	NetworkDefault	100	100	100		0.00		
B1	1	NetworkDefault	100	100	100		0.00		
Bx	1	NetworkDefault	100	100	100		0.00		
C1	1	Flare	100	100	100		0.00		
C2	1	Flare	100	100	100		0.00		
Cx	1	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
(ALL)	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100

Normal - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	1	100	100

Flows

Arm	Traffic Stream	Total Flow (Veh/hr)	Normal Flow (Veh/hr)
A1	1	436	436
Ax	1	409	409
B1	1	342	342
Bx	1	530	530
C1	1	279	279
C2	1	215	215
Cx	1	333	333

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled	Second phase
A1	1	1	A		
B1	1	1	C		
C1	1	1	B		
C2	1	1	A	✓	B

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
A1	1	12.00	30.00
B1	1	12.00	30.00
C1	1	3.60	30.00
C2	1	3.60	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	1	1	B1/1	Ax/1	12.00	30.00	✓	Offside	45.00
Bx	1	1	A1/1	Bx/1	12.00	30.00	✓	Nearside	20.00
Cx	1	1	A1/1	Cx/1	12.00	30.00	✓	Straight	Straight Movement
Ax	1	2	C2/1	Ax/1	12.00	30.00	✓	Straight	Straight Movement
Bx	1	2	C1/1	Bx/1	12.00	30.00	✓	Offside	35.00
Cx	1	2	B1/1	Cx/1	12.00	30.00	✓	Nearside	20.00

Give Way Data

Arm	Traffic Stream	Opposed traffic	Use Step-wise Opposed Turn Model	Visibility restricted
(ALL)	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 (%)
B1	1	1	Cx/1	574	1800	100
		2	Ax/1	440	1800	100
C1	1	1	Bx/1	574	1800	100

Give Way Data - Movements - Conflicts

Arm	Traffic Stream	Movement	Destination traffic stream	Description	Controlling type	Controlling from traffic stream	Controlling to traffic stream	Percentage opposing (%)	Slope coefficient	Upstream signals visible	Conflict shift	Conflict duration

B1	1	1	Cx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.09		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0
		2	Ax/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.08		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.20		0	0
				T-junction opposing flow	TrafficStreamMovement	C2/1	Ax/1	100	0.13		0	0
				T-junction opposing flow	TrafficStreamMovement	C1/1	Bx/1	100	0.29		0	0
C1	1	1	Bx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.22		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
(ALL)	(untitled)				Farside	3.00	2.00	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	D	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(ALL)	11000

Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	100	100		0.00		

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
1	Library		✓	TrafficStream	Two-Way	A1/1	A1/1	Ax/1	Two-Way	B1/1	B1/1	Bx/1	Two-Way	C2/1	C1/1	Cx/1	✓

T-Junction Majors

T-Junction	Left Carriageway Width (m)	Right Carriageway Width (m)	Kerbed Central Reserve Width (m)	Width for C-B traffic (m)	Visibility for C-B traffic (m)
1	6.00	6.00	0.00	2.20	0.00

T-Junction Minors

T-Junction	B-C Lane Width (m)	B-A Lane Width (m)	B-C Visibility (m)	B-A Visibility (m)
1	2.20	2.20	0.00	0.00

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
1	574	0.09	0.22	440	0.08	0.20	0.13	0.29	574	0.22	0.22

Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1		✓	✓	Lane Balancing			✓			✓	1.25		

Normal Input Flows (Veh/hr)

From	To 1	To 2	To 3
1	0	251	185
2	194	0	148
3	215	279	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
1	1		A1/1	Ax/1	#0000FF
	2		B1/1	Bx/1	#FF0000
	3		C2/1, C1/1	Cx/1	#00FF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (Veh/hr)
1	1		1	2	A1/1, Bx/1	Normal	251
	2		1	3	A1/1, Cx/1	Normal	185
	3		2	3	B1/1, Cx/1	Normal	148
	4		2	1	B1/1, Ax/1	Normal	194
	5		3	1	C2/1, Ax/1	Normal	215
	6		3	2	C1/1, Bx/1	Normal	279

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (Veh)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	A1	1	19	427	436	9999	22	31.21	9.71	55.84	53.67	4.32	57.99
	Ax	1	23	340	409	1800	100	0.29	0.03	0.19	0.47	0.00	0.47
	B1	1	63	58	342	1800	29	35.94	8.71	50.09	48.49	3.86	52.35
	Bx	1	29	240	530	1800	100	0.88	5.17	29.76	1.85	1.25	3.10
	C1	1	57	74	279	1800	26	36.49	6.04	120.82	40.15	3.13	43.28
	C2	1	24	319	215	1800	48	9.66	2.31	46.14	8.19	1.47	9.66
	Cx	1	19	441	333	1800	100	0.32	2.20	12.64	0.42	0.22	0.65

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Calculated sat flow (Veh/hr)	Calculated capacity (Veh/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
08:00-09:00	A1	1	436	436	0		9999	2300	19		427	0.00	22	23
	Ax	1	409	409	0		1800	1800	23		340	0.64	100	100
	B1	1	342	342	0		1800	540	63		58	0.00	29	30
	Bx	1	530	530	0		1800	1800	29		240	1.04	100	100
	C1	1	279	279	0		1800	486	57		74	0.00	26	27
	C2	1	215	215	0		1800	900	24		319	0.00	48	50
	Cx	1	333	333	0		1800	1800	19		441	1.01	100	100

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	A1	1	12.00	31.21	3.76	0.02	53.67	53.67	79.00	343.64	0.80	4.32	4.32
	Ax	1	12.00	0.29	0.00	0.03	0.47	0.47	0.00	0.00	0.00	0.00	0.00
	B1	1	12.00	35.94	2.87	0.54	48.49	48.49	90.07	288.84	19.19	3.86	3.86
	Bx	1	12.00	0.88	0.07	0.06	1.85	1.85	18.88	97.84	2.21	1.25	1.25
	C1	1	3.60	36.49	2.44	0.38	40.15	40.15	89.42	235.84	13.63	3.13	3.13
	C2	1	3.60	9.66	0.54	0.04	8.19	8.19	54.36	114.19	2.69	1.47	1.47
	Cx	1	12.00	0.32	0.01	0.02	0.42	0.42	5.37	17.12	0.76	0.22	0.22

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (Veh)	Mean max queue (Veh)	Max queue storage (Veh)	Utilised storage (%)	Average storage excess queue (Veh)	Average limit excess queue (Veh)	Excess queue penalty (£ per hr)	Max end of green queue (Veh)	Max end of red queue (Veh)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))	Estimated blocking
08:00-09:00	A1	1	0.00	9.71	17.39	55.84	0.00	0.00	0.00	0.02	9.35	0.00	0.00	0.00	
	Ax	1	0.00	0.03	17.39	0.19	0.00	0.00	0.00			10.00	0.00	10.00	
	B1	1	0.00	8.71	17.39	50.09	0.00	0.00	0.00	0.54	7.19	0.00	0.00	0.00	
	Bx	1	0.00	5.17	17.39	29.76	0.00	0.00	0.00			39.00	0.00	39.00	
	C1	1	0.00	6.04	5.00	120.82	0.08	0.00	0.00	0.38	6.04	0.00	0.00	0.00	
	C2	1	0.00	2.31	5.00	46.14	0.00	0.00	0.00	0.04	2.31	0.00	0.00	0.00	
	Cx	1	0.00	2.20	17.39	12.64	0.00	0.00	0.00			42.00	0.00	42.00	

Traffic Stream Results: Journey times

Time Segment	Arm	Traffic Stream	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	A1	1	43.60	5.23	8.33	43.21
	Ax	1	40.90	1.40	29.28	12.29
	B1	1	34.20	4.55	7.51	47.94
	Bx	1	53.00	1.90	27.94	12.88
	C1	1	8.37	3.11	2.69	40.09
	C2	1	6.45	0.79	8.15	13.26
	Cx	1	33.30	1.14	29.22	12.32

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	Mean Max Queue EoTS (Veh)	Max End of Green Queue EoTS (Veh)	Max End of Red Queue EoTS (Veh)	PCU Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	A1	1	0.00	0.00	✓	0.00	9.71	0.02	9.35	1.00	0.00	57.99	57.99
	Ax	1	0.00	0.00	✓	0.00	0.03			1.00	0.00	0.47	0.47
	B1	1	0.00	0.00	✓	0.00	8.71	0.54	7.19	1.00	0.00	52.35	52.35
	Bx	1	0.00	0.00	✓	0.00	5.17			1.00	0.00	3.10	3.10
	C1	1	0.00	0.00	✓	0.00	6.04	0.39	6.04	1.00	0.00	43.28	43.28
	C2	1	0.00	0.00	✓	0.00	2.31	0.04	2.31	1.00	0.00	9.66	9.66

	Cx	1	0.00	0.00	✓	0.00	2.20			1.00	0.00	0.65	0.65

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
08:00-09:00	(ALL)	(ALL)	0	0	0		11000	770	0		Unrestricted	0.00	7	7

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Uniform delay (Ped-min/min)	Random plus oversat delay (Ped-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)
08:00-09:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Average storage excess queue (Ped)	Average limit excess queue (Ped)	Excess queue penalty (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Journey times

Time Segment	Crossing	Side	Distance travelled (Ped-km/hr)	Time spent (Ped-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	(ALL)	(ALL)	0.00	0.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00	0.00

Network Results

Run Summary

Analysis	Run start time	Run finish time	Modelling start	Network Cycle	Performance	Total network	Highest	Item with high	Number of oversatur	Percentage of oversatur	Item with worst	Item with worst	Item with wor	Network withi
set used			time (HH:mm)	Time (s)	Index (£ per hr)	delay (Veh-min/min)	DOS (%)	est DOS	ated items	ated items (%)	signalised PRC	unsignalised PRC	st overall PRC	n capacity
15	20/12/2018 09:35:09	20/12/2018 09:35:10	08:00	100	167.50	10.79	63.33	B1/1	0	0	B1/1	Bx/1	B1/1	✓

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	63	0	2544	425	15.27	153.24	14.25	167.50

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	0	0	42	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))	Effective green (s (per cycle))
08:00-09:00	2544	2544	0		63		58	467	472

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	10.37	15.27	9.69	1.10	153.24	153.24	44.68	1097.48	39.27	14.25	14.25

Network Results: Queues and blocking

Time Segment	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))
08:00-09:00	120.82	0.00	91.00	0.00	91.00

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
08:00-09:00	219.82	18.12	12.13

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	PCU Factor	Cost of traffic penalties (£ per hr)	Controller stream penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	0.00	0.00	✓	0.00	1.00	0.00	0.00	167.50	167.50

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

From	To 1	To 2	To 3
1	0.0	56.6	55.6
2	60.2	0.0	60.2
3	25.6	52.5	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (Veh/hr)	Normal journey time (s)	Calculated Total Flow (Veh/hr)	Avg journey time (s)
1	1	2	251	56.61	251	56.61
2	1	3	185	55.60	185	55.60
3	2	3	148	60.17	148	60.17
4	2	1	194	60.24	194	60.24
5	3	1	215	25.55	215	25.55
6	3	2	279	52.50	279	52.50

Final Prediction Table

Traffic Stream Results

				SIGNALS			FLOWS		PERFORMANCE				PER PCU			QUEUES		WEIGHTS		PENALTIES	P.I.
Arm	TrafficStream	Name	Traffic node	Controller stream	Phase	Second phase	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (Veh)	Mean end of red queue (Veh)	Delay weighting multiplier (%)	Stop weighting multiplier (%)	Cost of traffic penalties (£ per hr)	P.I.
A1	1	Rathmullen Road (E)	2	1	A		436	9999	22	0.00	19	427	43.21	31.21	79.00	9.71	9.35	100	100	0.00	57.99
Ax	1	Rathmullen Road (E)					409	1800	100	10.00	23	340	12.29	0.29	0.00	0.03		100	100	0.00	0.47
B1	1	Marleys Lane	2	1	C		342	1800	29	0.00	63	58	47.94	35.94	90.07	8.71	7.19	100	100	0.00	52.35
Bx	1	Marleys Lane					530	1800	100	39.00	29	240	12.88	0.88	18.88	5.17		100	100	0.00	3.10
C1	1	Rathmullen Road (W)	2	1	B		279 <	1800	26	0.00	57	74	40.09	36.49	89.42	6.04 +	6.04	100	100	0.00	43.28
C2	1	Rathmullen	2	1	A	B	215	1800	48	0.00	24	319	13.26	9.66	54.36	2.31	2.31	100	100	0.00	9.66
Cx	1	Road (W)																			
		Rathmullen Road (W)					333	1800	100	42.00	19	441	12.32	0.32	5.37	2.20		100	100	0.00	0.65

Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE			PER PED		QUEUES	WEIGHTS	PENALTIES	P.I.
Pedestrian	Side	Name	Traffic node	Controller stream	Phase	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Degree of saturation (%)	Practical reserve capacity	Journey Time (s)	Mean Delay per Ped (s)	Mean max queue (Ped)	Delay weighting (%)	Cost of traffic penalties (£ per hr)	P.I.
(ALL)	(ALL)	(untitled)		1	D	0	11000	7	0	Unrestricted	0.00	0.00	0.00	100	0.00	0.00

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	219.82	18.12	12.13	9.69	1.10	153.24	14.25	0.00	167.50
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	219.82	18.12	12.13	9.69	1.10	153.24	14.25	0.00	167.50

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

A16 - 2038 - BASE - PM
D16 - 2038 - BASE - PM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-min/min)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
16	20/12/2018	20/12/2018	17:00	100	166.80	10.71	61.62	B1/1	0	0	B1/1	Ax/1	B1/1	✓

	09:35:12	09:35:13												

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2038 - BASE - PM		D16	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2038 - BASE - PM				17:00	

Network Options

Network timings

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

Signals options

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

Advanced

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

Traffic options

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

Advanced

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

Normal Traffic parameters

Dispersion type	Dispersion coefficient
Default	35

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Bus	1.00	70	15	0.47	30	85

Tram parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Tram	1.00	70	15	0.47	30	85

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order
Hill Climb (Fast)	15, 40, -1, 15, 40, 1, -1, 1	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05		✓	1

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
2		

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
A1			2
Ax			
B1			2
Bx			
C1			2
C2			2
Cx			

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red

A1	1	Rahtmullen Road (E)			100.00	✓	Sum of lanes	9999	✓		Normal	
Ax	1	Rathmullen Road (E)			100.00	✓	Sum of lanes	1800			Normal	
B1	1	Marleys Lane			100.00	✓	Sum of lanes	1800	✓	✓	Normal	
Bx	1	Marleys Lane			100.00	✓	Sum of lanes	1800			Normal	
C1	1	Rathmullen Road (W)			30.00	✓	Sum of lanes	1800	✓	✓	Normal	
C2	1	Rathmullen Road (W)			30.00	✓	Sum of lanes	1800	✓		Normal	
Cx	1	Rathmullen Road (W)			100.00	✓	Sum of lanes	1800			Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Saturation flow (PCU/hr)
A1	1	1				9999
Ax	1	1				1800
B1	1	1				1800
Bx	1	1				1800
C1	1	1				1800
C2	1	1				1800
Cx	1	1				1800

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
A1	1	NetworkDefault	100	100	100		0.00		
Ax	1	NetworkDefault	100	100	100		0.00		
B1	1	NetworkDefault	100	100	100		0.00		
Bx	1	NetworkDefault	100	100	100		0.00		
C1	1	Flare	100	100	100		0.00		
C2	1	Flare	100	100	100		0.00		
Cx	1	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
(ALL)	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100

Normal - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	1	100	100

Flows

Arm	Traffic Stream	Total Flow (Veh/hr)	Normal Flow (Veh/hr)
A1	1	408	408
Ax	1	552	552
B1	1	610	610
Bx	1	383	383
C1	1	129	129
C2	1	137	137
Cx	1	349	349

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled	Second phase
A1	1	1	A		
B1	1	1	C		
C1	1	1	B		
C2	1	1	A	✓	B

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
A1	1	12.00	30.00
B1	1	12.00	30.00
C1	1	3.60	30.00
C2	1	3.60	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	1	1	B1/1	Ax/1	12.00	30.00	✓	Offside	45.00
Bx	1	1	A1/1	Bx/1	12.00	30.00	✓	Nearside	20.00
Cx	1	1	A1/1	Cx/1	12.00	30.00	✓	Straight	Straight Movement
Ax	1	2	C2/1	Ax/1	12.00	30.00	✓	Straight	Straight Movement
Bx	1	2	C1/1	Bx/1	12.00	30.00	✓	Offside	35.00
Cx	1	2	B1/1	Cx/1	12.00	30.00	✓	Nearside	20.00

Give Way Data

Arm	Traffic Stream	Opposed traffic	Use Step-wise Opposed Turn Model	Visibility restricted
(ALL)	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 (%)
B1	1	1	Cx/1	574	1800	100
		2	Ax/1	440	1800	100
C1	1	1	Bx/1	574	1800	100

Give Way Data - Movements - Conflicts

Arm	Traffic Stream	Movement	Destination traffic stream	Description	Controlling type	Controlling from traffic stream	Controlling to traffic stream	Percentage opposing (%)	Slope coefficient	Upstream signals visible	Conflict shift	Conflict duration
B1	1	1	Cx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.09		0	0

				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0
		2	Ax/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.08		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.20		0	0
				T-junction opposing flow	TrafficStreamMovement	C2/1	Ax/1	100	0.13		0	0
				T-junction opposing flow	TrafficStreamMovement	C1/1	Bx/1	100	0.29		0	0
C1	1	1	Bx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.22		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
(ALL)	(untitled)				Farside	3.00	2.00	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	D	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(ALL)	11000

Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	100	100		0.00		

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
1	Library		✓	TrafficStream	Two-Way	A1/1	A1/1	Ax/1	Two-Way	B1/1	B1/1	Bx/1	Two-Way	C2/1	C1/1	Cx/1	✓

T-Junction Majors

T-Junction	Left Carriageway Width (m)	Right Carriageway Width (m)	Kerbed Central Reserve Width (m)	Width for C-B traffic (m)	Visibility for C-B traffic (m)
1	6.00	6.00	0.00	2.20	0.00

T-Junction Minors

T-Junction	B-C Lane Width (m)	B-A Lane Width (m)	B-C Visibility (m)	B-A Visibility (m)
1	2.20	2.20	0.00	0.00

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
1	574	0.09	0.22	440	0.08	0.20	0.13	0.29	574	0.22	0.22

Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1		✓	✓	Lane Balancing			✓			✓	1.25		

Normal Input Flows (Veh/hr)

		To		
		1	2	3
From	1	0	254	154
	2	415	0	195
	3	137	129	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
1	1		A1/1	Ax/1	#0000FF
	2		B1/1	Bx/1	#FF0000
	3		C2/1, C1/1	Cx/1	#00FF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (Veh/hr)
1	1		1	2	A1/1, Bx/1	Normal	254

	2		1	3	A1/1, Cx/1	Normal	154
	3		2	3	B1/1, Cx/1	Normal	195
	4		2	1	B1/1, Ax/1	Normal	415
	5		3	1	C2/1, Ax/1	Normal	137
	6		3	2	C1/1, Bx/1	Normal	129

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (Veh)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	A1	1	34	194	408	9999	11	41.16	10.40	59.80	66.24	4.63	70.88
	Ax	1	31	226	552	1800	100	0.44	0.07	0.39	0.96	0.00	0.96
	B1	1	62	62	610	1800	54	18.22	12.01	69.08	43.83	5.23	49.06
	Bx	1	21	370	383	1800	100	1.42	6.21	35.71	2.15	1.77	3.92
	C1	1	55	81	129	1800	12	50.07	3.45	69.01	25.48	1.63	27.11
	C2	1	30	228	137	1800	23	24.02	2.46	49.28	12.98	1.36	14.34
	Cx	1	19	416	349	1800	100	0.29	2.08	11.98	0.40	0.13	0.53

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Calculated sat flow (Veh/hr)	Calculated capacity (Veh/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
17:00-18:00	A1	1	408	408	0		9999	1200	34		194	0.00	11	12
	Ax	1	552	552	0		1800	1800	31		226	0.60	100	100
	B1	1	610	610	0		1800	990	62		62	0.00	54	55
	Bx	1	383	383	0		1800	1800	21		370	1.32	100	100
	C1	1	129	129	0		1800	234	55		81	0.00	12	13
	C2	1	137	137	0		1800	450	30		228	0.00	23	25
	Cx	1	349	349	0		1800	1800	19		416	0.81	100	100

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	A1	1	12.00	41.16	4.58	0.09	66.24	66.24	90.59	366.45	3.14	4.63	4.63
	Ax	1	12.00	0.44	0.00	0.07	0.96	0.96	0.00	0.00	0.00	0.00	0.00
	B1	1	12.00	18.22	2.60	0.49	43.83	43.83	68.33	399.21	17.57	5.23	5.23
	Bx	1	12.00	1.42	0.12	0.03	2.15	2.15	36.85	140.08	1.03	1.77	1.77
	C1	1	3.60	50.07	1.46	0.33	25.48	25.48	100.90	118.44	11.72	1.63	1.63
	C2	1	3.60	24.02	0.85	0.07	12.98	12.98	79.12	106.01	2.38	1.36	1.36
	Cx	1	12.00	0.29	0.00	0.02	0.40	0.40	3.02	9.70	0.84	0.13	0.13

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (Veh)	Mean max queue (Veh)	Max queue storage (Veh)	Utilised storage (%)	Average storage excess queue (Veh)	Average limit excess queue (Veh)	Excess queue penalty (£ per hr)	Max end of green queue (Veh)	Max end of red queue (Veh)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))	Estimated blocking
17:00-18:00	A1	1	0.00	10.40	17.39	59.80	0.00	0.00	0.00	0.09	10.06	0.00	0.00	0.00	
	Ax	1	0.00	0.07	17.39	0.39	0.00	0.00	0.00			6.00	0.00	6.00	
	B1	1	0.00	12.01	17.39	69.08	0.00	0.00	0.00	0.49	8.12	0.00	0.00	0.00	
	Bx	1	0.00	6.21	17.39	35.71	0.00	0.00	0.00			59.00	0.00	59.00	
	C1	1	0.00	3.45	5.00	69.01	0.00	0.00	0.00	0.33	3.45	0.00	0.00	0.00	
	C2	1	0.00	2.46	5.00	49.28	0.00	0.00	0.00	0.07	2.46	0.00	0.00	0.00	
	Cx	1	0.00	2.08	17.39	11.98	0.00	0.00	0.00			27.00	0.00	27.00	

Traffic Stream Results: Journey times

Time Segment	Arm	Traffic Stream	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
17:00-18:00	A1	1	40.80	6.02	6.77	53.16
	Ax	1	55.20	1.91	28.93	12.44
	B1	1	61.00	5.12	11.91	30.22
	Bx	1	38.30	1.43	26.82	13.42
	C1	1	3.87	1.92	2.01	53.67
	C2	1	4.11	1.05	3.91	27.62
	Cx	1	34.90	1.19	29.29	12.29

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	Mean Max Queue EoTS (Veh)	Max End of Green Queue EoTS (Veh)	Max End of Red Queue EoTS (Veh)	PCU Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
17:00-18:00	A1	1	0.00	0.00	✓	0.00	10.40	0.09	10.06	1.00	0.00	70.88	70.88
	Ax	1	0.00	0.00	✓	0.00	0.07			1.00	0.00	0.96	0.96
	B1	1	0.00	0.00	✓	0.00	12.02	0.49	8.12	1.00	0.00	49.06	49.06
	Bx	1	0.00	0.00	✓	0.00	6.21			1.00	0.00	3.92	3.92
	C1	1	0.00	0.00	✓	0.00	3.45	0.34	3.45	1.00	0.00	27.11	27.11
	C2	1	0.00	0.00	✓	0.00	2.46	0.07	2.46	1.00	0.00	14.34	14.34
	Cx	1	0.00	0.00	✓	0.00	2.08			1.00	0.00	0.53	0.53

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
17:00-18:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
17:00-18:00	(ALL)	(ALL)	0	0	0		11000	770	0		Unrestricted	0.00	7	7

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Uniform delay (Ped-min/min)	Random plus oversat delay (Ped-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)
17:00-18:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Average storage excess queue (Ped)	Average limit excess queue (Ped)	Excess queue penalty (£ per hr)
17:00-18:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Journey times

Time Segment	Crossing	Side	Distance travelled (Ped-km/hr)	Time spent (Ped-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
17:00-18:00	(ALL)	(ALL)	0.00	0.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
17:00-18:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-min/min)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
16	20/12/2018 09:35:12	20/12/2018 09:35:13	17:00	100	166.80	10.71	61.62	B1/1	0	0	B1/1	Ax/1	B1/1	✓

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	62	0	2568	400	15.01	152.05	14.75	166.80

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
17:00-18:00	0	0	42	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))	Effective green (s (per cycle))
17:00-18:00	2568	2568	0		62		62	442	447

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	11.13	15.01	9.61	1.10	152.05	152.05	45.82	1139.91	36.69	14.75	14.75

Network Results: Queues and blocking

Time Segment	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))
17:00-18:00	69.08	0.00	92.00	0.00	92.00

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
17:00-18:00	238.18	18.65	12.77

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	PCU Factor	Cost of traffic penalties (£ per hr)	Controller stream penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
17:00-18:00	0.00	0.00	✓	0.00	1.00	0.00	0.00	166.80	166.80

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

	To

From		1	2	3
	1	0.0	67.2	65.5
	2	42.7	0.0	42.5
	3	40.1	65.9	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (Veh/hr)	Normal journey time (s)	Calculated Total Flow (Veh/hr)	Avg journey time (s)
1	1	2	254	67.17	254	67.17
2	1	3	154	65.52	154	65.52
3	2	3	195	42.46	195	42.46
4	2	1	415	42.66	415	42.66
5	3	1	137	40.06	137	40.06
6	3	2	129	65.95	129	65.95

Final Prediction Table

Traffic Stream Results

				SIGNALS			FLOWS		PERFORMANCE				PER PCU			QUEUES		WEIGHTS		PENALTIES	P.I.
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Second phase	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (Veh)	Max end of red queue (Veh)	Delay weighting multiplier (%)	Stop weighting multiplier (%)	Cost of traffic penalties (£ per hr)	P.I.
A1	1	Rathmullen Road (E)	2	1	A		408	9999	11	0.00	34	194	53.16	41.16	90.59	10.40	10.06	100	100	0.00	70.88
Ax	1	Rathmullen Road (E)					552	1800	100	6.00	31	226	12.44	0.44	0.00	0.07		100	100	0.00	0.96
B1	1	Marleys Lane	2	1	C		610	1800	54	0.00	62	62	30.22	18.22	68.33	12.01	8.12	100	100	0.00	49.06
Bx	1	Marleys Lane					383	1800	100	59.00	21	370	13.42	1.42	36.85	6.21		100	100	0.00	3.92
C1	1	Rathmullen Road (W)	2	1	B		129	1800	12	0.00	55	81	53.67	50.07	100.90	3.45	3.45	100	100	0.00	27.11
C2	1	Rathmullen Road (W)	2	1	A	B	137	1800	23	0.00	30	228	27.62	24.02	79.12	2.46	2.46	100	100	0.00	14.34
Cx	1	Rathmullen Road (W)					349	1800	100	27.00	19	416	12.29	0.29	3.02	2.08		100	100	0.00	0.53

Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE			PER PED		QUEUES	WEIGHTS	PENALTIES	P.I.
Pedestrian	Side	Name	Traffic node	Controller stream	Phase	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Degree of saturation (%)	Practical reserve capacity	Journey Time (s)	Mean Delay per Ped (s)	Mean max queue (Ped)	Delay weighting (%)	Cost of traffic penalties (£ per hr)	P.I.
(ALL)	(ALL)	(untitled)		1	D	0	11000	7	0	Unrestricted	0.00	0.00	0.00	100	0.00	0.00

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	238.18	18.65	12.77	9.61	1.10	152.05	14.75	0.00	166.80
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	238.18	18.65	12.77	9.61	1.10	152.05	14.75	0.00	166.80

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

A17 - 2038 - BASE + DEV - AM
D17 - 2038 - BASE + 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)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-min/min)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
17	20/12/2018 09:35:16	20/12/2018 09:35:17	08:00	100	216.35	13.94	72.80	B1/1	0	0	B1/1	Bx/1	B1/1	✓

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2038 - BASE + DEV - AM		D17	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2038 - BASE + DEV - AM				08:00	

Network Options

Network timings

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

Signals options

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

Advanced

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

Traffic options

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

Advanced

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

Normal Traffic parameters

Dispersion type	Dispersion coefficient
Default	35

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Bus	1.00	70	15	0.47	30	85

Tram parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Tram	1.00	70	15	0.47	30	85

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order
Hill Climb (Fast)	15, 40, -1, 15, 40, 1, -1, 1	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05		✓	1

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
2		

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
A1			2
Ax			
B1			2
Bx			
C1			2
C2			2
Cx			

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
A1	1	Rahtmullen Road (E)			100.00	✓	Sum of lanes	9999	✓		Normal	
Ax	1	Rathmullen Road (E)			100.00	✓	Sum of lanes	1800			Normal	

B1	1	Marleys Lane			100.00	✓	Sum of lanes	1800	✓	✓	Normal	
Bx	1	Marleys Lane			100.00	✓	Sum of lanes	1800			Normal	
C1	1	Rathmullen Road (W)			30.00	✓	Sum of lanes	1800	✓	✓	Normal	
C2	1	Rathmullen Road (W)			30.00	✓	Sum of lanes	1800	✓		Normal	
Cx	1	Rathmullen Road (W)			100.00	✓	Sum of lanes	1800			Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Saturation flow (PCU/hr)
A1	1	1				9999
Ax	1	1				1800
B1	1	1				1800
Bx	1	1				1800
C1	1	1				1800
C2	1	1				1800
Cx	1	1				1800

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
A1	1	NetworkDefault	100	100	100		0.00		
Ax	1	NetworkDefault	100	100	100		0.00		
B1	1	NetworkDefault	100	100	100		0.00		
Bx	1	NetworkDefault	100	100	100		0.00		
C1	1	Flare	100	100	100		0.00		
C2	1	Flare	100	100	100		0.00		
Cx	1	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
(ALL)	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100

Normal - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	1	100	100

Flows

Arm	Traffic Stream	Total Flow (Veh/hr)	Normal Flow (Veh/hr)
A1	1	475	475
Ax	1	513	513
B1	1	380	380
Bx	1	633	633
C1	1	382	382
C2	1	319	319
Cx	1	410	410

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled	Second phase
A1	1	1	A		
B1	1	1	C		
C1	1	1	B		
C2	1	1	A	✓	B

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
A1	1	12.00	30.00
B1	1	12.00	30.00
C1	1	3.60	30.00
C2	1	3.60	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	1	1	B1/1	Ax/1	12.00	30.00	✓	Offside	45.00
Bx	1	1	A1/1	Bx/1	12.00	30.00	✓	Nearside	20.00
Cx	1	1	A1/1	Cx/1	12.00	30.00	✓	Straight	Straight Movement
Ax	1	2	C2/1	Ax/1	12.00	30.00	✓	Straight	Straight Movement
Bx	1	2	C1/1	Bx/1	12.00	30.00	✓	Offside	35.00
Cx	1	2	B1/1	Cx/1	12.00	30.00	✓	Nearside	20.00

Give Way Data

Arm	Traffic Stream	Opposed traffic	Use Step-wise Opposed Turn Model	Visibility restricted
(ALL)	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 (%)
B1	1	1	Cx/1	574	1800	100
		2	Ax/1	440	1800	100
C1	1	1	Bx/1	574	1800	100

Give Way Data - Movements - Conflicts

Arm	Traffic Stream	Movement	Destination traffic stream	Description	Controlling type	Controlling from traffic stream	Controlling to traffic stream	Percentage opposing (%)	Slope coefficient	Upstream signals visible	Conflict shift	Conflict duration
B1	1	1	Cx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.09		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0

		2	Ax/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.08		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.20		0	0
				T-junction opposing flow	TrafficStreamMovement	C2/1	Ax/1	100	0.13		0	0
				T-junction opposing flow	TrafficStreamMovement	C1/1	Bx/1	100	0.29		0	0
C1	1	1	Bx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.22		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
(ALL)	(untitled)				Farside	3.00	2.00	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	D	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(ALL)	11000

Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	100	100		0.00		

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
1	Library		✓	TrafficStream	Two-Way	A1/1	A1/1	Ax/1	Two-Way	B1/1	B1/1	Bx/1	Two-Way	C2/1	C1/1	Cx/1	✓

T-Junction Majors

T-Junction	Left Carriageway Width (m)	Right Carriageway Width (m)	Kerbed Central Reserve Width (m)	Width for C-B traffic (m)	Visibility for C-B traffic (m)
1	6.00	6.00	0.00	2.20	0.00

T-Junction Minors

T-Junction	B-C Lane Width (m)	B-A Lane Width (m)	B-C Visibility (m)	B-A Visibility (m)
1	2.20	2.20	0.00	0.00

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
1	574	0.09	0.22	440	0.08	0.20	0.13	0.29	574	0.22	0.22

Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1		✓	✓	Lane Balancing			✓			✓	1.25		

Normal Input Flows (Veh/hr)

		To		
		1	2	3
From	1	0	251	224
	2	194	0	186
	3	319	382	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
1	1		A1/1	Ax/1	#0000FF
	2		B1/1	Bx/1	#FF0000
	3		C2/1, C1/1	Cx/1	#00FF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (Veh/hr)
1	1		1	2	A1/1, Bx/1	Normal	251
	2		1	3	A1/1, Cx/1	Normal	224
	3		2	3	B1/1, Cx/1	Normal	186
	4		2	1	B1/1, Ax/1	Normal	194

	5		3	1	C2/1, Ax/1	Normal	319
	6		3	2	C1/1, Bx/1	Normal	382

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (Veh)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	A1	1	24	321	475	9999	19	33.88	10.99	63.18	63.47	4.89	68.36
	Ax	1	29	251	513	1800	100	0.40	0.06	0.33	0.81	0.00	0.81
	B1	1	73	37	380	1800	28	40.96	10.35	59.49	61.40	4.60	66.00
	Bx	1	35	184	633	1800	100	0.97	5.41	31.09	2.43	1.34	3.76
	C1	1	68	46	382	1800	30	37.11	8.05	161.06	55.92	4.42	60.34
	C2	1	35	188	319	1800	49	10.24	3.37	67.42	12.89	2.30	15.18
	Cx	1	23	339	410	1800	100	0.64	4.57	26.30	1.04	0.85	1.89

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Calculated sat flow (Veh/hr)	Calculated capacity (Veh/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
08:00-09:00	A1	1	475	475	0		9999	2000	24		321	0.00	19	20
	Ax	1	513	513	0		1800	1800	29		251	0.55	100	100
	B1	1	380	380	0		1800	522	73		37	0.00	28	29
	Bx	1	633	633	0		1800	1800	35		184	1.00	100	100
	C1	1	382	382	0		1800	558	68		46	0.00	30	31
	C2	1	319	319	0		1800	918	35		188	0.00	49	51
	Cx	1	410	410	0		1800	1800	23		339	1.03	100	100

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	A1	1	12.00	33.88	4.43	0.04	63.47	63.47	82.10	388.63	1.33	4.89	4.89
	Ax	1	12.00	0.40	0.00	0.06	0.81	0.81	0.00	0.00	0.00	0.00	0.00
	B1	1	12.00	40.96	3.37	0.95	61.40	61.40	96.48	333.14	33.50	4.60	4.60
	Bx	1	12.00	0.97	0.08	0.10	2.43	2.43	16.83	103.10	3.43	1.34	1.34
	C1	1	3.60	37.11	3.21	0.73	55.92	55.92	92.28	326.63	25.87	4.42	4.42
	C2	1	3.60	10.24	0.82	0.09	12.89	12.89	57.38	176.44	6.62	2.30	2.30
	Cx	1	12.00	0.64	0.04	0.03	1.04	1.04	16.56	66.71	1.21	0.85	0.85

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (Veh)	Mean max queue (Veh)	Max queue storage (Veh)	Utilised storage (%)	Average storage excess queue (Veh)	Average limit excess queue (Veh)	Excess queue penalty (£ per hr)	Max end of green queue (Veh)	Max end of red queue (Veh)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))	Estimated blocking
08:00-09:00	A1	1	0.00	10.99	17.39	63.18	0.00	0.00	0.00	0.04	10.59	0.00	0.00	0.00	
	Ax	1	0.00	0.06	17.39	0.33	0.00	0.00	0.00			7.00	0.00	7.00	
	B1	1	0.00	10.35	17.39	59.49	0.00	0.00	0.00	0.95	8.45	0.00	0.00	0.00	
	Bx	1	0.00	5.41	17.39	31.09	0.00	0.00	0.00			36.00	0.00	36.00	
	C1	1	0.00	8.05	5.00	161.06	0.56	0.00	0.00	0.73	8.05	0.00	0.00	0.00	
	C2	1	0.00	3.37	5.00	67.42	0.00	0.00	0.00	0.09	3.37	0.00	0.00	0.00	
	Cx	1	0.00	4.57	17.39	26.30	0.00	0.00	0.00			44.00	0.00	44.00	

Traffic Stream Results: Journey times

Time Segment	Arm	Traffic Stream	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	A1	1	47.50	6.05	7.85	45.88
	Ax	1	51.30	1.77	29.04	12.40
	B1	1	38.00	5.59	6.80	52.96
	Bx	1	63.30	2.28	27.75	12.97
	C1	1	11.46	4.32	2.65	40.71
	C2	1	9.57	1.23	7.80	13.84
	Cx	1	41.00	1.44	28.47	12.64

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	Mean Max Queue EoTS (Veh)	Max End of Green Queue EoTS (Veh)	Max End of Red Queue EoTS (Veh)	PCU Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	A1	1	0.00	0.00	✓	0.00	10.99	0.04	10.59	1.00	0.00	68.36	68.36
	Ax	1	0.00	0.00	✓	0.00	0.06			1.00	0.00	0.81	0.81
	B1	1	0.00	0.00	✓	0.00	10.36	0.96	8.46	1.00	0.00	66.00	66.00
	Bx	1	0.00	0.00	✓	0.00	5.41			1.00	0.00	3.76	3.76
	C1	1	0.00	0.00	✓	0.00	8.06	0.74	8.06	1.00	0.00	60.34	60.34
	C2	1	0.00	0.00	✓	0.00	3.37	0.09	3.37	1.00	0.00	15.18	15.18
	Cx	1	0.00	0.00	✓	0.00	4.57			1.00	0.00	1.89	1.89

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
08:00-09:00	(ALL)	(ALL)	0	0	0		11000	770	0		Unrestricted	0.00	7	7

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Uniform delay (Ped-min/min)	Random plus oversat delay (Ped-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)
08:00-09:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Average storage excess queue (Ped)	Average limit excess queue (Ped)	Excess queue penalty (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Journey times

Time Segment	Crossing	Side	Distance travelled (Ped-km/hr)	Time spent (Ped-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	(ALL)	(ALL)	0.00	0.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-min/min)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
17	20/12/2018 09:35:16	20/12/2018 09:35:17	08:00	100	216.35	13.94	72.80	B1/1	0	0	B1/1	Bx/1	B1/1	✓

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	73	0	3112	426	16.13	197.96	18.39	216.35

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	0	0	42	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))	Effective green (s (per cycle))
08:00-09:00	3112	3112	0		73		37	468	473

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	10.11	16.13	11.94	2.00	197.96	197.96	47.13	1394.65	71.95	18.39	18.39

Network Results: Queues and blocking

Time Segment	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))
08:00-09:00	161.06	0.00	87.00	0.00	87.00

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
08:00-09:00	262.13	22.68	11.56

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	PCU Factor	Cost of traffic penalties (£ per hr)	Controller stream penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	0.00	0.00	✓	0.00	1.00	0.00	0.00	216.35	216.35

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

	To

From		1	2	3
	1	0.0	59.5	58.8
	2	65.4	0.0	65.3
	3	26.2	53.3	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (Veh/hr)	Normal journey time (s)	Calculated Total Flow (Veh/hr)	Avg journey time (s)
1	1	2	251	59.50	251	59.50
2	1	3	224	58.81	224	58.81
3	2	3	186	65.26	186	65.26
4	2	1	194	65.36	194	65.36
5	3	1	319	26.24	319	26.24
6	3	2	382	53.26	382	53.26

Final Prediction Table

Traffic Stream Results

				SIGNALS			FLOWS		PERFORMANCE				PER PCU			QUEUES		WEIGHTS		PENALTIES	P.I.
Arm	TrafficStream	Name	Traffic node	Controller stream	Phase	Second phase	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (Veh)	Max end of red queue (Veh)	Delay weighting multiplier (%)	Stop weighting multiplier (%)	Cost of traffic penalties (£ per hr)	
A1	1	Rathmullen Road (E)	2	1	A		475	9999	19	0.00	24	321	45.88	33.88	82.10	10.99	10.59	100	100	0.00	68.36
Ax	1	Rathmullen Road (E)					513	1800	100	7.00	29	251	12.40	0.40	0.00	0.06		100	100	0.00	0.81
B1	1	Marleys Lane	2	1	C		380	1800	28	0.00	73	37	52.96	40.96	96.48	10.35	8.45	100	100	0.00	66.00
Bx	1	Marleys Lane					633	1800	100	36.00	35	184	12.97	0.97	16.83	5.41		100	100	0.00	3.76
C1	1	Rathmullen Road (W)	2	1	B		382<	1800	30	0.00	68	46	40.71	37.11	92.28	8.05+	8.05	100	100	0.00	60.34
C2	1	Rathmullen Road (W)	2	1	A	B	319	1800	49	0.00	35	188	13.84	10.24	57.38	3.37	3.37	100	100	0.00	15.18
Cx	1	Rathmullen Road (W)					410	1800	100	44.00	23	339	12.64	0.64	16.56	4.57		100	100	0.00	1.89

Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE			PER PED		QUEUES	WEIGHTS	PENALTIES	P.I.
Pedestrian	Side	Name	Traffic node	Controller stream	Phase	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Degree of saturation (%)	Practical reserve capacity	Journey Time (s)	Mean Delay per Ped (s)	Mean max queue (Ped)	Delay weighting (%)	Cost of traffic penalties (£ per hr)	
(ALL)	(ALL)	(untitled)		1	D	0	11000	7	0	Unrestricted	0.00	0.00	0.00	100	0.00	0.00

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	262.13	22.68	11.56	11.94	2.00	197.96	18.39	0.00	216.35
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	262.13	22.68	11.56	11.94	2.00	197.96	18.39	0.00	216.35

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

A18 - 2038 - BASE + DEV - PM
D18 - 2038 - BASE + 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)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-min/min)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
18	20/12/2018 09:35:20	20/12/2018 09:35:21	17:00	100	228.63	14.67	73.48	B1/1	0	0	B1/1	Ax/1	B1/1	✓

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2038 - BASE + DEV - PM		D18	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2038 - BASE + DEV - PM				17:00	

Network Options

Network timings

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

Signals options

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

Advanced

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

Traffic options

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

Advanced

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

Normal Traffic parameters

Dispersion type	Dispersion coefficient
Default	35

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Bus	1.00	70	15	0.47	30	85

Tram parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Tram	1.00	70	15	0.47	30	85

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order
Hill Climb (Fast)	15, 40, -1, 15, 40, 1, -1, 1	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05		✓	1

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
2		

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
A1			2
Ax			
B1			2
Bx			
C1			2
C2			2
Cx			

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
A1	1	Rahtmullen Road (E)			100.00	✓	Sum of lanes	9999	✓		Normal	
Ax	1	Rathmullen Road (E)			100.00	✓	Sum of lanes	1800			Normal	

B1	1	Marleys Lane			100.00	✓	Sum of lanes	1800	✓	✓	Normal	
Bx	1	Marleys Lane			100.00	✓	Sum of lanes	1800			Normal	
C1	1	Rathmullen Road (W)			30.00	✓	Sum of lanes	1800	✓	✓	Normal	
C2	1	Rathmullen Road (W)			30.00	✓	Sum of lanes	1800	✓		Normal	
Cx	1	Rathmullen Road (W)			100.00	✓	Sum of lanes	1800			Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Saturation flow (PCU/hr)
A1	1	1				9999
Ax	1	1				1800
B1	1	1				1800
Bx	1	1				1800
C1	1	1				1800
C2	1	1				1800
Cx	1	1				1800

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
A1	1	NetworkDefault	100	100	100		0.00		
Ax	1	NetworkDefault	100	100	100		0.00		
B1	1	NetworkDefault	100	100	100		0.00		
Bx	1	NetworkDefault	100	100	100		0.00		
C1	1	Flare	100	100	100		0.00		
C2	1	Flare	100	100	100		0.00		
Cx	1	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
(ALL)	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100

Normal - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	1	100	100

Flows

Arm	Traffic Stream	Total Flow (Veh/hr)	Normal Flow (Veh/hr)
A1	1	499	499
Ax	1	606	606
B1	1	701	701
Bx	1	436	436
C1	1	182	182
C2	1	191	191
Cx	1	531	531

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled	Second phase
A1	1	1	A		
B1	1	1	C		
C1	1	1	B		
C2	1	1	A	✓	B

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
A1	1	12.00	30.00
B1	1	12.00	30.00
C1	1	3.60	30.00
C2	1	3.60	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	1	1	B1/1	Ax/1	12.00	30.00	✓	Offside	45.00
Bx	1	1	A1/1	Bx/1	12.00	30.00	✓	Nearside	20.00
Cx	1	1	A1/1	Cx/1	12.00	30.00	✓	Straight	Straight Movement
Ax	1	2	C2/1	Ax/1	12.00	30.00	✓	Straight	Straight Movement
Bx	1	2	C1/1	Bx/1	12.00	30.00	✓	Offside	35.00
Cx	1	2	B1/1	Cx/1	12.00	30.00	✓	Nearside	20.00

Give Way Data

Arm	Traffic Stream	Opposed traffic	Use Step-wise Opposed Turn Model	Visibility restricted
(ALL)	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 (%)
B1	1	1	Cx/1	574	1800	100
		2	Ax/1	440	1800	100
C1	1	1	Bx/1	574	1800	100

Give Way Data - Movements - Conflicts

Arm	Traffic Stream	Movement	Destination traffic stream	Description	Controlling type	Controlling from traffic stream	Controlling to traffic stream	Percentage opposing (%)	Slope coefficient	Upstream signals visible	Conflict shift	Conflict duration
B1	1	1	Cx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.09		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0

		2	Ax/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.08		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.20		0	0
				T-junction opposing flow	TrafficStreamMovement	C2/1	Ax/1	100	0.13		0	0
				T-junction opposing flow	TrafficStreamMovement	C1/1	Bx/1	100	0.29		0	0
C1	1	1	Bx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.22		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
(ALL)	(untitled)				Farside	3.00	2.00	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	D	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(ALL)	11000

Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	100	100		0.00		

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
1	Library		✓	TrafficStream	Two-Way	A1/1	A1/1	Ax/1	Two-Way	B1/1	B1/1	Bx/1	Two-Way	C2/1	C1/1	Cx/1	✓

T-Junction Majors

T-Junction	Left Carriageway Width (m)	Right Carriageway Width (m)	Kerbed Central Reserve Width (m)	Width for C-B traffic (m)	Visibility for C-B traffic (m)
1	6.00	6.00	0.00	2.20	0.00

T-Junction Minors

T-Junction	B-C Lane Width (m)	B-A Lane Width (m)	B-C Visibility (m)	B-A Visibility (m)
1	2.20	2.20	0.00	0.00

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
1	574	0.09	0.22	440	0.08	0.20	0.13	0.29	574	0.22	0.22

Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1		✓	✓	Lane Balancing			✓			✓	1.25		

Normal Input Flows (Veh/hr)

From	To 1	To 2	To 3
1	0	254	245
2	415	0	286
3	191	182	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
1	1		A1/1	Ax/1	#0000FF
	2		B1/1	Bx/1	#FF0000
	3		C2/1, C1/1	Cx/1	#00FF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (Veh/hr)
1	1		1	2	A1/1, Bx/1	Normal	254
	2		1	3	A1/1, Cx/1	Normal	245
	3		2	3	B1/1, Cx/1	Normal	286
	4		2	1	B1/1, Ax/1	Normal	415

	5		3	1	C2/1, Ax/1	Normal	191
	6		3	2	C1/1, Bx/1	Normal	182

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (Veh)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	A1	1	45	120	499	9999	10	43.06	13.08	75.20	84.76	5.83	90.59
	Ax	1	34	197	606	1800	100	0.51	0.09	0.49	1.21	0.00	1.21
	B1	1	73	36	701	1800	52	23.25	15.80	90.87	64.28	6.96	71.24
	Bx	1	24	313	436	1800	100	1.23	6.28	36.13	2.12	1.67	3.79
	C1	1	63	58	182	1800	15	49.76	4.78	95.55	35.72	2.33	38.05
	C2	1	39	154	191	1800	25	24.03	3.36	67.26	18.10	1.99	20.09
	Cx	1	30	239	531	1800	100	1.04	6.07	34.92	2.17	1.49	3.67

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Calculated sat flow (Veh/hr)	Calculated capacity (Veh/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
17:00-18:00	A1	1	499	499	0		9999	1100	45		120	0.00	10	11
	Ax	1	606	606	0		1800	1800	34		197	0.55	100	100
	B1	1	701	701	0		1800	954	73		36	0.00	52	53
	Bx	1	436	436	0		1800	1800	24		313	1.27	100	100
	C1	1	182	182	0		1800	288	63		58	0.00	15	16
	C2	1	191	191	0		1800	486	39		154	0.00	25	27
	Cx	1	531	531	0		1800	1800	30		239	0.80	100	100

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	A1	1	12.00	43.06	5.78	0.19	84.76	84.76	93.17	458.17	6.74	5.83	5.83
	Ax	1	12.00	0.51	0.00	0.09	1.21	1.21	0.00	0.00	0.00	0.00	0.00
	B1	1	12.00	23.25	3.52	1.00	64.28	64.28	79.23	519.74	35.69	6.96	6.96
	Bx	1	12.00	1.23	0.11	0.04	2.12	2.12	30.54	131.75	1.39	1.67	1.67
	C1	1	3.60	49.76	1.98	0.53	35.72	35.72	101.93	166.89	18.62	2.33	2.33
	C2	1	3.60	24.03	1.15	0.13	18.10	18.10	82.92	149.36	9.02	1.99	1.99
	Cx	1	12.00	1.04	0.09	0.06	2.17	2.17	22.39	116.68	2.22	1.49	1.49

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (Veh)	Mean max queue (Veh)	Max queue storage (Veh)	Utilised storage (%)	Average storage excess queue (Veh)	Average limit excess queue (Veh)	Excess queue penalty (£ per hr)	Max end of green queue (Veh)	Max end of red queue (Veh)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))	Estimated blocking
17:00-18:00	A1	1	0.00	13.08	17.39	75.20	0.00	0.00	0.00	0.19	12.52	0.00	0.00	0.00	
	Ax	1	0.00	0.09	17.39	0.49	0.00	0.00	0.00			6.00	0.00	6.00	
	B1	1	0.00	15.80	17.39	90.87	0.00	0.00	0.00	1.00	10.16	0.00	0.00	0.00	
	Bx	1	0.00	6.28	17.39	36.13	0.00	0.00	0.00			56.00	0.00	56.00	
	C1	1	0.00	4.78	5.00	95.55	0.00	0.00	0.00	0.53	4.78	0.00	0.00	0.00	
	C2	1	0.00	3.36	5.00	67.26	0.00	0.00	0.00	0.13	3.36	0.00	0.00	0.00	
	Cx	1	0.00	6.07	17.39	34.92	0.00	0.00	0.00			28.00	0.00	28.00	

Traffic Stream Results: Journey times

Time Segment	Arm	Traffic Stream	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
17:00-18:00	A1	1	49.90	7.63	6.54	55.06
	Ax	1	60.60	2.11	28.78	12.51
	B1	1	70.10	6.86	10.21	35.25
	Bx	1	43.60	1.60	27.21	13.23
	C1	1	5.46	2.70	2.02	53.36
	C2	1	5.73	1.47	3.91	27.63
	Cx	1	53.10	1.92	27.61	13.04

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	Mean Max Queue EoTS (Veh)	Max End of Green Queue EoTS (Veh)	Max End of Red Queue EoTS (Veh)	PCU Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
17:00-18:00	A1	1	0.00	0.00	✓	0.00	13.08	0.19	12.52	1.00	0.00	90.59	90.59
	Ax	1	0.00	0.00	✓	0.00	0.09			1.00	0.00	1.21	1.21
	B1	1	0.00	0.00	✓	0.00	15.81	1.01	10.16	1.00	0.00	71.24	71.24
	Bx	1	0.00	0.00	✓	0.00	6.28			1.00	0.00	3.79	3.79
	C1	1	0.00	0.00	✓	0.00	4.78	0.54	4.78	1.00	0.00	38.05	38.05
	C2	1	0.00	0.00	✓	0.00	3.36	0.13	3.36	1.00	0.00	20.09	20.09
	Cx	1	0.00	0.00	✓	0.00	6.07			1.00	0.00	3.67	3.67

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
17:00-18:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
17:00-18:00	(ALL)	(ALL)	0	0	0		11000	770	0		Unrestricted	0.00	7	7

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Uniform delay (Ped-min/min)	Random plus oversat delay (Ped-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)
17:00-18:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Average storage excess queue (Ped)	Average limit excess queue (Ped)	Excess queue penalty (£ per hr)
17:00-18:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Journey times

Time Segment	Crossing	Side	Distance travelled (Ped-km/hr)	Time spent (Ped-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
17:00-18:00	(ALL)	(ALL)	0.00	0.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
17:00-18:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-min/min)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
18	20/12/2018 09:35:20	20/12/2018 09:35:21	17:00	100	228.63	14.67	73.48	B1/1	0	0	B1/1	Ax/1	B1/1	✓

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	73	0	3146	402	16.79	208.37	20.27	228.63

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
17:00-18:00	0	0	42	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))	Effective green (s (per cycle))
17:00-18:00	3146	3146	0		73		36	444	449

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	11.00	16.79	12.64	2.04	208.37	208.37	51.38	1542.59	73.68	20.27	20.27

Network Results: Queues and blocking

Time Segment	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))
17:00-18:00	95.55	0.00	90.00	0.00	90.00

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
17:00-18:00	288.49	24.29	11.88

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	PCU Factor	Cost of traffic penalties (£ per hr)	Controller stream penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
17:00-18:00	0.00	0.00	✓	0.00	1.00	0.00	0.00	228.63	228.63

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

From	To 1	To 2	To 3
1	0.0	68.9	68.8
2	47.8	0.0	47.7
3	40.1	65.7	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (Veh/hr)	Normal journey time (s)	Calculated Total Flow (Veh/hr)	Avg journey time (s)
1	1	2	254	68.94	254	68.94
2	1	3	245	68.82	245	68.82
3	2	3	286	47.67	286	47.67
4	2	1	415	47.75	415	47.75
5	3	1	191	40.13	191	40.13
6	3	2	182	65.68	182	65.68

Final Prediction Table

Traffic Stream Results

				SIGNALS			FLOWS		PERFORMANCE				PER PCU			QUEUES		WEIGHTS		PENALTIES	P.I.
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Second phase	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (Veh)	Max end of red queue (Veh)	Delay weighting multiplier (%)	Stop weighting multiplier (%)	Cost of traffic penalties (£ per hr)	P.I.
A1	1	Rathmullen Road (E)	2	1	A		499	9999	10	0.00	45	120	55.06	43.06	93.17	13.08	12.52	100	100	0.00	90.59
Ax	1	Rathmullen Road (E)					606	1800	100	6.00	34	197	12.51	0.51	0.00	0.09		100	100	0.00	1.21
B1	1	Marleys Lane	2	1	C		701	1800	52	0.00	73	36	35.25	23.25	79.23	15.80	10.16	100	100	0.00	71.24
Bx	1	Marleys Lane					436	1800	100	56.00	24	313	13.23	1.23	30.54	6.28		100	100	0.00	3.79
C1	1	Rathmullen Road (W)	2	1	B		182	1800	15	0.00	63	58	53.36	49.76	101.93	4.78	4.78	100	100	0.00	38.05
C2	1	Rathmullen Road (W)	2	1	A	B	191	1800	25	0.00	39	154	27.63	24.03	82.92	3.36	3.36	100	100	0.00	20.09
Cx	1	Rathmullen Road (W)					531	1800	100	28.00	30	239	13.04	1.04	22.39	6.07		100	100	0.00	3.67

Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE			PER PED		QUEUES	WEIGHTS	PENALTIES	P.I.
Pedestrian	Side	Name	Traffic node	Controller stream	Phase	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Degree of saturation (%)	Practical reserve capacity	Journey Time (s)	Mean Delay per Ped (s)	Mean max queue (Ped)	Delay weighting (%)	Cost of traffic penalties (£ per hr)	P.I.
(ALL)	(ALL)	(untitled)		1	D	0	11000	7	0	Unrestricted	0.00	0.00	0.00	100	0.00	0.00

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	288.49	24.29	11.88	12.64	2.04	208.37	20.27	0.00	228.63
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	288.49	24.29	11.88	12.64	2.04	208.37	20.27	0.00	228.63

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

A19 - 2038 - BASE + DEV + COM(PHASES 1 AND 2) - AM
D19 - 2038 - BASE + DEV + COM(PHASES 1 AND 2) - AM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-min/min)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
19	20/12/2018 09:35:23	20/12/2018 09:35:24	08:00	100	242.76	15.65	76.25	B1/1	0	0	B1/1	Bx/1	B1/1	✓

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2038 - BASE + DEV + COM(PHASES 1 AND 2) - AM		D19	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2038 - BASE + DEV + COM(PHASES 1 AND 2) - AM				08:00	

Network Options

Network timings

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

Signals options

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

Advanced

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

Traffic options

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

Advanced

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

Normal Traffic parameters

Dispersion type	Dispersion coefficient
Default	35

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Bus	1.00	70	15	0.47	30	85

Tram parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Tram	1.00	70	15	0.47	30	85

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order
Hill Climb (Fast)	15, 40, -1, 15, 40, 1, -1, 1	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05		✓	1

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
2		

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
A1			2
Ax			
B1			2
Bx			
C1			2
C2			2
Cx			

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
A1	1	Rahtmullen Road (E)			100.00	✓	Sum of lanes	9999	✓		Normal	
Ax	1	Rathmullen Road (E)			100.00	✓	Sum of lanes	1800			Normal	

B1	1	Marleys Lane			100.00	✓	Sum of lanes	1800	✓	✓	Normal	
Bx	1	Marleys Lane			100.00	✓	Sum of lanes	1800			Normal	
C1	1	Rathmullen Road (W)			30.00	✓	Sum of lanes	1800	✓	✓	Normal	
C2	1	Rathmullen Road (W)			30.00	✓	Sum of lanes	1800	✓		Normal	
Cx	1	Rathmullen Road (W)			100.00	✓	Sum of lanes	1800			Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Saturation flow (PCU/hr)
A1	1	1				9999
Ax	1	1				1800
B1	1	1				1800
Bx	1	1				1800
C1	1	1				1800
C2	1	1				1800
Cx	1	1				1800

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
A1	1	NetworkDefault	100	100	100		0.00		
Ax	1	NetworkDefault	100	100	100		0.00		
B1	1	NetworkDefault	100	100	100		0.00		
Bx	1	NetworkDefault	100	100	100		0.00		
C1	1	Flare	100	100	100		0.00		
C2	1	Flare	100	100	100		0.00		
Cx	1	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
(ALL)	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100

Normal - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	1	100	100

Flows

Arm	Traffic Stream	Total Flow (Veh/hr)	Normal Flow (Veh/hr)
A1	1	493	493
Ax	1	559	559
B1	1	398	398
Bx	1	679	679
C1	1	428	428
C2	1	365	365
Cx	1	446	446

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled	Second phase
A1	1	1	A		
B1	1	1	C		
C1	1	1	B		
C2	1	1	A	✓	B

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
A1	1	12.00	30.00
B1	1	12.00	30.00
C1	1	3.60	30.00
C2	1	3.60	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	1	1	B1/1	Ax/1	12.00	30.00	✓	Offside	45.00
Bx	1	1	A1/1	Bx/1	12.00	30.00	✓	Nearside	20.00
Cx	1	1	A1/1	Cx/1	12.00	30.00	✓	Straight	Straight Movement
Ax	1	2	C2/1	Ax/1	12.00	30.00	✓	Straight	Straight Movement
Bx	1	2	C1/1	Bx/1	12.00	30.00	✓	Offside	35.00
Cx	1	2	B1/1	Cx/1	12.00	30.00	✓	Nearside	20.00

Give Way Data

Arm	Traffic Stream	Opposed traffic	Use Step-wise Opposed Turn Model	Visibility restricted
(ALL)	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 (%)
B1	1	1	Cx/1	574	1800	100
		2	Ax/1	440	1800	100
C1	1	1	Bx/1	574	1800	100

Give Way Data - Movements - Conflicts

Arm	Traffic Stream	Movement	Destination traffic stream	Description	Controlling type	Controlling from traffic stream	Controlling to traffic stream	Percentage opposing (%)	Slope coefficient	Upstream signals visible	Conflict shift	Conflict duration
B1	1	1	Cx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.09		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0

		2	Ax/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.08		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.20		0	0
				T-junction opposing flow	TrafficStreamMovement	C2/1	Ax/1	100	0.13		0	0
				T-junction opposing flow	TrafficStreamMovement	C1/1	Bx/1	100	0.29		0	0
C1	1	1	Bx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.22		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
(ALL)	(untitled)				Farside	3.00	2.00	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	D	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(ALL)	11000

Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	100	100		0.00		

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
1	Library		✓	TrafficStream	Two-Way	A1/1	A1/1	Ax/1	Two-Way	B1/1	B1/1	Bx/1	Two-Way	C2/1	C1/1	Cx/1	✓

T-Junction Majors

T-Junction	Left Carriageway Width (m)	Right Carriageway Width (m)	Kerbed Central Reserve Width (m)	Width for C-B traffic (m)	Visibility for C-B traffic (m)
1	6.00	6.00	0.00	2.20	0.00

T-Junction Minors

T-Junction	B-C Lane Width (m)	B-A Lane Width (m)	B-C Visibility (m)	B-A Visibility (m)
1	2.20	2.20	0.00	0.00

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
1	574	0.09	0.22	440	0.08	0.20	0.13	0.29	574	0.22	0.22

Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1		✓	✓	Lane Balancing			✓			✓	1.25		

Normal Input Flows (Veh/hr)

		To		
		1	2	3
From	1	0	251	242
	2	194	0	204
	3	365	428	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
1	1		A1/1	Ax/1	#0000FF
	2		B1/1	Bx/1	#FF0000
	3		C2/1, C1/1	Cx/1	#00FF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (Veh/hr)
1	1		1	2	A1/1, Bx/1	Normal	251
	2		1	3	A1/1, Cx/1	Normal	242
	3		2	3	B1/1, Cx/1	Normal	204
	4		2	1	B1/1, Ax/1	Normal	194

	5		3	1	C2/1, Ax/1	Normal	365
	6		3	2	C1/1, Bx/1	Normal	428

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (Veh)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	A1	1	26	285	493	9999	18	34.85	11.69	67.19	67.78	5.19	72.97
	Ax	1	31	222	559	1800	100	0.45	0.07	0.40	0.99	0.00	0.99
	B1	1	76	31	398	1800	28	43.09	11.25	64.67	67.65	4.96	72.61
	Bx	1	38	165	679	1800	100	1.01	5.67	32.59	2.70	1.35	4.05
	C1	1	74	35	428	1800	31	39.16	9.13	182.67	66.11	5.13	71.24
	C2	1	40	152	365	1800	49	10.79	3.88	77.65	15.53	2.74	18.27
	Cx	1	25	304	446	1800	100	0.83	5.20	29.91	1.46	1.16	2.62

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Calculated sat flow (Veh/hr)	Calculated capacity (Veh/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
08:00-09:00	A1	1	493	493	0		9999	1900	26		285	0.00	18	19
	Ax	1	559	559	0		1800	1800	31		222	0.52	100	100
	B1	1	398	398	0		1800	522	76		31	0.00	28	29
	Bx	1	679	679	0		1800	1800	38		165	0.98	100	100
	C1	1	428	428	0		1800	576	74		35	0.00	31	32
	C2	1	365	365	0		1800	918	40		152	0.00	49	51
	Cx	1	446	446	0		1800	1800	25		304	1.03	100	100

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	A1	1	12.00	34.85	4.73	0.05	67.78	67.78	84.02	412.59	1.63	5.19	5.19
	Ax	1	12.00	0.45	0.00	0.07	0.99	0.99	0.00	0.00	0.00	0.00	0.00
	B1	1	12.00	43.09	3.58	1.19	67.65	67.65	99.44	354.18	41.58	4.96	4.96
	Bx	1	12.00	1.01	0.08	0.11	2.70	2.70	15.90	103.86	4.10	1.35	1.35
	C1	1	3.60	39.16	3.61	1.05	66.11	66.11	95.68	372.56	36.94	5.13	5.13
	C2	1	3.60	10.79	0.96	0.13	15.53	15.53	59.79	208.87	9.37	2.74	2.74
	Cx	1	12.00	0.83	0.06	0.04	1.46	1.46	20.75	91.07	1.47	1.16	1.16

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (Veh)	Mean max queue (Veh)	Max queue storage (Veh)	Utilised storage (%)	Average storage excess queue (Veh)	Average limit excess queue (Veh)	Excess queue penalty (£ per hr)	Max end of green queue (Veh)	Max end of red queue (Veh)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))	Estimated blocking
08:00-09:00	A1	1	0.00	11.69	17.39	67.19	0.00	0.00	0.00	0.05	11.14	0.00	0.00	0.00	
	Ax	1	0.00	0.07	17.39	0.40	0.00	0.00	0.00			7.00	0.00	7.00	
	B1	1	0.00	11.25	17.39	64.67	0.00	0.00	0.00	1.19	9.04	0.00	0.00	0.00	
	Bx	1	0.00	5.67	17.39	32.59	0.00	0.00	0.00			35.00	0.00	35.00	
	C1	1	0.00	9.13	5.00	182.67	0.94	0.00	0.00	1.05	9.13	0.00	0.00	0.00	
	C2	1	0.00	3.88	5.00	77.65	0.00	0.00	0.00	0.13	3.88	0.00	0.00	0.00	
	Cx	1	0.00	5.20	17.39	29.91	0.00	0.00	0.00			45.00	0.00	45.00	

Traffic Stream Results: Journey times

Time Segment	Arm	Traffic Stream	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	A1	1	49.30	6.42	7.68	46.85
	Ax	1	55.90	1.93	28.92	12.45
	B1	1	39.80	6.09	6.53	55.09
	Bx	1	67.90	2.45	27.68	13.01
	C1	1	12.84	5.08	2.53	42.76
	C2	1	10.95	1.46	7.51	14.39
	Cx	1	44.60	1.59	28.06	12.83

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	Mean Max Queue EoTS (Veh)	Max End of Green Queue EoTS (Veh)	Max End of Red Queue EoTS (Veh)	PCU Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	A1	1	0.00	0.00	✓	0.00	11.69	0.05	11.14	1.00	0.00	72.97	72.97
	Ax	1	0.00	0.00	✓	0.00	0.07			1.00	0.00	0.99	0.99
	B1	1	0.00	0.00	✓	0.00	11.27	1.20	9.05	1.00	0.00	72.61	72.61
	Bx	1	0.00	0.00	✓	0.00	5.67			1.00	0.00	4.05	4.05
	C1	1	0.00	0.00	✓	0.00	9.15	1.06	9.15	1.00	0.00	71.24	71.24
	C2	1	0.00	0.00	✓	0.00	3.88	0.13	3.88	1.00	0.00	18.27	18.27
	Cx	1	0.00	0.00	✓	0.00	5.20			1.00	0.00	2.62	2.62

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
08:00-09:00	(ALL)	(ALL)	0	0	0		11000	770	0		Unrestricted	0.00	7	7

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Uniform delay (Ped-min/min)	Random plus oversat delay (Ped-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)
08:00-09:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Average storage excess queue (Ped)	Average limit excess queue (Ped)	Excess queue penalty (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Journey times

Time Segment	Crossing	Side	Distance travelled (Ped-km/hr)	Time spent (Ped-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	(ALL)	(ALL)	0.00	0.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-min/min)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
19	20/12/2018 09:35:23	20/12/2018 09:35:24	08:00	100	242.76	15.65	76.25	B1/1	0	0	B1/1	Bx/1	B1/1	✓

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	76	0	3368	426	16.73	222.22	20.54	242.76

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	0	0	42	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))	Effective green (s (per cycle))
08:00-09:00	3368	3368	0		76		31	468	473

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	10.02	16.73	13.01	2.64	222.22	222.22	48.64	1543.13	95.10	20.54	20.54

Network Results: Queues and blocking

Time Segment	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))
08:00-09:00	182.67	0.00	87.00	0.00	87.00

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
08:00-09:00	281.29	25.03	11.24

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	PCU Factor	Cost of traffic penalties (£ per hr)	Controller stream penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	0.00	0.00	✓	0.00	1.00	0.00	0.00	242.76	242.76

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

	To

From		1	2	3
	1	0.0	60.5	60.1
	2	67.5	0.0	67.4
	3	26.8	55.4	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (Veh/hr)	Normal journey time (s)	Calculated Total Flow (Veh/hr)	Avg journey time (s)
1	1	2	251	60.55	251	60.55
2	1	3	242	60.10	242	60.10
3	2	3	204	67.42	204	67.42
4	2	1	194	67.54	194	67.54
5	3	1	365	26.84	365	26.84
6	3	2	428	55.37	428	55.37

Final Prediction Table

Traffic Stream Results

				SIGNALS			FLOWS		PERFORMANCE				PER PCU			QUEUES		WEIGHTS		PENALTIES	P.I.
Arm	TrafficStream	Name	Traffic node	Controller stream	Phase	Second phase	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (Veh)	Max end of red queue (Veh)	Delay weighting multiplier (%)	Stop weighting multiplier (%)	Cost of traffic penalties (£ per hr)	
A1	1	Rathmullen Road (E)	2	1	A		493	9999	18	0.00	26	285	46.85	34.85	84.02	11.69	11.14	100	100	0.00	72.97
Ax	1	Rathmullen Road (E)					559	1800	100	7.00	31	222	12.45	0.45	0.00	0.07		100	100	0.00	0.99
B1	1	Marleys Lane	2	1	C		398	1800	28	0.00	76	31	55.09	43.09	99.44	11.25	9.04	100	100	0.00	72.61
Bx	1	Marleys Lane					679	1800	100	35.00	38	165	13.01	1.01	15.90	5.67		100	100	0.00	4.05
C1	1	Rathmullen Road (W)	2	1	B		428<	1800	31	0.00	74	35	42.76	39.16	95.68	9.13+	9.13	100	100	0.00	71.24
C2	1	Rathmullen Road (W)	2	1	A	B	365	1800	49	0.00	40	152	14.39	10.79	59.79	3.88	3.88	100	100	0.00	18.27
Cx	1	Rathmullen Road (W)					446	1800	100	45.00	25	304	12.83	0.83	20.75	5.20		100	100	0.00	2.62

Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE			PER PED		QUEUES	WEIGHTS	PENALTIES	P.I.
Pedestrian	Side	Name	Traffic node	Controller stream	Phase	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Degree of saturation (%)	Practical reserve capacity	Journey Time (s)	Mean Delay per Ped (s)	Mean max queue (Ped)	Delay weighting (%)	Cost of traffic penalties (£ per hr)	
(ALL)	(ALL)	(untitled)		1	D	0	11000	7	0	Unrestricted	0.00	0.00	0.00	100	0.00	0.00

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	281.29	25.03	11.24	13.01	2.64	222.22	20.54	0.00	242.76
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	281.29	25.03	11.24	13.01	2.64	222.22	20.54	0.00	242.76

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

A20 - 2038 - BASE + DEV + COM(PHASES 1 AND 2) - PM
D20 - 2038 - BASE + DEV + COM(PHASES 1 AND 2) - PM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst over	Network within capacity

						min/ min)							all PRC	
20	20/12/2018 09:35:28	20/12/2018 09:35:29	17:00	100	395.63	25.78	91.60	B1/1	0	0	B1/1	Bx/1	B1/1	✓

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2038 - BASE + DEV + COM(PHASES 1 AND 2) - PM		D20	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2038 - BASE + DEV + COM(PHASES 1 AND 2) - PM				17:00	

Network Options

Network timings

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

Signals options

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

Advanced

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

Traffic options

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

Advanced

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

Normal Traffic parameters

Dispersion type	Dispersion coefficient
Default	35

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Bus	1.00	70	15	0.47	30	85

Tram parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Tram	1.00	70	15	0.47	30	85

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order
Hill Climb (Fast)	15, 40, -1, 15, 40, 1, -1, 1	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05		✓	1

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
2		

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
A1			2
Ax			
B1			2
Bx			
C1			2
C2			2
Cx			

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
A1	1	Rahtmullen Road (E)			100.00	✓	Sum of lanes	9999	✓		Normal	
Ax	1	Rathmullen Road (E)			100.00	✓	Sum of lanes	1800			Normal	
B1	1	Marleys Lane			100.00	✓	Sum of lanes	1800	✓	✓	Normal	
Bx	1	Marleys Lane			100.00	✓	Sum of lanes	1800			Normal	
C1	1	Rathmullen Road (W)			30.00	✓	Sum of lanes	1800	✓	✓	Normal	
C2	1	Rathmullen Road (W)			30.00	✓	Sum of lanes	1800	✓		Normal	
Cx	1	Rathmullen Road (W)			100.00	✓	Sum of lanes	1800			Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Saturation flow (PCU/hr)
A1	1	1				9999
Ax	1	1				1800
B1	1	1				1800
Bx	1	1				1800
C1	1	1				1800
C2	1	1				1800
Cx	1	1				1800

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
A1	1	NetworkDefault	100	100	100		0.00		
Ax	1	NetworkDefault	100	100	100		0.00		
B1	1	NetworkDefault	100	100	100		0.00		
Bx	1	NetworkDefault	100	100	100		0.00		
C1	1	Flare	100	100	100		0.00		
C2	1	Flare	100	100	100		0.00		
Cx	1	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
(ALL)	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100

Normal - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	1	100	100

Flows

Arm	Traffic Stream	Total Flow (Veh/hr)	Normal Flow (Veh/hr)
A1	1	540	540
Ax	1	630	630
B1	1	742	742
Bx	1	682	682
C1	1	428	428
C2	1	215	215
Cx	1	613	613

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled	Second phase
A1	1	1	A		
B1	1	1	C		
C1	1	1	B		
C2	1	1	A	✓	B

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
A1	1	12.00	30.00
B1	1	12.00	30.00
C1	1	3.60	30.00
C2	1	3.60	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	1	1	B1/1	Ax/1	12.00	30.00	✓	Offside	45.00
Bx	1	1	A1/1	Bx/1	12.00	30.00	✓	Nearside	20.00
Cx	1	1	A1/1	Cx/1	12.00	30.00	✓	Straight	Straight Movement
Ax	1	2	C2/1	Ax/1	12.00	30.00	✓	Straight	Straight Movement
Bx	1	2	C1/1	Bx/1	12.00	30.00	✓	Offside	35.00
Cx	1	2	B1/1	Cx/1	12.00	30.00	✓	Nearside	20.00

Give Way Data

Arm	Traffic Stream	Opposed traffic	Use Step-wise Opposed Turn Model	Visibility restricted
(ALL)	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 (%)
B1	1	1	Cx/1	574	1800	100
		2	Ax/1	440	1800	100
C1	1	1	Bx/1	574	1800	100

Give Way Data - Movements - Conflicts

Arm	Traffic Stream	Movement	Destination traffic stream	Description	Controlling type	Controlling from traffic stream	Controlling to traffic stream	Percentage opposing (%)	Slope coefficient	Upstream signals visible	Conflict shift	Conflict duration

B1	1	1	Cx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.09		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0
		2	Ax/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.08		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.20		0	0
				T-junction opposing flow	TrafficStreamMovement	C2/1	Ax/1	100	0.13		0	0
				T-junction opposing flow	TrafficStreamMovement	C1/1	Bx/1	100	0.29		0	0
C1	1	1	Bx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.22		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
(ALL)	(untitled)				Farside	3.00	2.00	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	D	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(ALL)	11000

Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	100	100		0.00		

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
1	Library		✓	TrafficStream	Two-Way	A1/1	A1/1	Ax/1	Two-Way	B1/1	B1/1	Bx/1	Two-Way	C2/1	C1/1	Cx/1	✓

T-Junction Majors

T-Junction	Left Carriageway Width (m)	Right Carriageway Width (m)	Kerbed Central Reserve Width (m)	Width for C-B traffic (m)	Visibility for C-B traffic (m)
1	6.00	6.00	0.00	2.20	0.00

T-Junction Minors

T-Junction	B-C Lane Width (m)	B-A Lane Width (m)	B-C Visibility (m)	B-A Visibility (m)
1	2.20	2.20	0.00	0.00

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
1	574	0.09	0.22	440	0.08	0.20	0.13	0.29	574	0.22	0.22

Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1		✓	✓	Lane Balancing			✓			✓	1.25		

Normal Input Flows (Veh/hr)

From	To 1	To 2	To 3
1	0	254	286
2	415	0	327
3	215	428	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
1	1		A1/1	Ax/1	#0000FF
	2		B1/1	Bx/1	#FF0000
	3		C2/1, C1/1	Cx/1	#00FF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (Veh/hr)
1	1		1	2	A1/1, Bx/1	Normal	254
	2		1	3	A1/1, Cx/1	Normal	286
	3		2	3	B1/1, Cx/1	Normal	327
	4		2	1	B1/1, Ax/1	Normal	415
	5		3	1	C2/1, Ax/1	Normal	215
	6		3	2	C1/1, Bx/1	Normal	428

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (Veh)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	A1	1	68	48	540	9999	7	49.38	15.24	87.65	105.18	6.79	111.97
	Ax	1	35	186	630	1800	100	0.54	0.09	0.54	1.34	0.00	1.34
	B1	1	92	9	742	1800	44	46.74	23.50	135.12	136.81	10.30	147.11
	Bx	1	38	164	682	1800	100	1.19	6.43	36.95	3.21	1.69	4.90
	C1	1	88	14	428	1800	26	59.16	11.56	231.12	99.87	6.24	106.12
	C2	1	34	193	215	1800	33	18.26	3.25	65.07	15.48	1.97	17.46
	Cx	1	34	194	613	1800	100	1.72	8.67	49.82	4.16	2.59	6.75

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Calculated sat flow (Veh/hr)	Calculated capacity (Veh/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
17:00-18:00	A1	1	540	540	0		9999	800	68		48	0.00	7	8
	Ax	1	630	630	0		1800	1800	35		186	0.56	100	100
	B1	1	742	742	0		1800	810	92		9	0.00	44	45
	Bx	1	682	682	0		1800	1800	38		164	1.08	100	100
	C1	1	428	428	0		1800	486	88		14	0.00	26	27
	C2	1	215	215	0		1800	630	34		193	0.00	33	35
	Cx	1	613	613	0		1800	1800	34		194	0.88	100	100

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	A1	1	12.00	49.38	6.71	0.69	105.18	105.18	100.29	516.88	24.70	6.79	6.79
	Ax	1	12.00	0.54	0.00	0.09	1.34	1.34	0.00	0.00	0.00	0.00	0.00
	B1	1	12.00	46.74	5.30	4.33	136.81	136.81	110.70	673.40	147.98	10.30	10.30
	Bx	1	12.00	1.19	0.11	0.12	3.21	3.21	19.76	130.60	4.15	1.69	1.69
	C1	1	3.60	59.16	4.16	2.88	99.87	99.87	116.32	400.29	97.55	6.24	6.24
	C2	1	3.60	18.26	1.00	0.09	15.48	15.48	73.09	150.84	6.31	1.97	1.97
	Cx	1	12.00	1.72	0.21	0.09	4.16	4.16	33.66	203.15	3.16	2.59	2.59

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (Veh)	Mean max queue (Veh)	Max queue storage (Veh)	Utilised storage (%)	Average storage excess queue (Veh)	Average limit excess queue (Veh)	Excess queue penalty (£ per hr)	Max end of green queue (Veh)	Max end of red queue (Veh)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))	Estimated blocking
17:00-18:00	A1	1	0.00	15.24	17.39	87.65	0.00	0.00	0.00	0.69	14.49	0.00	0.00	0.00	
	Ax	1	0.00	0.09	17.39	0.54	0.00	0.00	0.00			7.00	0.00	7.00	
	B1	1	0.00	23.50	17.39	135.12	0.94	0.00	0.00	4.33	15.67	0.00	0.00	0.00	
	Bx	1	0.00	6.43	17.39	36.95	0.00	0.00	0.00			42.00	0.00	42.00	
	C1	1	0.00	11.56	5.00	231.12	2.37	0.00	0.00	2.88	11.56	0.00	0.00	0.00	
	C2	1	0.00	3.25	5.00	65.07	0.00	0.00	0.00	0.09	3.25	0.00	0.00	0.00	
	Cx	1	0.00	8.67	17.39	49.82	0.00	0.00	0.00			38.00	0.00	38.00	

Traffic Stream Results: Journey times

Time Segment	Arm	Traffic Stream	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
17:00-18:00	A1	1	54.00	9.21	5.87	61.38
	Ax	1	63.00	2.19	28.71	12.54
	B1	1	74.20	12.11	6.13	58.74
	Bx	1	68.20	2.50	27.29	13.19
	C1	1	12.84	7.46	1.72	62.76
	C2	1	6.45	1.31	4.94	21.86
	Cx	1	61.30	2.34	26.24	13.72

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	Mean Max Queue EoTS (Veh)	Max End of Green Queue EoTS (Veh)	Max End of Red Queue EoTS (Veh)	PCU Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
17:00-18:00	A1	1	0.00	0.00	✓	0.00	15.25	0.70	14.50	1.00	0.00	111.97	111.97
	Ax	1	0.00	0.00	✓	0.00	0.09			1.00	0.00	1.34	1.34
	B1	1	0.00	0.00	✓	0.00	23.79	4.62	15.96	1.00	0.00	147.11	147.11

	Bx	1	0.00	0.00	✓	0.00	6.43			1.00	0.00	4.90	4.90
	C1	1	0.00	0.00	✓	0.00	11.72	3.04	11.72	1.00	0.00	106.12	106.12
	C2	1	0.00	0.00	✓	0.00	3.25	0.09	3.25	1.00	0.00	17.46	17.46
	Cx	1	0.00	0.00	✓	0.00	8.67			1.00	0.00	6.75	6.75

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
17:00-18:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
17:00-18:00	(ALL)	(ALL)	0	0	0		11000	770	0		Unrestricted	0.00	7	7

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Uniform delay (Ped-min/min)	Random plus oversat delay (Ped-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)
17:00-18:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Average storage excess queue (Ped)	Average limit excess queue (Ped)	Excess queue penalty (£ per hr)
17:00-18:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Journey times

Time Segment	Crossing	Side	Distance travelled (Ped-km/hr)	Time spent (Ped-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
17:00-18:00	(ALL)	(ALL)	0.00	0.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
17:00-18:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-min/min)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
20	20/12/2018 09:35:28	20/12/2018 09:35:29	17:00	100	395.63	25.78	91.60	B1/1	0	0	B1/1	Bx/1	B1/1	✓

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	92	0	3850	410	24.10	366.05	29.58	395.63

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
17:00-18:00	0	0	42	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))	Effective green (s (per cycle))
17:00-18:00	3850	3850	0		92		9	452	457

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	10.60	24.10	17.49	8.29	366.05	366.05	61.27	2075.16	283.85	29.58	29.58

Network Results: Queues and blocking

Time Segment	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))
17:00-18:00	231.12	0.00	87.00	0.00	87.00

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
17:00-18:00	339.99	37.11	9.16

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	PCU Factor	Cost of traffic penalties (£ per hr)	Controller stream penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
17:00-18:00	0.00	0.00	✓	0.00	1.00	0.00	0.00	395.63	395.63

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

From	To 1	To 2	To 3
1	0.0	75.6	76.2
2	71.3	0.0	71.5
3	34.4	75.4	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (Veh/hr)	Normal journey time (s)	Calculated Total Flow (Veh/hr)	Avg journey time (s)
1	1	2	254	75.55	254	75.55
2	1	3	286	76.23	286	76.23
3	2	3	327	71.48	327	71.48
4	2	1	415	71.28	415	71.28
5	3	1	215	34.40	215	34.40
6	3	2	428	75.37	428	75.37

Final Prediction Table

Traffic Stream Results

				SIGNALS			FLOWS		PERFORMANCE				PER PCU			QUEUES		WEIGHTS		PENALTIES	P.I.
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Second phase	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (Veh)	Max end of red queue (Veh)	Delay weighting multiplier (%)	Stop weighting multiplier (%)	Cost of traffic penalties (£ per hr)	P.I.
A1	1	Rahtmullen Road (E)	2	1	A		540	9999	7	0.00	68	48	61.38	49.38	100.29	15.24	14.49	100	100	0.00	111.97
Ax	1	Rathmullen Road (E)					630	1800	100	7.00	35	186	12.54	0.54	0.00	0.09		100	100	0.00	1.34
B1	1	Marleys Lane	2	1	C		742 <	1800	44	0.00	92	9	58.74	46.74	110.70	23.50 +	15.67	100	100	0.00	147.11
Bx	1	Marleys Lane					682	1800	100	42.00	38	164	13.19	1.19	19.76	6.43		100	100	0.00	4.90
C1	1	Rathmullen Road (W)	2	1	B		428 <	1800	26	0.00	88	14	62.76	59.16	116.32	11.56 +	11.56	100	100	0.00	106.12
C2	1	Rathmullen Road (W)	2	1	A	B	215	1800	33	0.00	34	193	21.86	18.26	73.09	3.25	3.25	100	100	0.00	17.46
Cx	1	Rathmullen Road (W)					613	1800	100	38.00	34	194	13.72	1.72	33.66	8.67		100	100	0.00	6.75

Pedestrian Crossing Results

Pedestrian	Side	Name	Traffic node	SIGNALS Controller stream	SIGNALS Phase	FLOWS Calculated Flow Entering (Ped/hr)	FLOWS Calculated sat flow (Ped/hr)	PERFORMANCE Actual green (s (per cycle))	PERFORMANCE Degree of saturation (%)	PERFORMANCE Practical reserve capacity	PER PED Journey Time (s)	PER PED Mean Delay per Ped (s)	QUEUES Mean max queue (Ped)	WEIGHTS Delay weighting (%)	PENALTIES Cost of traffic penalties (£ per hr)	P.I.
(ALL)	(ALL)	(untitled)		1	D	0	11000	7	0	Unrestricted	0.00	0.00	0.00	100	0.00	0.00

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	339.99	37.11	9.16	17.49	8.29	366.05	29.58	0.00	395.63
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	339.99	37.11	9.16	17.49	8.29	366.05	29.58	0.00	395.63

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

TRANSYT 15

Version: 15.5.0.6767
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Filename: 26-11-2018 - R132-Rathmullen Road SIGNALISED.t15
Path: M:\Projects\18\18-014 - Rathmullan Drogheda SHD Planning Application\Design\Civil\Traffic\Junction Modelling\Junction 3 - 21-11-2018 - R132-Rathmullen Road
Report generation date: 26/11/2018 17:17:43

»A1 - 2038 BASE+COM+SITE -AM : D1 - 2038 - BASE+COM+SITE - AM* :
»A2 - 2038 BASE+COM+SITE - PM : D2 - 2038 - BASE+COM+SITE - PM* :
»A3 - 2038 BASE+DEV-AM : D3 - 2038 - BASE+SITE - AM* :
»A4 - 2038 BASE+DEV-PM : D4 - 2038 - BASE+SITE - PM* :
»A5 - 2038 BASE AM : D5 - 2038 - BASE AM* :
»A6 - 2038 BASE PM : D6 - 2038 - BASE PM* :

File summary

File description

File title	(untitled)
Location	
Site number	
UTCRegion	
Driving side	Left
Date	06/12/2011
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	DOMAIN\j.ulicna
Description	

Model and Results

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

Units

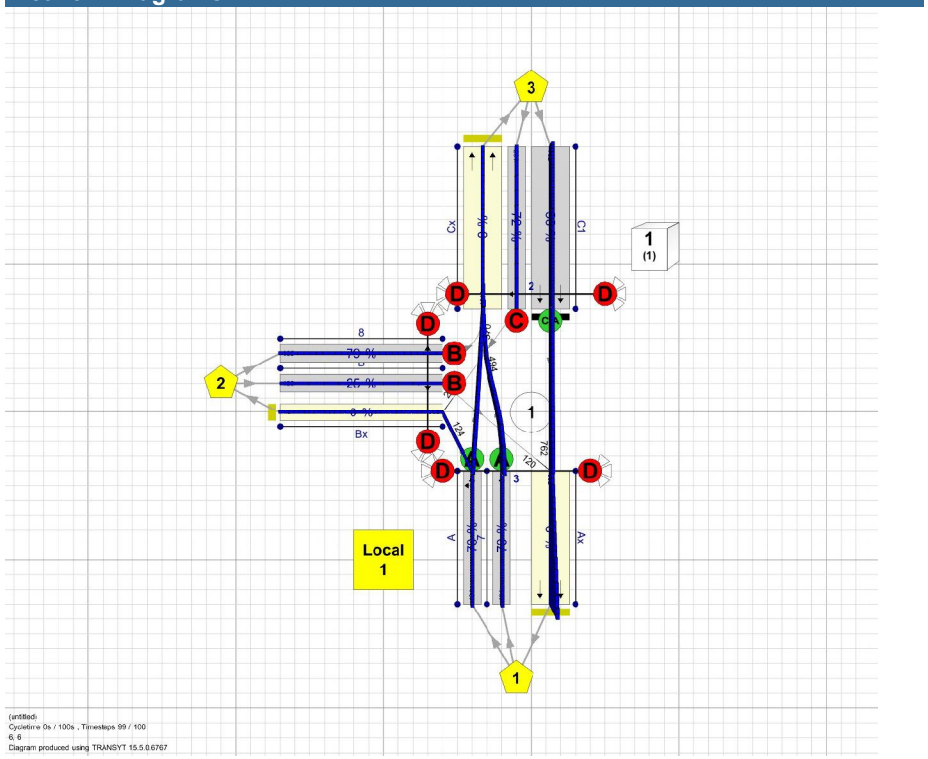
Cost units	Speed units	Distance units	Fuel economy units	Fuel rate units	Mass units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
£	kph	m	mpg	l/h	kg	PCU	PCU	perHour	s	-Hour	perHour

Sorting

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

Generated on 26/11/2018 17:18:18 using TRANSYT 15 (15.5.0.6767)

Network Diagrams



A1 - 2038 BASE+COM+SITE -AM
D1 - 2038 - BASE+COM+SITE - AM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
1	26/11/2018 17:17:17	26/11/2018 17:17:18	08:00	100	353.01	22.99	80.56	8/1	0	0	8/1	Ax/1	8/

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2038 BASE+COM+SITE -AM		D1	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2038 - BASE+COM+SITE - AM				08:00	

Network Options

Network timings

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

Signals options

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

Advanced

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

Traffic options

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

Advanced

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

Normal Traffic parameters

Dispersion type	Dispersion coefficient
Default	35

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Bus	1.00	70	15	0.47	30	85

Tram parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Tram	1.00	0	0	0.47	100	100

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order
Hill Climb (Fast)	15, 40, -1, 15, 40, 1, -1, 1	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05		✓	1

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
1	(untitled)	

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
7	(untitled)		1
8	(untitled)		1
A	(untitled)		1
B	(untitled)		1
Ax	(untitled)		
Bx	(untitled)		
C1	(untitled)		1
Cx	(untitled)		

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
7	1	(untitled)			250.00	✓	Sum of lanes	1800	✓		Normal	
8	1	(untitled)			50.00	✓	Sum of lanes	1800	✓		Normal	
A	1	(untitled)			250.00	✓	Sum of lanes	1800	✓		Normal	
B	1	(untitled)			20.00	✓	Sum of lanes	1800	✓		Normal	
Ax	1	(untitled)			250.00						Normal	
Bx	1	(untitled)			100.00						Normal	
C1	1	(untitled)			250.00	✓	Sum of lanes	3600	✓		Normal	
	2	(untitled)			20.00	✓	Sum of lanes	1800	✓		Normal	
Cx	1	(untitled)			250.00						Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Saturation flow (PCU/hr)
7	1	1	(untitled)			1800
8	1	1	(untitled)			1800
A	1	1	(untitled)			1800
B	1	1	(untitled)			1800
Ax	1	1	(untitled)			
		2	(untitled)			
Bx	1	1	(untitled)			
C1	1	1	(untitled)			1800
		2	(untitled)			1800
	2	1	(untitled)			1800
Cx	1	1	(untitled)			
		2	(untitled)			

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
(ALL)	(ALL)	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100

Normal - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	(ALL)	100	100

Flows

Arm	Traffic Stream	Total Flow (PCU/hr)	Normal Flow (PCU/hr)
7	1	492	492
8	1	377	377
A	1	492	492
B	1	214	214
Ax	1	843	843
Bx	1	475	475
C1	1	629	629
	2	325	325
Cx	1	1210	1210

TRL THE FUTURE OF TRANSPORT
Generated on 26/11/2018 17:18:18 using TRANSYT 15 (15.5.0.6767)

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled	Second phase
7	1	1	A		
8	1	1	B		
A	1	1	A		
B	1	1	B		
C1	1	1	C	✓	A
	2	1	C		

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
7	1	30.00	30.00
8	1	6.00	30.00
A	1	30.00	30.00
B	1	2.40	30.00
C1	1	30.00	30.00
	2	2.40	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	1	1	B/1	Ax/1	30.00	30.00	✓	Offside	75.00
Bx	1	1	A/1	Bx/1	12.00	30.00	✓	Nearside	25.00
Cx	1	1	A/1	Cx/1	30.00	30.00	✓	Straight	Straight Movement
Ax	1	2	C1/1	Ax/1	30.00	30.00	✓	Straight	Straight Movement
Bx	1	2	C1/2	Bx/1	12.00	30.00	✓	Offside	62.50
Cx	1	2	7/1	Cx/1	30.00	30.00	✓	Straight	Straight Movement
		3	8/1	Cx/1	30.00	30.00	✓	Nearside	33.75

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
(ALL)	(untitled)				Farside	3.00	2.00	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	D	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(ALL)	11000

Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	100	100		0.00		

Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1	(untitled)	✓	✓	Lane Balancing			✓			✓	1.25		

Normal Input Flows (PCU/hr)

		To		
		1	2	3
From	1	0	150	833
	2	214	0	377
	3	629	325	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
1	1	(untitled)	A/1, 7/1	Ax/1	#FF0000
	2	(untitled)	B/1, 8/1	Bx/1	#00FF00
	3	(untitled)	C1/1, C1/2	Cx/1	#0000FF

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
1	1		3	1	C1/1, Ax/1	Normal	629
	2		3	2	C1/2, Bx/1	Normal	325
	3		1	2	A/1, Bx/1	Normal	150
	5		2	1	B/1, Ax/1	Normal	214
	6		1	3	7/1, Cx/1	Normal	492
	7		2	3	8/1, Cx/1	Normal	377
	8		1	3	A/1, Cx/1	Normal	342

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (PCU)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	7	1	74	22	492	1800	36	34.80	12.78	29.39	67.54	5.66	73.20
	8	1	81	12	377	1800	25	49.78	11.32	130.23	74.02	5.02	79.04
	A	1	74	22	492	1800	36	34.80	12.78	29.39	67.54	5.66	73.20
	B	1	46	97	214	1800	25	34.30	5.13	147.36	28.95	2.28	31.23
	Ax	1	0	Unrestricted	843	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	Bx	1	0	Unrestricted	475	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	C1	1	29	209	629	3600	58	9.12	8.10	9.31	22.63	3.59	26.22
		2	79	15	325	1800	22	51.32	9.76	280.69	65.79	4.33	70.13
	Cx	1	0	Unrestricted	1211	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Calculated sat flow (PCU/hr)	Calculated capacity (PCU/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))	Effec gree (pe cycl
08:00-09:00	7	1	492	492	-1		1800	666	74		22	0.00	36	37
	8	1	377	377	0		1800	468	81		12	0.00	25	26
	A	1	492	492	-1		1800	666	74		22	0.00	36	37
	B	1	214	214	0		1800	468	46		97	0.00	25	26
	Ax	1	843	843	0		Unrestricted	Unrestricted	0		Unrestricted	0.38	100	10
	Bx	1	475	475	0		Unrestricted	Unrestricted	0		Unrestricted	0.88	100	10
	C1	1	629	629	0		3600	2160	29		209	0.00	58	60
		2	325	325	0		1800	414	79		15	0.00	22	23
	Cx	1	1211	1211	-1		Unrestricted	Unrestricted	0		Unrestricted	0.57	100	10

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	7	1	30.00	34.80	3.73	1.02	67.54	67.54	91.75	415.22	36.17	5.66	5.66
	8	1	6.00	49.78	3.63	1.59	74.02	74.02	106.10	345.03	54.97	5.02	5.02
	A	1	30.00	34.80	3.73	1.02	67.54	67.54	91.75	415.22	36.17	5.66	5.66
	B	1	2.40	34.30	1.85	0.19	28.95	28.95	85.00	175.06	6.84	2.28	2.28
	Ax	1	30.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Bx	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	C1	1	30.00	9.12	1.53	0.06	22.63	22.63	45.46	283.79	2.15	3.59	3.59
		2	2.40	51.32	3.27	1.37	65.79	65.79	106.30	298.08	47.41	4.33	4.33
	Cx	1	30.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (PCU)	Mean max queue (PCU)	Max queue storage (PCU)	Utilised storage (%)	Average storage excess queue (PCU)	Average limit excess queue (PCU)	Excess queue penalty (£ per hr)	Max end of green queue (PCU)	Max end of red queue (PCU)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))	Estimated blocking
08:00-09:00	7	1	0.00	12.78	43.48	29.39	0.00	0.00	0.00	1.02	9.63	0.00	0.00	0.00	
	8	1	0.00	11.32	8.70	130.23	0.34	0.00	0.00	1.59	9.33	0.00	0.00	0.00	
	A	1	0.00	12.78	43.48	29.39	0.00	0.00	0.00	1.02	9.63	0.00	0.00	0.00	
	B	1	0.00	5.13	3.48	147.36	0.24	0.00	0.00	0.19	4.59	0.00	0.00	0.00	
	Ax	1	0.00	0.00	86.96	0.00	0.00	0.00	0.00			0.00	0.00	0.00	
	Bx	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			35.00	0.00	35.00	
	C1	1	0.00	8.10	86.96	9.31	0.00	0.00	0.00	0.06	6.70	0.00	0.00	0.00	
		2	0.00	9.76	3.48	280.69	2.22	0.00	0.00	1.37	8.32	0.00	0.00	0.00	
	Cx	1	0.00	0.00	86.96	0.00	0.00	0.00	0.00			6.00	0.00	6.00	

Traffic Stream Results: Journey times

Time Segment	Arm	Traffic Stream	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	7	1	123.00	8.86	13.89	64.80
	8	1	18.85	5.84	3.23	55.78
	A	1	123.00	8.86	13.89	64.80
	B	1	4.28	2.18	1.96	36.70
	Ax	1	210.75	7.03	30.00	30.00
	Bx	1	47.50	1.58	30.00	12.00
	C1	1	157.25	6.84	23.01	39.12
		2	6.50	4.85	1.34	53.72
	Cx	1	302.75	10.09	30.00	30.00

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	Mean Max Queue EoTS (PCU)	Max End of Green Queue EoTS (PCU)	Max End of Red Queue EoTS (PCU)	PCU Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	7	1	0.00	0.00	✓	0.00	12.79	1.03	9.64	1.00	0.00	73.20	73.20
	8	1	0.00	0.00	✓	0.00	11.36	1.63	9.37	1.00	0.00	79.04	79.04
	A	1	0.00	0.00	✓	0.00	12.79	1.03	9.64	1.00	0.00	73.20	73.20
	B	1	0.00	0.00	✓	0.00	5.13	0.19	4.59	1.00	0.00	31.23	31.23
	Ax	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00	0.00
	Bx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00	0.00
	C1	1	0.00	0.00	✓	0.00	8.10	0.06	6.70	1.00	0.00	26.22	26.22
		2	0.00	0.00	✓	0.00	9.79	1.40	8.35	1.00	0.00	70.13	70.13
	Cx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00	0.00

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s (per cycle))	Eff gr (c
08:00-09:00	(ALL)	(ALL)	0	0	0		11000	770	0		Unrestricted	0.00	7	

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Uniform delay (Ped-hr/hr)	Random plus oversat delay (Ped-hr/hr)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)
08:00-09:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Average storage excess queue (Ped)	Average limit excess queue (Ped)	Excess queue penalty (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Journey times

Time Segment	Crossing	Side	Distance travelled (Ped-km/hr)	Time spent (Ped-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	(ALL)	(ALL)	0.00	0.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit over PR
1	26/11/2018 17:17:17	26/11/2018 17:17:18	08:00	100	353.01	22.99	80.56	8/1	0	0	8/1	Ax/1	8/

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	81	0	5058	502	16.36	326.48	26.53	353.01

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	0	0	42	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))	Effective green (s (per cycle))
08:00-09:00	5058	5058	-2		81		12	544	551

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	23.58	16.36	17.74	5.25	326.48	326.48	41.84	1932.39	183.71	26.53	26.53

Network Results: Queues and blocking

Time Segment	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))
08:00-09:00	280.69	0.00	41.00	0.00	41.00

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
08:00-09:00	993.88	56.12	17.71

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	PCU Factor	Cost of traffic penalties (£ per hr)	Controller stream penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	0.00	0.00	✓	0.00	1.00	0.00	0.00	353.01	353.01

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

		To		
		1	2	3
From	1	0.0	76.8	94.8
	2	66.7	0.0	85.8
	3	69.1	65.7	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (PCU/hr)	Normal journey time (s)	Calculated Total Flow (PCU/hr)	Avg journey time (s)
1	3	1	629	69.12	629	69.12
2	3	2	325	65.72	325	65.72
3	1	2	150	76.80	150	76.80
5	2	1	214	66.70	214	66.70
6	1	3	492	94.80	492	94.80
7	2	3	377	85.78	377	85.78
8	1	3	342	94.80	342	94.80

Final Prediction Table

Traffic Stream Results

				SIGNALS			FLOWS		PERFORMANCE				PER PCU			
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Second phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	q (
7	1	(untitled)	1	1	A		492	1800	36	0.00	74	22	64.80	34.80	91.75	1
8	1	(untitled)	1	1	B		377 <	1800	25	0.00	81	12	55.78	49.78	106.10	1
A	1	(untitled)	1	1	A		492	1800	36	0.00	74	22	64.80	34.80	91.75	1
B	1	(untitled)	1	1	B		214 <	1800	25	0.00	46	97	36.70	34.30	85.00	5
Ax	1	(untitled)					843	Unrestricted	100	0.00	0	Unrestricted	30.00	0.00	0.00	
Bx	1	(untitled)					475	Unrestricted	100	35.00	0	Unrestricted	12.00	0.00	0.00	
C1	1	(untitled)	1	1	C	A	629	3600	58	0.00	29	209	39.12	9.12	45.46	
	2	(untitled)	1	1	C		325 <	1800	22	0.00	79	15	53.72	51.32	106.30	9
Cx	1	(untitled)					1211	Unrestricted	100	6.00	0	Unrestricted	30.00	0.00	0.00	

Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE			PER PED		QUEUES	WEIGHTS	P
Pedestrian	Side	Name	Traffic node	Controller stream	Phase	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Degree of saturation (%)	Practical reserve capacity	JourneyTime (s)	Mean Delay per Ped (s)	Mean max queue (Ped)	Delay weighting (%)	(
(ALL)	(ALL)	(untitled)		1	D	0	11000	7	0	Unrestricted	0.00	0.00	0.00	100	

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Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	993.88	56.12	17.71	17.74	5.25	326.48	26.53	0.00	353.01
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	993.88	56.12	17.71	17.74	5.25	326.48	26.53	0.00	353.01

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

A2 - 2038 BASE+COM+SITE - PM
D2 - 2038 - BASE+COM+SITE - PM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
2	26/11/2018 17:17:20	26/11/2018 17:17:21	18:00	100	408.42	26.67	87.24	8/1	0	0	8/1	Ax/1	8/

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2038 BASE+COM+SITE - PM		D2	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2038 - BASE+COM+SITE - PM				18:00	

Network Options

Network timings

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

Signals options

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

Advanced

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

Traffic options

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

Advanced

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

Normal Traffic parameters

Dispersion type	Dispersion coefficient
Default	35

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Bus	1.00	70	15	0.47	30	85

Tram parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Tram	1.00	0	0	0.47	100	100

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order
Hill Climb (Fast)	15, 40, -1, 15, 40, 1, -1, 1	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05		✓	1

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
1	(untitled)	

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
7	(untitled)		1
8	(untitled)		1
A	(untitled)		1
B	(untitled)		1
Ax	(untitled)		
Bx	(untitled)		
C1	(untitled)		1
Cx	(untitled)		

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
7	1	(untitled)			250.00	✓	Sum of lanes	1800	✓		Normal	
8	1	(untitled)			50.00	✓	Sum of lanes	1800	✓		Normal	
A	1	(untitled)			250.00	✓	Sum of lanes	1800	✓		Normal	
B	1	(untitled)			20.00	✓	Sum of lanes	1800	✓		Normal	
Ax	1	(untitled)			250.00						Normal	
Bx	1	(untitled)			100.00						Normal	
C1	1	(untitled)			250.00	✓	Sum of lanes	3600	✓		Normal	
	2	(untitled)			20.00	✓	Sum of lanes	1800	✓		Normal	
Cx	1	(untitled)			250.00						Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Saturation flow (PCU/hr)
7	1	1	(untitled)			1800
8	1	1	(untitled)			1800
A	1	1	(untitled)			1800
B	1	1	(untitled)			1800
Ax	1	1	(untitled)			
		2	(untitled)			
Bx	1	1	(untitled)			
C1	1	1	(untitled)			1800
		2	(untitled)			1800
	2	1	(untitled)			1800
Cx	1	1	(untitled)			
		2	(untitled)			

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
(ALL)	(ALL)	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100

Normal - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	(ALL)	100	100

Flows

Arm	Traffic Stream	Total Flow (PCU/hr)	Normal Flow (PCU/hr)
7	1	527	527
8	1	424	424
A	1	527	527
B	1	159	159
Ax	1	921	921
Bx	1	518	518
C1	1	762	762
	2	328	328
Cx	1	1287	1287

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Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled	Second phase
7	1	1	A		
8	1	1	B		
A	1	1	A		
B	1	1	B		
C1	1	1	C	✓	A
	2	1	C		

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
7	1	30.00	30.00
8	1	6.00	30.00
A	1	30.00	30.00
B	1	2.40	30.00
C1	1	30.00	30.00
	2	2.40	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	1	1	B/1	Ax/1	30.00	30.00	✓	Offside	75.00
Bx	1	1	A/1	Bx/1	12.00	30.00	✓	Nearside	25.00
Cx	1	1	A/1	Cx/1	30.00	30.00	✓	Straight	Straight Movement
Ax	1	2	C1/1	Ax/1	30.00	30.00	✓	Straight	Straight Movement
Bx	1	2	C1/2	Bx/1	12.00	30.00	✓	Offside	62.50
Cx	1	2	7/1	Cx/1	30.00	30.00	✓	Straight	Straight Movement
		3	8/1	Cx/1	30.00	30.00	✓	Nearside	33.75

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
(ALL)	(untitled)				Farside	3.00	2.00	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	D	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(ALL)	11000

Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	100	100		0.00		

Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1	(untitled)	✓	✓	Lane Balancing			✓			✓	1.25		

Normal Input Flows (PCU/hr)

		To		
		1	2	3
From	1	0	190	863
	2	159	0	424
	3	762	328	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
1	1	(untitled)	A/1, 7/1	Ax/1	#FF0000
	2	(untitled)	B/1, 8/1	Bx/1	#00FF00
	3	(untitled)	C1/1, C1/2	Cx/1	#0000FF

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
1	1		3	1	C1/1, Ax/1	Normal	762
	2		3	2	C1/2, Bx/1	Normal	328
	3		1	2	A/1, Bx/1	Normal	190
	5		2	1	B/1, Ax/1	Normal	159
	6		1	3	7/1, Cx/1	Normal	527
	7		2	3	8/1, Cx/1	Normal	424
	8		1	3	A/1, Cx/1	Normal	337

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (PCU)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
18:00-19:00	7	1	79	14	527	1800	36	37.99	14.48	33.31	78.97	6.36	85.33
	8	1	87	3	424	1800	26	57.59	13.87	159.46	96.32	6.11	102.42
	A	1	79	14	527	1800	36	37.99	14.48	33.31	78.97	6.36	85.33
	B	1	33	175	159	1800	26	31.03	3.61	103.86	19.46	1.60	21.05
	Ax	1	0	Unrestricted	921	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	Bx	1	0	Unrestricted	518	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	C1	1	36	151	762	3600	57	10.16	10.47	12.04	30.52	4.70	35.22
		2	83	9	328	1800	21	57.53	10.51	302.09	74.43	4.64	79.07
	Cx	1	0	Unrestricted	1288	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Calculated sat flow (PCU/hr)	Calculated capacity (PCU/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))	Effec gree (pe cycl
18:00-19:00	7	1	527	527	-1	✓	1800	666	79		14	0.00	36	37
	8	1	424	424	0		1800	486	87		3	0.00	26	27
	A	1	527	527	-1	✓	1800	666	79		14	0.00	36	37
	B	1	159	159	0		1800	486	33		175	0.00	26	27
	Ax	1	921	921	0		Unrestricted	Unrestricted	0		Unrestricted	0.42	100	10
	Bx	1	518	518	0		Unrestricted	Unrestricted	0		Unrestricted	0.84	100	10
	C1	1	762	762	0		3600	2124	36		151	0.00	57	59
		2	328	328	0		1800	396	83		9	0.00	21	22
	Cx	1	1288	1288	-1	✓	Unrestricted	Unrestricted	0		Unrestricted	0.53	100	10

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
18:00-19:00	7	1	30.00	37.99	4.11	1.45	78.97	78.97	96.30	456.46	51.04	6.36	6.36
	8	1	6.00	57.59	4.11	2.68	96.32	96.32	114.87	395.93	91.10	6.11	6.11
	A	1	30.00	37.99	4.11	1.45	78.97	78.97	96.30	456.46	51.04	6.36	6.36
	B	1	2.40	31.03	1.29	0.08	19.46	19.46	80.02	124.39	2.84	1.60	1.60
	Ax	1	30.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Bx	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	C1	1	30.00	10.16	2.05	0.10	30.52	30.52	49.16	371.03	3.61	4.70	4.70
		2	2.40	57.53	3.39	1.85	74.43	74.43	112.77	306.50	63.39	4.64	4.64
	Cx	1	30.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (PCU)	Mean max queue (PCU)	Max queue storage (PCU)	Utilised storage (%)	Average storage excess queue (PCU)	Average limit excess queue (PCU)	Excess queue penalty (£ per hr)	Max end of green queue (PCU)	Max end of red queue (PCU)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))	Estimated blocking
18:00-19:00	7	1	0.00	14.48	43.48	33.31	0.00	0.00	0.00	1.45	10.68	0.00	0.00	0.00	
	8	1	0.00	13.87	8.70	159.46	1.16	0.00	0.00	2.68	11.27	0.00	0.00	0.00	
	A	1	0.00	14.48	43.48	33.31	0.00	0.00	0.00	1.45	10.68	0.00	0.00	0.00	
	B	1	0.00	3.61	3.48	103.86	0.00	0.00	0.00	0.08	3.30	0.00	0.00	0.00	
	Ax	1	0.00	0.00	86.96	0.00	0.00	0.00	0.00			0.00	0.00	0.00	
	Bx	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			35.00	0.00	35.00	
	C1	1	0.00	10.47	86.96	12.04	0.00	0.00	0.00	0.10	8.36	0.00	0.00	0.00	
		2	0.00	10.51	3.48	302.09	2.75	0.00	0.00	1.85	8.96	0.00	0.00	0.00	
	Cx	1	0.00	0.00	86.96	0.00	0.00	0.00	0.00			4.00	0.00	4.00	

Traffic Stream Results: Journey times

Time Segment	Arm	Traffic Stream	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
18:00-19:00	7	1	131.75	9.95	13.24	67.99
	8	1	21.20	7.49	2.83	63.59
	A	1	131.75	9.95	13.24	67.99
	B	1	3.18	1.48	2.15	33.43
	Ax	1	230.25	7.68	30.00	30.00
	Bx	1	51.80	1.73	30.00	12.00
	C1	1	190.50	8.50	22.41	40.16
		2	6.56	5.46	1.20	59.93
	Cx	1	322.00	10.73	30.00	30.00

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	Mean Max Queue EoTS (PCU)	Max End of Green Queue EoTS (PCU)	Max End of Red Queue EoTS (PCU)	PCU Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
18:00-19:00	7	1	0.00	0.00	✓	0.00	14.50	1.48	10.70	1.00	0.00	85.33	85.33
	8	1	0.00	0.00	✓	0.00	14.00	2.82	11.41	1.00	0.00	102.42	102.42
	A	1	0.00	0.00	✓	0.00	14.50	1.48	10.70	1.00	0.00	85.33	85.33
	B	1	0.00	0.00	✓	0.00	3.61	0.08	3.30	1.00	0.00	21.05	21.05
	Ax	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00	0.00
	Bx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00	0.00
	C1	1	0.00	0.00	✓	0.00	10.47	0.10	8.36	1.00	0.00	35.22	35.22
		2	0.00	0.00	✓	0.00	10.58	1.92	9.03	1.00	0.00	79.07	79.07
	Cx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00	0.00

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
18:00-19:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s (per cycle))	Eff gr (c
18:00-19:00	(ALL)	(ALL)	0	0	0		11000	770	0		Unrestricted	0.00	7	

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Uniform delay (Ped-hr/hr)	Random plus oversat delay (Ped-hr/hr)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)
18:00-19:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Average storage excess queue (Ped)	Average limit excess queue (Ped)	Excess queue penalty (£ per hr)
18:00-19:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Journey times

Time Segment	Crossing	Side	Distance travelled (Ped-km/hr)	Time spent (Ped-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
18:00-19:00	(ALL)	(ALL)	0.00	0.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
18:00-19:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00	0.00

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Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit over PR
2	26/11/2018 17:17:20	26/11/2018 17:17:21	18:00	100	408.42	26.67	87.24	8/1	0	0	8/1	Ax/1	8/

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
18:00-19:00	87	0	5454	502	17.60	378.66	29.76	408.42

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
18:00-19:00	0	0	42	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))	Effective green (s (per cycle))
18:00-19:00	5454	5454	-2	✓	87		3	544	551

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
18:00-19:00	23.96	17.60	19.05	7.61	378.66	378.66	43.52	2110.76	263.02	29.76	29.76

Network Results: Queues and blocking

Time Segment	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))
18:00-19:00	302.09	0.00	39.00	0.00	39.00

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
18:00-19:00	1088.99	62.97	17.29

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	PCU Factor	Cost of traffic penalties (£ per hr)	Controller stream penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
18:00-19:00	0.00	0.00	✓	0.00	1.00	0.00	0.00	408.42	408.42

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

		To		
		1	2	3
From	1	0.0	80.0	98.0
	2	63.4	0.0	93.6
	3	70.2	71.9	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (PCU/hr)	Normal journey time (s)	Calculated Total Flow (PCU/hr)	Avg journey time (s)
1	3	1	762	70.16	762	70.16
2	3	2	328	71.93	328	71.93
3	1	2	190	79.99	190	79.99
5	2	1	159	63.43	159	63.43
6	1	3	527	97.99	527	97.99
7	2	3	424	93.59	424	93.59
8	1	3	337	97.99	337	97.99

Final Prediction Table

Traffic Stream Results

				SIGNALS			FLOWS		PERFORMANCE				PER PCU			
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Second phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	q (
7	1	(untitled)	1	1	A		527	1800	36	0.00	79	14	67.99	37.99	96.30	1
8	1	(untitled)	1	1	B		424 <	1800	26	0.00	87	3	63.59	57.59	114.87	1
A	1	(untitled)	1	1	A		527	1800	36	0.00	79	14	67.99	37.99	96.30	1
B	1	(untitled)	1	1	B		159 <	1800	26	0.00	33	175	33.43	31.03	80.02	3
Ax	1	(untitled)					921	Unrestricted	100	0.00	0	Unrestricted	30.00	0.00	0.00	
Bx	1	(untitled)					518	Unrestricted	100	35.00	0	Unrestricted	12.00	0.00	0.00	
C1	1	(untitled)	1	1	C	A	762	3600	57	0.00	36	151	40.16	10.16	49.16	1
	2	(untitled)	1	1	C		328 <	1800	21	0.00	83	9	59.93	57.53	112.77	1
Cx	1	(untitled)					1288	Unrestricted	100	4.00	0	Unrestricted	30.00	0.00	0.00	

Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE			PER PED		QUEUES	WEIGHTS	P
Pedestrian	Side	Name	Traffic node	Controller stream	Phase	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Degree of saturation (%)	Practical reserve capacity	JourneyTime (s)	Mean Delay per Ped (s)	Mean max queue (Ped)	Delay weighting (%)	(
(ALL)	(ALL)	(untitled)		1	D	0	11000	7	0	Unrestricted	0.00	0.00	0.00	100	

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	1088.99	62.97	17.29	19.05	7.61	378.66	29.76	0.00	408.42
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	1088.99	62.97	17.29	19.05	7.61	378.66	29.76	0.00	408.42

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

A3 - 2038 BASE+DEV-AM
D3 - 2038 - BASE+SITE - AM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
3	26/11/2018 17:17:23	26/11/2018 17:17:23	08:00	100	328.63	21.37	78.67	8/1	0	0	8/1	Ax/1	8/

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2038 BASE+DEV-AM		D3	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2038 - BASE+SITE - AM				08:00	

Network Options

Network timings

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

Signals options

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

Advanced

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

Traffic options

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

Advanced

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

Normal Traffic parameters

Dispersion type	Dispersion coefficient
Default	35

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Bus	1.00	70	15	0.47	30	85

Tram parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Tram	1.00	0	0	0.47	100	100

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order
Hill Climb (Fast)	15, 40, -1, 15, 40, 1, -1, 1	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05		✓	1

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
1	(untitled)	

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
7	(untitled)		1
8	(untitled)		1
A	(untitled)		1
B	(untitled)		1
Ax	(untitled)		
Bx	(untitled)		
C1	(untitled)		1
Cx	(untitled)		

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
7	1	(untitled)			250.00	✓	Sum of lanes	1800	✓		Normal	
8	1	(untitled)			50.00	✓	Sum of lanes	1800	✓		Normal	
A	1	(untitled)			250.00	✓	Sum of lanes	1800	✓		Normal	
B	1	(untitled)			20.00	✓	Sum of lanes	1800	✓		Normal	
Ax	1	(untitled)			250.00						Normal	
Bx	1	(untitled)			100.00						Normal	
C1	1	(untitled)			250.00	✓	Sum of lanes	3600	✓		Normal	
	2	(untitled)			20.00	✓	Sum of lanes	1800	✓		Normal	
Cx	1	(untitled)			250.00						Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Saturation flow (PCU/hr)
7	1	1	(untitled)			1800
8	1	1	(untitled)			1800
A	1	1	(untitled)			1800
B	1	1	(untitled)			1800
Ax	1	1	(untitled)			
		2	(untitled)			
Bx	1	1	(untitled)			
C1	1	1	(untitled)			1800
		2	(untitled)			1800
	2	1	(untitled)			1800
Cx	1	1	(untitled)			
		2	(untitled)			

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
(ALL)	(ALL)	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100

Normal - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	(ALL)	100	100

Flows

Arm	Traffic Stream	Total Flow (PCU/hr)	Normal Flow (PCU/hr)
7	1	487	487
8	1	354	354
A	1	487	487
B	1	191	191
Ax	1	820	820
Bx	1	457	457
C1	1	629	629
	2	316	316
Cx	1	1187	1187

TRL THE FUTURE OF TRANSPORT
Generated on 26/11/2018 17:18:18 using TRANSYT 15 (15.5.0.6767)

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled	Second phase
7	1	1	A		
8	1	1	B		
A	1	1	A		
B	1	1	B		
C1	1	1	C	✓	A
	2	1	C		

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
7	1	30.00	30.00
8	1	6.00	30.00
A	1	30.00	30.00
B	1	2.40	30.00
C1	1	30.00	30.00
	2	2.40	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	1	1	B/1	Ax/1	30.00	30.00	✓	Offside	75.00
Bx	1	1	A/1	Bx/1	12.00	30.00	✓	Nearside	25.00
Cx	1	1	A/1	Cx/1	30.00	30.00	✓	Straight	Straight Movement
Ax	1	2	C1/1	Ax/1	30.00	30.00	✓	Straight	Straight Movement
Bx	1	2	C1/2	Bx/1	12.00	30.00	✓	Offside	62.50
Cx	1	2	7/1	Cx/1	30.00	30.00	✓	Straight	Straight Movement
		3	8/1	Cx/1	30.00	30.00	✓	Nearside	33.75

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
(ALL)	(untitled)				Farside	3.00	2.00	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	D	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(ALL)	11000

Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	100	100		0.00		

Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1	(untitled)	✓	✓	Lane Balancing			✓			✓	1.25		

Normal Input Flows (PCU/hr)

		To		
		1	2	3
From	1	0	141	833
	2	191	0	354
	3	629	316	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
1	1	(untitled)	A/1, 7/1	Ax/1	#FF0000
	2	(untitled)	B/1, 8/1	Bx/1	#00FF00
	3	(untitled)	C1/1, C1/2	Cx/1	#0000FF

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
1	1		3	1	C1/1, Ax/1	Normal	629
	2		3	2	C1/2, Bx/1	Normal	316
	3		1	2	A/1, Bx/1	Normal	141
	5		2	1	B/1, Ax/1	Normal	191
	6		1	3	7/1, Cx/1	Normal	487
	7		2	3	8/1, Cx/1	Normal	354
	8		1	3	A/1, Cx/1	Normal	346

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (PCU)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	7	1	71	26	487	1800	37	32.75	12.23	28.13	62.91	5.42	68.34
	8	1	79	14	354	1800	24	49.13	10.53	121.13	68.60	4.66	73.26
	A	1	71	26	487	1800	37	32.75	12.23	28.13	62.91	5.42	68.34
	B	1	42	112	191	1800	24	34.40	4.56	131.08	25.92	2.03	27.95
	Ax	1	0	Unrestricted	820	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	Bx	1	0	Unrestricted	457	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	C1	1	29	214	629	3600	59	8.66	7.75	8.91	21.48	3.49	24.97
		2	76	18	316	1800	22	49.45	9.35	268.73	61.63	4.14	65.78
	Cx	1	0	Unrestricted	1187	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Calculated sat flow (PCU/hr)	Calculated capacity (PCU/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))	Effec gree (pe cycl
08:00-09:00	7	1	487	487	0		1800	684	71		26	0.00	37	38
	8	1	354	354	0		1800	450	79		14	0.00	24	25
	A	1	487	487	0		1800	684	71		26	0.00	37	38
	B	1	191	191	0		1800	450	42		112	0.00	24	25
	Ax	1	820	820	0		Unrestricted	Unrestricted	0		Unrestricted	0.37	100	10
	Bx	1	457	457	0		Unrestricted	Unrestricted	0		Unrestricted	0.88	100	10
	C1	1	629	629	0		3600	2196	29		214	0.00	59	61
		2	316	316	0		1800	414	76		18	0.00	22	23
	Cx	1	1187	1187	0		Unrestricted	Unrestricted	0		Unrestricted	0.58	100	10

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	7	1	30.00	32.75	3.56	0.87	62.91	62.91	88.84	401.94	30.69	5.42	5.42
	8	1	6.00	49.13	3.44	1.39	68.60	68.60	105.01	323.52	48.23	4.66	4.66
	A	1	30.00	32.75	3.56	0.87	62.91	62.91	88.84	401.94	30.69	5.42	5.42
	B	1	2.40	34.40	1.67	0.16	25.92	25.92	84.72	156.25	5.57	2.03	2.03
	Ax	1	30.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Bx	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	C1	1	30.00	8.66	1.45	0.06	21.48	21.48	44.28	276.45	2.07	3.49	3.49
		2	2.40	49.45	3.16	1.18	61.63	61.63	104.52	289.07	41.21	4.14	4.14
	Cx	1	30.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (PCU)	Mean max queue (PCU)	Max queue storage (PCU)	Utilised storage (%)	Average storage excess queue (PCU)	Average limit excess queue (PCU)	Excess queue penalty (£ per hr)	Max end of green queue (PCU)	Max end of red queue (PCU)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))	Estimated blocking
08:00-09:00	7	1	0.00	12.23	43.48	28.13	0.00	0.00	0.00	0.87	9.25	0.00	0.00	0.00	
	8	1	0.00	10.53	8.70	121.13	0.18	0.00	0.00	1.39	8.76	0.00	0.00	0.00	
	A	1	0.00	12.23	43.48	28.13	0.00	0.00	0.00	0.87	9.25	0.00	0.00	0.00	
	B	1	0.00	4.56	3.48	131.08	0.12	0.00	0.00	0.16	4.13	0.00	0.00	0.00	
	Ax	1	0.00	0.00	86.96	0.00	0.00	0.00	0.00			0.00	0.00	0.00	
	Bx	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			34.00	0.00	34.00	
	C1	1	0.00	7.75	86.96	8.91	0.00	0.00	0.00	0.06	6.52	0.00	0.00	0.00	
		2	0.00	9.35	3.48	268.73	1.99	0.00	0.00	1.18	7.94	0.00	0.00	0.00	
	Cx	1	0.00	0.00	86.96	0.00	0.00	0.00	0.00			7.00	0.00	7.00	

Traffic Stream Results: Journey times

Time Segment	Arm	Traffic Stream	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	7	1	121.75	8.49	14.34	62.75
	8	1	17.70	5.42	3.27	55.13
	A	1	121.75	8.49	14.34	62.75
	B	1	3.82	1.95	1.96	36.80
	Ax	1	205.00	6.83	30.00	30.00
	Bx	1	45.70	1.52	30.00	12.00
	C1	1	157.25	6.75	23.28	38.66
		2	6.32	4.55	1.39	51.85
	Cx	1	296.75	9.89	30.00	30.00

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	Mean Max Queue EoTS (PCU)	Max End of Green Queue EoTS (PCU)	Max End of Red Queue EoTS (PCU)	PCU Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	7	1	0.00	0.00	✓	0.00	12.24	0.87	9.26	1.00	0.00	68.34	68.34
	8	1	0.00	0.00	✓	0.00	10.56	1.42	8.79	1.00	0.00	73.26	73.26
	A	1	0.00	0.00	✓	0.00	12.24	0.87	9.26	1.00	0.00	68.34	68.34
	B	1	0.00	0.00	✓	0.00	4.56	0.16	4.14	1.00	0.00	27.95	27.95
	Ax	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00	0.00
	Bx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00	0.00
	C1	1	0.00	0.00	✓	0.00	7.75	0.06	6.52	1.00	0.00	24.97	24.97
		2	0.00	0.00	✓	0.00	9.37	1.21	7.97	1.00	0.00	65.78	65.78
	Cx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00	0.00

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s (per cycle))	Eff gr (c
08:00-09:00	(ALL)	(ALL)	0	0	0		11000	770	0		Unrestricted	0.00	7	

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Uniform delay (Ped-hr/hr)	Random plus oversat delay (Ped-hr/hr)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)
08:00-09:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Average storage excess queue (Ped)	Average limit excess queue (Ped)	Excess queue penalty (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Journey times

Time Segment	Crossing	Side	Distance travelled (Ped-km/hr)	Time spent (Ped-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	(ALL)	(ALL)	0.00	0.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit over PR
3	26/11/2018 17:17:23	26/11/2018 17:17:23	08:00	100	328.63	21.37	78.67	8/1	0	0	8/1	Ax/1	8/

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	79	0	4928	503	15.61	303.46	25.17	328.63

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	0	0	42	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))	Effective green (s (per cycle))
08:00-09:00	4928	4928	0		79		14	545	552

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	23.77	15.61	16.85	4.52	303.46	303.46	40.74	1849.17	158.45	25.17	25.17

Network Results: Queues and blocking

Time Segment	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))
08:00-09:00	268.73	0.00	41.00	0.00	41.00

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
08:00-09:00	976.04	53.90	18.11

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	PCU Factor	Cost of traffic penalties (£ per hr)	Controller stream penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	0.00	0.00	✓	0.00	1.00	0.00	0.00	328.63	328.63

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

		To		
		1	2	3
From	1	0.0	74.8	92.8
	2	66.8	0.0	85.1
	3	68.7	63.8	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (PCU/hr)	Normal journey time (s)	Calculated Total Flow (PCU/hr)	Avg journey time (s)
1	3	1	629	68.66	629	68.66
2	3	2	316	63.85	316	63.85
3	1	2	141	74.75	141	74.75
5	2	1	191	66.80	191	66.80
6	1	3	487	92.75	487	92.75
7	2	3	354	85.13	354	85.13
8	1	3	346	92.75	346	92.75

Final Prediction Table

Traffic Stream Results

				SIGNALS			FLOWS		PERFORMANCE				PER PCU			
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Second phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	q (
7	1	(untitled)	1	1	A		487	1800	37	0.00	71	26	62.75	32.75	88.84	1
8	1	(untitled)	1	1	B		354 <	1800	24	0.00	79	14	55.13	49.13	105.01	1
A	1	(untitled)	1	1	A		487	1800	37	0.00	71	26	62.75	32.75	88.84	1
B	1	(untitled)	1	1	B		191 <	1800	24	0.00	42	112	36.80	34.40	84.72	4
Ax	1	(untitled)					820	Unrestricted	100	0.00	0	Unrestricted	30.00	0.00	0.00	
Bx	1	(untitled)					457	Unrestricted	100	34.00	0	Unrestricted	12.00	0.00	0.00	
C1	1	(untitled)	1	1	C	A	629	3600	59	0.00	29	214	38.66	8.66	44.28	
	2	(untitled)	1	1	C		316 <	1800	22	0.00	76	18	51.85	49.45	104.52	9
Cx	1	(untitled)					1187	Unrestricted	100	7.00	0	Unrestricted	30.00	0.00	0.00	

Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE			PER PED		QUEUES	WEIGHTS	P
Pedestrian	Side	Name	Traffic node	Controller stream	Phase	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Degree of saturation (%)	Practical reserve capacity	JourneyTime (s)	Mean Delay per Ped (s)	Mean max queue (Ped)	Delay weighting (%)	(
(ALL)	(ALL)	(untitled)		1	D	0	11000	7	0	Unrestricted	0.00	0.00	0.00	100	

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Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	976.04	53.90	18.11	16.85	4.52	303.46	25.17	0.00	328.63
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	976.04	53.90	18.11	16.85	4.52	303.46	25.17	0.00	328.63

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

A4 - 2038 BASE+DEV-PM
D4 - 2038 - BASE+SITE - PM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
4	26/11/2018 17:17:26	26/11/2018 17:17:27	18:00	100	374.20	24.41	84.77	8/1	0	0	8/1	Ax/1	8/

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2038 BASE+DEV-PM		D4	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2038 - BASE+SITE - PM				18:00	

Network Options

Network timings

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

Signals options

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

Advanced

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

Traffic options

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

Advanced

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

Normal Traffic parameters

Dispersion type	Dispersion coefficient
Default	35

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Bus	1.00	70	15	0.47	30	85

Tram parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Tram	1.00	0	0	0.47	100	100

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order
Hill Climb (Fast)	15, 40, -1, 15, 40, 1, -1, 1	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05		✓	1

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
1	(untitled)	

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
7	(untitled)		1
8	(untitled)		1
A	(untitled)		1
B	(untitled)		1
Ax	(untitled)		
Bx	(untitled)		
C1	(untitled)		1
Cx	(untitled)		

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
7	1	(untitled)			250.00	✓	Sum of lanes	1800	✓		Normal	
8	1	(untitled)			50.00	✓	Sum of lanes	1800	✓		Normal	
A	1	(untitled)			250.00	✓	Sum of lanes	1800	✓		Normal	
B	1	(untitled)			20.00	✓	Sum of lanes	1800	✓		Normal	
Ax	1	(untitled)			250.00						Normal	
Bx	1	(untitled)			100.00						Normal	
C1	1	(untitled)			250.00	✓	Sum of lanes	3600	✓		Normal	
	2	(untitled)			20.00	✓	Sum of lanes	1800	✓		Normal	
Cx	1	(untitled)			250.00						Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Saturation flow (PCU/hr)
7	1	1	(untitled)			1800
8	1	1	(untitled)			1800
A	1	1	(untitled)			1800
B	1	1	(untitled)			1800
Ax	1	1	(untitled)			
		2	(untitled)			
Bx	1	1	(untitled)			
C1	1	1	(untitled)			1800
		2	(untitled)			1800
	2	1	(untitled)			1800
Cx	1	1	(untitled)			
		2	(untitled)			

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
(ALL)	(ALL)	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100

Normal - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	(ALL)	100	100

Flows

Arm	Traffic Stream	Total Flow (PCU/hr)	Normal Flow (PCU/hr)
7	1	517	517
8	1	412	412
A	1	517	517
B	1	147	147
Ax	1	776	776
Bx	1	486	486
C1	1	629	629
	2	316	316
Cx	1	1275	1275

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Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled	Second phase
7	1	1	A		
8	1	1	B		
A	1	1	A		
B	1	1	B		
C1	1	1	C	✓	A
	2	1	C		

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
7	1	30.00	30.00
8	1	6.00	30.00
A	1	30.00	30.00
B	1	2.40	30.00
C1	1	30.00	30.00
	2	2.40	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	1	1	B/1	Ax/1	30.00	30.00	✓	Offside	75.00
Bx	1	1	A/1	Bx/1	12.00	30.00	✓	Nearside	25.00
Cx	1	1	A/1	Cx/1	30.00	30.00	✓	Straight	Straight Movement
Ax	1	2	C1/1	Ax/1	30.00	30.00	✓	Straight	Straight Movement
Bx	1	2	C1/2	Bx/1	12.00	30.00	✓	Offside	62.50
Cx	1	2	7/1	Cx/1	30.00	30.00	✓	Straight	Straight Movement
		3	8/1	Cx/1	30.00	30.00	✓	Nearside	33.75

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
(ALL)	(untitled)				Farside	3.00	2.00	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	D	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(ALL)	11000

Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	100	100		0.00		

Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1	(untitled)	✓	✓	Lane Balancing			✓			✓	1.25		

Normal Input Flows (PCU/hr)

		To		
		1	2	3
From	1	0	170	863
	2	147	0	412
	3	629	316	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
1	1	(untitled)	A/1, 7/1	Ax/1	#FF0000
	2	(untitled)	B/1, 8/1	Bx/1	#00FF00
	3	(untitled)	C1/1, C1/2	Cx/1	#0000FF

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
1	1		3	1	C1/1, Ax/1	Normal	629
	2		3	2	C1/2, Bx/1	Normal	316
	3		1	2	A/1, Bx/1	Normal	170
	5		2	1	B/1, Ax/1	Normal	147
	6		1	3	7/1, Cx/1	Normal	517
	7		2	3	8/1, Cx/1	Normal	412
	8		1	3	A/1, Cx/1	Normal	347

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (PCU)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
18:00-19:00	7	1	78	16	517	1800	36	36.97	13.95	32.08	75.39	6.16	81.55
	8	1	85	6	412	1800	26	53.62	12.94	148.80	87.14	5.72	92.86
	A	1	78	16	517	1800	36	36.97	13.95	32.08	75.39	6.16	81.55
	B	1	30	198	147	1800	26	30.63	3.29	94.62	17.76	1.46	19.22
	Ax	1	0	Unrestricted	776	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	Bx	1	0	Unrestricted	486	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	C1	1	30	204	629	3600	57	9.61	8.27	9.52	23.83	3.70	27.54
		2	80	13	316	1800	21	53.89	9.74	280.08	67.17	4.31	71.48
	Cx	1	0	Unrestricted	1276	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Calculated sat flow (PCU/hr)	Calculated capacity (PCU/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))	Effec gree (pe cycl
18:00-19:00	7	1	517	517	-1	✓	1800	666	78		16	0.00	36	37
	8	1	412	412	0		1800	486	85		6	0.00	26	27
	A	1	517	517	-1	✓	1800	666	78		16	0.00	36	37
	B	1	147	147	0		1800	486	30		198	0.00	26	27
	Ax	1	776	776	0		Unrestricted	Unrestricted	0		Unrestricted	0.41	100	10
	Bx	1	486	486	0		Unrestricted	Unrestricted	0		Unrestricted	0.86	100	10
	C1	1	629	629	0		3600	2124	30		204	0.00	57	59
		2	316	316	0		1800	396	80		13	0.00	21	22
	Cx	1	1276	1276	-1	✓	Unrestricted	Unrestricted	0		Unrestricted	0.54	100	10

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
18:00-19:00	7	1	30.00	36.97	4.00	1.31	75.39	75.39	95.06	445.34	46.10	6.16	6.16
	8	1	6.00	53.62	3.95	2.18	87.14	87.14	110.68	381.11	74.91	5.72	5.72
	A	1	30.00	36.97	4.00	1.31	75.39	75.39	95.06	445.34	46.10	6.16	6.16
	B	1	2.40	30.63	1.19	0.07	17.76	17.76	79.36	114.31	2.35	1.46	1.46
	Ax	1	30.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Bx	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	C1	1	30.00	9.61	1.62	0.06	23.83	23.83	46.97	293.22	2.24	3.70	3.70
		2	2.40	53.89	3.24	1.49	67.17	67.17	108.89	292.63	51.45	4.31	4.31
	Cx	1	30.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (PCU)	Mean max queue (PCU)	Max queue storage (PCU)	Utilised storage (%)	Average storage excess queue (PCU)	Average limit excess queue (PCU)	Excess queue penalty (£ per hr)	Max end of green queue (PCU)	Max end of red queue (PCU)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))	Estimated blocking
18:00-19:00	7	1	0.00	13.95	43.48	32.08	0.00	0.00	0.00	1.31	10.36	0.00	0.00	0.00	
	8	1	0.00	12.94	8.70	148.80	0.81	0.00	0.00	2.18	10.54	0.00	0.00	0.00	
	A	1	0.00	13.95	43.48	32.08	0.00	0.00	0.00	1.31	10.36	0.00	0.00	0.00	
	B	1	0.00	3.29	3.48	94.62	0.00	0.00	0.00	0.07	3.05	0.00	0.00	0.00	
	Ax	1	0.00	0.00	86.96	0.00	0.00	0.00	0.00			0.00	0.00	0.00	
	Bx	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			35.00	0.00	35.00	
	C1	1	0.00	8.27	86.96	9.52	0.00	0.00	0.00	0.06	6.88	0.00	0.00	0.00	
		2	0.00	9.74	3.48	280.08	2.27	0.00	0.00	1.49	8.34	0.00	0.00	0.00	
	Cx	1	0.00	0.00	86.96	0.00	0.00	0.00	0.00			4.00	0.00	4.00	

Traffic Stream Results: Journey times

Time Segment	Arm	Traffic Stream	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
18:00-19:00	8	1	20.60	6.82	3.02	59.62
	A	1	129.25	9.62	13.44	66.97
	B	1	2.94	1.35	2.18	33.03
	Ax	1	194.00	6.47	30.00	30.00
	Bx	1	48.60	1.62	30.00	12.00
	C1	1	157.25	6.92	22.72	39.61
		2	6.32	4.94	1.28	56.29
	Cx	1	319.00	10.63	30.00	30.00

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	Mean Max Queue EoTS (PCU)	Max End of Green Queue EoTS (PCU)	Max End of Red Queue EoTS (PCU)	PCU Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
18:00-19:00	7	1	0.00	0.00	✓	0.00	13.97	1.33	10.38	1.00	0.00	81.55	81.55
	8	1	0.00	0.00	✓	0.00	13.02	2.26	10.62	1.00	0.00	92.86	92.86
	A	1	0.00	0.00	✓	0.00	13.97	1.33	10.38	1.00	0.00	81.55	81.55
	B	1	0.00	0.00	✓	0.00	3.29	0.07	3.05	1.00	0.00	19.22	19.22
	Ax	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00	0.00
	Bx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00	0.00
	C1	1	0.00	0.00	✓	0.00	8.27	0.06	6.88	1.00	0.00	27.54	27.54
		2	0.00	0.00	✓	0.00	9.78	1.53	8.38	1.00	0.00	71.48	71.48
	Cx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00	0.00

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
18:00-19:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s (per cycle))	Eff gr (c
18:00-19:00	(ALL)	(ALL)	0	0	0		11000	770	0		Unrestricted	0.00	7	

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Uniform delay (Ped-hr/hr)	Random plus oversat delay (Ped-hr/hr)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)
18:00-19:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Average storage excess queue (Ped)	Average limit excess queue (Ped)	Excess queue penalty (£ per hr)
18:00-19:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Journey times

Time Segment	Crossing	Side	Distance travelled (Ped-km/hr)	Time spent (Ped-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
18:00-19:00	(ALL)	(ALL)	0.00	0.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
18:00-19:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit over PR
4	26/11/2018 17:17:26	26/11/2018 17:17:27	18:00	100	374.20	24.41	84.77	8/1	0	0	8/1	Ax/1	8/

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
18:00-19:00	85	0	5076	502	17.31	346.67	27.52	374.20

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
18:00-19:00	0	0	42	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))	Effective green (s (per cycle))
18:00-19:00	5076	5076	-2	✓	85		6	544	551

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
18:00-19:00	23.81	17.31	17.99	6.42	346.67	346.67	43.25	1971.96	223.16	27.52	27.52

Network Results: Queues and blocking

Time Segment	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))
18:00-19:00	280.08	0.00	39.00	0.00	39.00

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
18:00-19:00	1007.21	57.99	17.37

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	PCU Factor	Cost of traffic penalties (£ per hr)	Controller stream penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
18:00-19:00	0.00	0.00	✓	0.00	1.00	0.00	0.00	374.20	374.20

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

		To		
		1	2	3
From	1	0.0	79.0	97.0
	2	63.0	0.0	89.6
	3	69.6	68.3	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (PCU/hr)	Normal journey time (s)	Calculated Total Flow (PCU/hr)	Avg journey time (s)
1	3	1	629	69.61	629	69.61
2	3	2	316	68.29	316	68.29
3	1	2	170	78.97	170	78.97
5	2	1	147	63.03	147	63.03
6	1	3	517	96.97	517	96.97
7	2	3	412	89.62	412	89.62
8	1	3	347	96.97	347	96.97

Final Prediction Table

Traffic Stream Results

				SIGNALS			FLOWS		PERFORMANCE				PER PCU			
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Second phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	q (
7	1	(untitled)	1	1	A		517	1800	36	0.00	78	16	66.97	36.97	95.06	1
8	1	(untitled)	1	1	B		412 <	1800	26	0.00	85	6	59.62	53.62	110.68	1
A	1	(untitled)	1	1	A		517	1800	36	0.00	78	16	66.97	36.97	95.06	1
B	1	(untitled)	1	1	B		147	1800	26	0.00	30	198	33.03	30.63	79.36	
Ax	1	(untitled)					776	Unrestricted	100	0.00	0	Unrestricted	30.00	0.00	0.00	
Bx	1	(untitled)					486	Unrestricted	100	35.00	0	Unrestricted	12.00	0.00	0.00	
C1	1	(untitled)	1	1	C	A	629	3600	57	0.00	30	204	39.61	9.61	46.97	
	2	(untitled)	1	1	C		316 <	1800	21	0.00	80	13	56.29	53.89	108.89	9
Cx	1	(untitled)					1276	Unrestricted	100	4.00	0	Unrestricted	30.00	0.00	0.00	

Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE				PER PED	QUEUES	WEIGHTS	P
Pedestrian	Side	Name	Traffic node	Controller stream	Phase	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Degree of saturation (%)	Practical reserve capacity	JourneyTime (s)	Mean Delay per Ped (s)	Mean max queue (Ped)	Delay weighting (%)	(
(ALL)	(ALL)	(untitled)		1	D	0	11000	7	0	Unrestricted	0.00	0.00	0.00	100	

TRL THE FUTURE OF TRANSPORT
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Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	1007.21	57.99	17.37	17.99	6.42	346.67	27.52	0.00	374.20
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	1007.21	57.99	17.37	17.99	6.42	346.67	27.52	0.00	374.20

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

A5 - 2038 BASE AM
D5 - 2038 - BASE AM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
5	26/11/2018 17:17:29	26/11/2018 17:17:30	08:00	100	280.09	18.15	76.26	8/1	0	0	8/1	Ax/1	8/

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2038 BASE AM		D5	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2038 - BASE AM				08:00	

Network Options

Network timings

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

Signals options

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

Advanced

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

Traffic options

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

Advanced

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

Normal Traffic parameters

Dispersion type	Dispersion coefficient
Default	35

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Bus	1.00	70	15	0.47	30	85

Tram parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Tram	1.00	0	0	0.47	100	100

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order
Hill Climb (Fast)	15, 40, -1, 15, 40, 1, -1, 1	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05		✓	1

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
1	(untitled)	

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
7	(untitled)		1
8	(untitled)		1
A	(untitled)		1
B	(untitled)		1
Ax	(untitled)		
Bx	(untitled)		
C1	(untitled)		1
Cx	(untitled)		

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
7	1	(untitled)			250.00	✓	Sum of lanes	1800	✓		Normal	
8	1	(untitled)			50.00	✓	Sum of lanes	1800	✓		Normal	
A	1	(untitled)			250.00	✓	Sum of lanes	1800	✓		Normal	
B	1	(untitled)			20.00	✓	Sum of lanes	1800	✓		Normal	
Ax	1	(untitled)			250.00						Normal	
Bx	1	(untitled)			100.00						Normal	
C1	1	(untitled)			250.00	✓	Sum of lanes	3600	✓		Normal	
	2	(untitled)			20.00	✓	Sum of lanes	1800	✓		Normal	
Cx	1	(untitled)			250.00						Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Saturation flow (PCU/hr)
7	1	1	(untitled)			1800
8	1	1	(untitled)			1800
A	1	1	(untitled)			1800
B	1	1	(untitled)			1800
Ax	1	1	(untitled)			
		2	(untitled)			
Bx	1	1	(untitled)			
C1	1	1	(untitled)			1800
		2	(untitled)			1800
	2	1	(untitled)			1800
Cx	1	1	(untitled)			
		2	(untitled)			

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
(ALL)	(ALL)	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100

Normal - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	(ALL)	100	100

Flows

Arm	Traffic Stream	Total Flow (PCU/hr)	Normal Flow (PCU/hr)
7	1	477	477
8	1	302	302
A	1	477	477
B	1	139	139
Ax	1	768	768
Bx	1	418	418
C1	1	629	629
	2	297	297
Cx	1	1135	1135

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Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled	Second phase
7	1	1	A		
8	1	1	B		
A	1	1	A		
B	1	1	B		
C1	1	1	C	✓	A
	2	1	C		

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
7	1	30.00	30.00
8	1	6.00	30.00
A	1	30.00	30.00
B	1	2.40	30.00
C1	1	30.00	30.00
	2	2.40	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	1	1	B/1	Ax/1	30.00	30.00	✓	Offside	75.00
Bx	1	1	A/1	Bx/1	12.00	30.00	✓	Nearside	25.00
Cx	1	1	A/1	Cx/1	30.00	30.00	✓	Straight	Straight Movement
Ax	1	2	C1/1	Ax/1	30.00	30.00	✓	Straight	Straight Movement
Bx	1	2	C1/2	Bx/1	12.00	30.00	✓	Offside	62.50
Cx	1	2	7/1	Cx/1	30.00	30.00	✓	Straight	Straight Movement
		3	8/1	Cx/1	30.00	30.00	✓	Nearside	33.75

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
(ALL)	(untitled)				Farside	3.00	2.00	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	D	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(ALL)	11000

Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	100	100		0.00		

Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1	(untitled)	✓	✓	Lane Balancing			✓			✓	1.25		

Normal Input Flows (PCU/hr)

		To		
		1	2	3
From	1	0	121	833
	2	139	0	302
	3	629	297	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
1	1	(untitled)	A/1, 7/1	Ax/1	#FF0000
	2	(untitled)	B/1, 8/1	Bx/1	#00FF00
	3	(untitled)	C1/1, C1/2	Cx/1	#0000FF

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
1	1		3	1	C1/1, Ax/1	Normal	629
	2		3	2	C1/2, Bx/1	Normal	297
	3		1	2	A/1, Bx/1	Normal	121
	5		2	1	B/1, Ax/1	Normal	139
	6		1	3	7/1, Cx/1	Normal	477
	7		2	3	8/1, Cx/1	Normal	302
	8		1	3	A/1, Cx/1	Normal	356

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (PCU)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	7	1	65	39	477	1800	40	28.10	11.19	25.73	52.87	4.93	57.80
	8	1	76	18	302	1800	21	50.58	8.98	103.25	60.26	3.98	64.24
	A	1	65	39	477	1800	40	28.10	11.19	25.73	52.87	4.93	57.80
	B	1	35	156	139	1800	21	35.43	3.34	95.97	19.43	1.49	20.91
	Ax	1	0	Unrestricted	768	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	Bx	1	0	Unrestricted	418	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	C1	1	27	230	629	3600	62	7.33	7.21	8.30	18.19	3.22	21.41
		2	72	25	297	1800	22	46.25	8.48	243.69	54.18	3.75	57.94
	Cx	1	0	Unrestricted	1135	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Calculated sat flow (PCU/hr)	Calculated capacity (PCU/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))	Effec gree (pe cycl
08:00-09:00	7	1	477	477	0		1800	738	65		39	0.00	40	41
	8	1	302	302	0		1800	396	76		18	0.00	21	22
	A	1	477	477	0		1800	738	65		39	0.00	40	41
	B	1	139	139	0		1800	396	35		156	0.00	21	22
	Ax	1	768	768	0		Unrestricted	Unrestricted	0		Unrestricted	0.36	100	10
	Bx	1	418	418	0		Unrestricted	Unrestricted	0		Unrestricted	0.90	100	10
	C1	1	629	629	0		3600	2304	27		230	0.00	62	64
		2	297	297	0		1800	414	72		25	0.00	22	23
	Cx	1	1135	1135	0		Unrestricted	Unrestricted	0		Unrestricted	0.59	100	10

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	7	1	30.00	28.10	3.14	0.59	52.87	52.87	82.41	372.28	20.83	4.93	4.93
	8	1	6.00	50.58	3.07	1.18	60.26	60.26	105.21	276.84	40.91	3.98	3.98
	A	1	30.00	28.10	3.14	0.59	52.87	52.87	82.41	372.28	20.83	4.93	4.93
	B	1	2.40	35.43	1.27	0.09	19.43	19.43	85.22	115.07	3.38	1.49	1.49
	Ax	1	30.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Bx	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	C1	1	30.00	7.33	1.23	0.05	18.19	18.19	40.83	254.99	1.84	3.22	3.22
		2	2.40	46.25	2.93	0.89	54.18	54.18	100.80	268.32	31.06	3.75	3.75
	Cx	1	30.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (PCU)	Mean max queue (PCU)	Max queue storage (PCU)	Utilised storage (%)	Average storage excess queue (PCU)	Average limit excess queue (PCU)	Excess queue penalty (£ per hr)	Max end of green queue (PCU)	Max end of red queue (PCU)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))	Estimated blocking
08:00-09:00	7	1	0.00	11.19	43.48	25.73	0.00	0.00	0.00	0.59	8.40	0.00	0.00	0.00	
	8	1	0.00	8.98	8.70	103.25	0.01	0.00	0.00	1.18	7.72	0.00	0.00	0.00	
	A	1	0.00	11.19	43.48	25.73	0.00	0.00	0.00	0.59	8.40	0.00	0.00	0.00	
	B	1	0.00	3.34	3.48	95.97	0.00	0.00	0.00	0.09	3.11	0.00	0.00	0.00	
	Ax	1	0.00	0.00	86.96	0.00	0.00	0.00	0.00			0.00	0.00	0.00	
	Bx	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			32.00	0.00	32.00	
	C1	1	0.00	7.21	86.96	8.30	0.00	0.00	0.00	0.05	5.99	0.00	0.00	0.00	
		2	0.00	8.48	3.48	243.69	1.54	0.00	0.00	0.89	7.24	0.00	0.00	0.00	
	Cx	1	0.00	0.00	86.96	0.00	0.00	0.00	0.00			7.00	0.00	7.00	

Traffic Stream Results: Journey times

Time Segment	Arm	Traffic Stream	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	7	1	119.25	7.70	15.49	58.10
	8	1	15.10	4.75	3.18	56.58
	A	1	119.25	7.70	15.49	58.10
	B	1	2.78	1.46	1.90	37.83
	Ax	1	192.00	6.40	30.00	30.00
	Bx	1	41.80	1.39	30.00	12.00
	C1	1	157.25	6.52	24.11	37.33
		2	5.94	4.01	1.48	48.65
	Cx	1	283.75	9.46	30.00	30.00

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	Mean Max Queue EoTS (PCU)	Max End of Green Queue EoTS (PCU)	Max End of Red Queue EoTS (PCU)	PCU Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	7	1	0.00	0.00	✓	0.00	11.19	0.59	8.41	1.00	0.00	57.80	57.80
	8	1	0.00	0.00	✓	0.00	9.00	1.20	7.74	1.00	0.00	64.24	64.24
	A	1	0.00	0.00	✓	0.00	11.19	0.59	8.41	1.00	0.00	57.80	57.80
	B	1	0.00	0.00	✓	0.00	3.34	0.09	3.11	1.00	0.00	20.91	20.91
	Ax	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00	0.00
	Bx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00	0.00
	C1	1	0.00	0.00	✓	0.00	7.21	0.05	5.99	1.00	0.00	21.41	21.41
		2	0.00	0.00	✓	0.00	8.49	0.90	7.25	1.00	0.00	57.94	57.94
	Cx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00	0.00

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s (per cycle))	Eff gr (c
08:00-09:00	(ALL)	(ALL)	0	0	0		11000	770	0		Unrestricted	0.00	7	

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Uniform delay (Ped-hr/hr)	Random plus oversat delay (Ped-hr/hr)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)
08:00-09:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Average storage excess queue (Ped)	Average limit excess queue (Ped)	Excess queue penalty (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Journey times

Time Segment	Crossing	Side	Distance travelled (Ped-km/hr)	Time spent (Ped-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	(ALL)	(ALL)	0.00	0.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit over PR
5	26/11/2018 17:17:29	26/11/2018 17:17:30	08:00	100	280.09	18.15	76.26	8/1	0	0	8/1	Ax/1	8/

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	76	0	4642	506	14.08	257.79	22.30	280.09

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	0	0	42	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))	Effective green (s (per cycle))
08:00-09:00	4642	4642	0		76		18	548	555

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	24.23	14.08	14.78	3.38	257.79	257.79	38.32	1659.77	118.86	22.30	22.30

Network Results: Queues and blocking

Time Segment	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))
08:00-09:00	243.69	0.00	39.00	0.00	39.00

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
08:00-09:00	937.12	49.39	18.97

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	PCU Factor	Cost of traffic penalties (£ per hr)	Controller stream penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	0.00	0.00	✓	0.00	1.00	0.00	0.00	280.09	280.09

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

		To		
		1	2	3
From	1	0.0	70.1	88.1
	2	67.8	0.0	86.6
	3	67.3	60.6	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (PCU/hr)	Normal journey time (s)	Calculated Total Flow (PCU/hr)	Avg journey time (s)
1	3	1	629	67.33	629	67.33
2	3	2	297	60.65	297	60.65
3	1	2	121	70.10	121	70.10
5	2	1	139	67.83	139	67.83
6	1	3	477	88.10	477	88.10
7	2	3	302	86.58	302	86.58
8	1	3	356	88.10	356	88.10

Final Prediction Table

Traffic Stream Results

				SIGNALS			FLOWS		PERFORMANCE				PER PCU			
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Second phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	q (
7	1	(untitled)	1	1	A		477	1800	40	0.00	65	39	58.10	28.10	82.41	1
8	1	(untitled)	1	1	B		302 <	1800	21	0.00	76	18	56.58	50.58	105.21	8
A	1	(untitled)	1	1	A		477	1800	40	0.00	65	39	58.10	28.10	82.41	1
B	1	(untitled)	1	1	B		139	1800	21	0.00	35	156	37.83	35.43	85.22	
Ax	1	(untitled)					768	Unrestricted	100	0.00	0	Unrestricted	30.00	0.00	0.00	
Bx	1	(untitled)					418	Unrestricted	100	32.00	0	Unrestricted	12.00	0.00	0.00	
C1	1	(untitled)	1	1	C	A	629	3600	62	0.00	27	230	37.33	7.33	40.83	
	2	(untitled)	1	1	C		297 <	1800	22	0.00	72	25	48.65	46.25	100.80	8
Cx	1	(untitled)					1135	Unrestricted	100	7.00	0	Unrestricted	30.00	0.00	0.00	

Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE			PER PED		QUEUES	WEIGHTS	P
Pedestrian	Side	Name	Traffic node	Controller stream	Phase	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Degree of saturation (%)	Practical reserve capacity	JourneyTime (s)	Mean Delay per Ped (s)	Mean max queue (Ped)	Delay weighting (%)	(
(ALL)	(ALL)	(untitled)		1	D	0	11000	7	0	Unrestricted	0.00	0.00	0.00	100	

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	937.12	49.39	18.97	14.78	3.38	257.79	22.30	0.00	280.09
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	937.12	49.39	18.97	14.78	3.38	257.79	22.30	0.00	280.09

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

A6 - 2038 BASE PM
D6 - 2038 - BASE PM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
6	26/11/2018 17:17:32	26/11/2018 17:17:33	18:00	100	316.75	20.54	79.22	8/1	0	0	8/1	Ax/1	8/

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2038 BASE PM		D6	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2038 - BASE PM				18:00	

Network Options

Network timings

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

Signals options

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

Advanced

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

Traffic options

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

Advanced

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

Normal Traffic parameters

Dispersion type	Dispersion coefficient
Default	35

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Bus	1.00	70	15	0.47	30	85

Tram parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Tram	1.00	0	0	0.47	100	100

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order
Hill Climb (Fast)	15, 40, -1, 15, 40, 1, -1, 1	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05		✓	1

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
1	(untitled)	

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
7	(untitled)		1
8	(untitled)		1
A	(untitled)		1
B	(untitled)		1
Ax	(untitled)		
Bx	(untitled)		
C1	(untitled)		1
Cx	(untitled)		

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
7	1	(untitled)			250.00	✓	Sum of lanes	1800	✓		Normal	
8	1	(untitled)			50.00	✓	Sum of lanes	1800	✓		Normal	
A	1	(untitled)			250.00	✓	Sum of lanes	1800	✓		Normal	
B	1	(untitled)			20.00	✓	Sum of lanes	1800	✓		Normal	
Ax	1	(untitled)			250.00						Normal	
Bx	1	(untitled)			100.00						Normal	
C1	1	(untitled)			250.00	✓	Sum of lanes	3600	✓		Normal	
	2	(untitled)			20.00	✓	Sum of lanes	1800	✓		Normal	
Cx	1	(untitled)			250.00						Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Saturation flow (PCU/hr)
7	1	1	(untitled)			1800
8	1	1	(untitled)			1800
A	1	1	(untitled)			1800
B	1	1	(untitled)			1800
Ax	1	1	(untitled)			
		2	(untitled)			
Bx	1	1	(untitled)			
C1	1	1	(untitled)			1800
		2	(untitled)			1800
	2	1	(untitled)			1800
Cx	1	1	(untitled)			
		2	(untitled)			

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
(ALL)	(ALL)	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100

Normal - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	(ALL)	100	100

Flows

Arm	Traffic Stream	Total Flow (PCU/hr)	Normal Flow (PCU/hr)
7	1	494	494
8	1	385	385
A	1	494	494
B	1	120	120
Ax	1	882	882
Bx	1	385	385
C1	1	762	762
	2	261	261
Cx	1	1248	1248

TRL THE FUTURE OF TRANSPORT
Generated on 26/11/2018 17:18:18 using TRANSYT 15 (15.5.0.6767)

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled	Second phase
7	1	1	A		
8	1	1	B		
A	1	1	A		
B	1	1	B		
C1	1	1	C	✓	A
	2	1	C		

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
7	1	30.00	30.00
8	1	6.00	30.00
A	1	30.00	30.00
B	1	2.40	30.00
C1	1	30.00	30.00
	2	2.40	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	1	1	B/1	Ax/1	30.00	30.00	✓	Offside	75.00
Bx	1	1	A/1	Bx/1	12.00	30.00	✓	Nearside	25.00
Cx	1	1	A/1	Cx/1	30.00	30.00	✓	Straight	Straight Movement
Ax	1	2	C1/1	Ax/1	30.00	30.00	✓	Straight	Straight Movement
Bx	1	2	C1/2	Bx/1	12.00	30.00	✓	Offside	62.50
Cx	1	2	7/1	Cx/1	30.00	30.00	✓	Straight	Straight Movement
		3	8/1	Cx/1	30.00	30.00	✓	Nearside	33.75

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
(ALL)	(untitled)				Farside	3.00	2.00	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	D	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(ALL)	11000

Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	100	100		0.00		

Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1	(untitled)	✓	✓	Lane Balancing			✓			✓	1.25		

Normal Input Flows (PCU/hr)

		To		
		1	2	3
From	1	0	124	863
	2	120	0	385
	3	762	261	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
1	1	(untitled)	A/1, 7/1	Ax/1	#FF0000
	2	(untitled)	B/1, 8/1	Bx/1	#00FF00
	3	(untitled)	C1/1, C1/2	Cx/1	#0000FF

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
1	1		3	1	C1/1, Ax/1	Normal	762
	2		3	2	C1/2, Bx/1	Normal	261
	3		1	2	A/1, Bx/1	Normal	124
	5		2	1	B/1, Ax/1	Normal	120
	6		1	3	7/1, Cx/1	Normal	494
	7		2	3	8/1, Cx/1	Normal	385
	8		1	3	A/1, Cx/1	Normal	370

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (PCU)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
18:00-19:00	7	1	70	28	494	1800	38	31.64	12.35	28.41	61.66	5.42	67.09
	8	1	79	14	385	1800	26	47.42	11.28	129.77	72.01	5.01	77.01
	A	1	70	28	494	1800	38	31.64	12.35	28.41	61.66	5.42	67.09
	B	1	25	265	120	1800	26	29.77	2.64	75.91	14.09	1.17	15.26
	Ax	1	0	Unrestricted	882	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	Bx	1	0	Unrestricted	385	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	C1	1	36	151	762	3600	57	10.16	10.47	12.04	30.52	4.70	35.22
		2	73	24	261	1800	19	50.19	7.67	220.44	51.67	3.40	55.08
	Cx	1	0	Unrestricted	1249	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Calculated sat flow (PCU/hr)	Calculated capacity (PCU/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))	Effec gree (pe cycl
18:00-19:00	7	1	494	494	-1		1800	702	70		28	0.00	38	39
	8	1	385	385	0		1800	486	79		14	0.00	26	27
	A	1	494	494	-1		1800	702	70		28	0.00	38	39
	B	1	120	120	0		1800	486	25		265	0.00	26	27
	Ax	1	882	882	0		Unrestricted	Unrestricted	0		Unrestricted	0.45	100	10
	Bx	1	385	385	0		Unrestricted	Unrestricted	0		Unrestricted	0.92	100	10
	C1	1	762	762	0		3600	2124	36		151	0.00	57	59
		2	261	261	0		1800	360	73		24	0.00	19	20
	Cx	1	1249	1249	-1		Unrestricted	Unrestricted	0		Unrestricted	0.54	100	10

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
18:00-19:00	7	1	30.00	31.64	3.52	0.82	61.66	61.66	87.57	403.39	29.21	5.42	5.42
	8	1	6.00	47.42	3.63	1.45	72.01	72.01	103.69	348.89	50.33	5.01	5.01
	A	1	30.00	31.64	3.52	0.82	61.66	61.66	87.57	403.39	29.21	5.42	5.42
	B	1	2.40	29.77	0.95	0.04	14.09	14.09	77.84	91.96	1.45	1.17	1.17
	Ax	1	30.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Bx	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	C1	1	30.00	10.16	2.05	0.10	30.52	30.52	49.16	371.03	3.61	4.70	4.70
		2	2.40	50.19	2.71	0.92	51.67	51.67	104.01	239.21	32.26	3.40	3.40
	Cx	1	30.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (PCU)	Mean max queue (PCU)	Max queue storage (PCU)	Utilised storage (%)	Average storage excess queue (PCU)	Average limit excess queue (PCU)	Excess queue penalty (£ per hr)	Max end of green queue (PCU)	Max end of red queue (PCU)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))	Estimated blocking
18:00-19:00	7	1	0.00	12.35	43.48	28.41	0.00	0.00	0.00	0.82	9.19	0.00	0.00	0.00	
	8	1	0.00	11.28	8.70	129.77	0.33	0.00	0.00	1.45	9.25	0.00	0.00	0.00	
	A	1	0.00	12.35	43.48	28.41	0.00	0.00	0.00	0.82	9.19	0.00	0.00	0.00	
	B	1	0.00	2.64	3.48	75.91	0.00	0.00	0.00	0.04	2.47	0.00	0.00	0.00	
	Ax	1	0.00	0.00	86.96	0.00	0.00	0.00	0.00			0.00	0.00	0.00	
	Bx	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			37.00	0.00	37.00	
	C1	1	0.00	10.47	86.96	12.04	0.00	0.00	0.00	0.10	8.36	0.00	0.00	0.00	
		2	0.00	7.67	3.48	220.44	1.23	0.00	0.00	0.92	6.72	0.00	0.00	0.00	
	Cx	1	0.00	0.00	86.96	0.00	0.00	0.00	0.00			4.00	0.00	4.00	

Traffic Stream Results: Journey times

Time Segment	Arm	Traffic Stream	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
18:00-19:00	7	1	123.50	8.46	14.60	61.64
	8	1	19.25	5.71	3.37	53.42
	A	1	123.50	8.46	14.60	61.64
	B	1	2.40	1.07	2.24	32.17
	Ax	1	220.50	7.35	30.00	30.00
	Bx	1	38.50	1.28	30.00	12.00
	C1	1	190.50	8.50	22.41	40.16
		2	5.22	3.81	1.37	52.59
	Cx	1	312.25	10.41	30.00	30.00

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	Mean Max Queue EoTS (PCU)	Max End of Green Queue EoTS (PCU)	Max End of Red Queue EoTS (PCU)	PCU Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
18:00-19:00	7	1	0.00	0.00	✓	0.00	12.36	0.83	9.20	1.00	0.00	67.09	67.09
	8	1	0.00	0.00	✓	0.00	11.32	1.48	9.28	1.00	0.00	77.01	77.01
	A	1	0.00	0.00	✓	0.00	12.36	0.83	9.20	1.00	0.00	67.09	67.09
	B	1	0.00	0.00	✓	0.00	2.64	0.04	2.47	1.00	0.00	15.26	15.26
	Ax	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00	0.00
	Bx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00	0.00
	C1	1	0.00	0.00	✓	0.00	10.47	0.10	8.36	1.00	0.00	35.22	35.22
		2	0.00	0.00	✓	0.00	7.68	0.94	6.74	1.00	0.00	55.08	55.08
	Cx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00	0.00

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
18:00-19:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s (per cycle))	Eff gr (c
18:00-19:00	(ALL)	(ALL)	0	0	0		11000	770	0		Unrestricted	0.00	7	

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Uniform delay (Ped-hr/hr)	Random plus oversat delay (Ped-hr/hr)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)
18:00-19:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Average storage excess queue (Ped)	Average limit excess queue (Ped)	Excess queue penalty (£ per hr)
18:00-19:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Journey times

Time Segment	Crossing	Side	Distance travelled (Ped-km/hr)	Time spent (Ped-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
18:00-19:00	(ALL)	(ALL)	0.00	0.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
18:00-19:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit over PR
6	26/11/2018 17:17:32	26/11/2018 17:17:33	18:00	100	316.75	20.54	79.22	8/1	0	0	8/1	Ax/1	8/

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
18:00-19:00	79	0	5032	504	14.69	291.62	25.13	316.75

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
18:00-19:00	0	0	42	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))	Effective green (s (per cycle))
18:00-19:00	5032	5032	-2		79		14	546	553

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
18:00-19:00	24.70	14.69	16.38	4.16	291.62	291.62	39.82	1857.87	146.06	25.13	25.13

Network Results: Queues and blocking

Time Segment	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))
18:00-19:00	220.44	0.00	41.00	0.00	41.00

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
18:00-19:00	1035.62	55.06	18.81

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	PCU Factor	Cost of traffic penalties (£ per hr)	Controller stream penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
18:00-19:00	0.00	0.00	✓	0.00	1.00	0.00	0.00	316.75	316.75

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

		To		
		1	2	3
From	1	0.0	73.6	91.6
	2	62.2	0.0	83.4
	3	70.2	64.6	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (PCU/hr)	Normal journey time (s)	Calculated Total Flow (PCU/hr)	Avg journey time (s)
1	3	1	762	70.16	762	70.16
2	3	2	261	64.59	261	64.59
3	1	2	124	73.64	124	73.64
5	2	1	120	62.17	120	62.17
6	1	3	494	91.64	494	91.64
7	2	3	385	83.42	385	83.42
8	1	3	370	91.64	370	91.64

Final Prediction Table

Traffic Stream Results

				SIGNALS			FLOWS		PERFORMANCE				PER PCU			
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Second phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	q (
7	1	(untitled)	1	1	A		494	1800	38	0.00	70	28	61.64	31.64	87.57	1
8	1	(untitled)	1	1	B		385 <	1800	26	0.00	79	14	53.42	47.42	103.69	1
A	1	(untitled)	1	1	A		494	1800	38	0.00	70	28	61.64	31.64	87.57	1
B	1	(untitled)	1	1	B		120	1800	26	0.00	25	265	32.17	29.77	77.84	
Ax	1	(untitled)					882	Unrestricted	100	0.00	0	Unrestricted	30.00	0.00	0.00	
Bx	1	(untitled)					385	Unrestricted	100	37.00	0	Unrestricted	12.00	0.00	0.00	
C1	1	(untitled)	1	1	C	A	762	3600	57	0.00	36	151	40.16	10.16	49.16	1
	2	(untitled)	1	1	C		261 <	1800	19	0.00	73	24	52.59	50.19	104.01	7
Cx	1	(untitled)					1249	Unrestricted	100	4.00	0	Unrestricted	30.00	0.00	0.00	

Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE			PER PED		QUEUES	WEIGHTS	P
Pedestrian	Side	Name	Traffic node	Controller stream	Phase	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Degree of saturation (%)	Practical reserve capacity	JourneyTime (s)	Mean Delay per Ped (s)	Mean max queue (Ped)	Delay weighting (%)	(
(ALL)	(ALL)	(untitled)		1	D	0	11000	7	0	Unrestricted	0.00	0.00	0.00	100	

TRL THE FUTURE OF TRANSPORT
Generated on 26/11/2018 17:18:18 using TRANSYT 15 (15.5.0.6767)

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	1035.62	55.06	18.81	16.38	4.16	291.62	25.13	0.00	316.75
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	1035.62	55.06	18.81	16.38	4.16	291.62	25.13	0.00	316.75

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

TRANSYT 15

Version: 15.5.0.6767
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Filename: Junction 4.t15
Path: M:\Projects\18\18-014 - Rathmullan Drogheda SHD Planning Application\Design\Civil\Traffic\Junction Modelling\Junction 4
Report generation date: 20/12/2018 09:51:46

»A1 - 2018 - SURVEYED FLOWS - AM : D1 - 2018 - SURVEYED FLOWS - AM* :
»A2 - 2018 - SURVEYED FLOWS - PM : D2 - 2018 - SURVEYED FLOWS - PM* :
»A3 - 2023 - OPENING YEAR - BASE - AM : D3 - 2023 - OPENING YEAR - BASE - AM* :
»A4 - 2023 - OPENING YEAR - BASE - PM : D4 - 2023 - OPENING YEAR - BASE - PM* :
»A5 - 2023 - OPENING YEAR - BASE + DEV - AM : D5 - 2023 - OPENING YEAR - BASE + DEV - AM* :
»A6 - 2023 - OPENING YEAR - BASE + DEV - PM : D6 - 2023 - OPENING YEAR - BASE + DEV - PM* :
»A7 - 2023 - OPENING YEAR - BASE + DEV + COM(PHASE 1)- AM : D7 - 2023 - OPENING YEAR - BASE + DEV + COM(PHASE 1)- AM* :
»A8 - 2023 - OPENING YEAR - BASE + DEV + COM(PHASE 1) - PM : D8 - 2023 - OPENING YEAR - BASE + DEV + COM(PHASE 1) - PM* :
»A9 - 2028 - BASE - AM : D9 - 2028 - BASE - AM* :
»A10 - 2028 - BASE - PM : D10 - 2028 - BASE - PM* :
»A11 - 2028 - BASE + DEV - AM : D11 - 2028 - BASE + DEV - AM* :
»A12 - 2028 - BASE + DEV - PM : D12 - 2028 - BASE + DEV - PM* :
»A13 - 2028 - BASE + DEV + COM(PHASES 1 AND 2) - AM : D13 - 2028 - BASE + DEV + COM(PHASES 1 AND 2) - AM* :
»A14 - 2028 - BASE + DEV + COM(PHASES 1 AND 2) - PM : D14 - 2028 - BASE + DEV + COM(PHASES 1 AND 2) - PM* :
»A15 - 2038 - BASE - AM : D15 - 2038 - BASE - AM* :
»A16 - 2038 - BASE - PM : D16 - 2038 - BASE - PM* :
»A17 - 2038 - BASE + DEV - AM : D17 - 2038 - BASE + DEV - AM* :
»A18 - 2038 - BASE + DEV - PM : D18 - 2038 - BASE + DEV - PM* :
»A19 - 2038 - BASE + DEV + COM(PHASES 1 AND 2) - AM : D19 - 2038 - BASE + DEV + COM(PHASES 1 AND 2) - AM* :
»A20 - 2038 - BASE + DEV + COM(PHASES 1 AND 2) - PM : D20 - 2038 - BASE + DEV + COM(PHASES 1 AND 2) - PM* :

File summary

File description

File title	(untitled)
Location	
Site number	
UTCRegion	
Driving side	Left
Date	18/03/2010
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	DOMAIN\j.ulicna
Description	

Model and Results

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

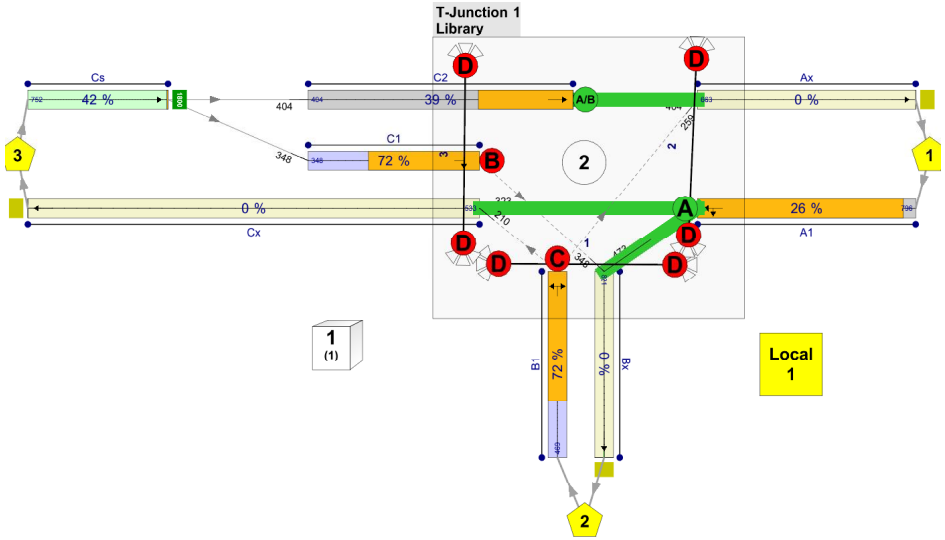
Units

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

Sorting

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

Network Diagrams



(untitled)
Cycletime 0s / 100s , Timesteps 99 / 100
20, 20
Diagram produced using TRANSYT 15.5.0.6767

A1 - 2018 - SURVEYED FLOWS - AM
D1 - 2018 - SURVEYED FLOWS - AM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-min/min)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
1	20/12/2018 09:50:23	20/12/2018 09:50:23	08:00	100	124.65	8.02	54.65	B1/1	0	0	B1/1	Cs/1	B1/1	✓

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2018 - SURVEYED FLOWS - AM		D1	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2018 - SURVEYED FLOWS - AM				08:00	

Network Options

Network timings

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

Signals options

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

Advanced

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

Traffic options

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

Advanced

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

Normal Traffic parameters

Dispersion type	Dispersion coefficient
Default	35

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Bus	1.00	70	15	0.47	30	85

Tram parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Tram	1.00	70	15	0.47	30	85

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order
Hill Climb (Fast)	15, 40, -1, 15, 40, 1, -1, 1	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05		✓	1

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
2		

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
A1			2
Ax			
B1			2
Bx			
C1			2
C2			2
Cs			2
Cx			

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
A1	1	Donore Road (W)			100.00	✓	Sum of lanes	9999	✓		Normal	
Ax	1	Donore Road (W)			100.00						Normal	
B1	1	Marlays Lane			100.00	✓	Sum of lanes	1800	✓	✓	Normal	
Bx	1	Marlays Lane			100.00						Normal	
C1	1	Donore Road (E)			85.00	✓	Sum of lanes	1800	✓	✓	Normal	
C2	1	Donore Road (E)			85.00	✓	Sum of lanes	1800	✓		Normal	
Cs	1	Donore Road (E)			100.00	✓	Sum of lanes	1800			Normal	
Cx	1	Donore Road (E)			100.00						Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Saturation flow (PCU/hr)
A1	1	1				9999
Ax	1	1				
B1	1	1				1800
Bx	1	1				
C1	1	1				1800
C2	1	1				1800
Cs	1	1				1800
Cx	1	1				

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
(ALL)	1	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
A1	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100
Ax	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100
B1	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
Bx	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100
C1	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
C2	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
Cs	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
Cx	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100

Normal - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	1	100	100

Flows

Arm	Traffic Stream	Total Flow (Veh/hr)	Normal Flow (Veh/hr)
A1	1	441	441
Ax	1	452	452
B1	1	376	376
Bx	1	340	340
C1	1	169	169
C2	1	251	251
Cs	1	420	420

Cx	1	445	445

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled	Second phase
A1	1	1	A		
B1	1	1	C		
C1	1	1	B		
C2	1	1	A	✓	B

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
(ALL)	1	12.00	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	1	1	B1/1	Ax/1	12.00	30.00	✓	Offside	45.00
Bx	1	1	A1/1	Bx/1	12.00	30.00	✓	Nearside	20.00
C1	1	1	Cs/1	C1/1	10.20	30.00	✓	Straight	Straight Movement
C2	1	1	Cs/1	C2/1	10.20	30.00	✓	Straight	Straight Movement
Cx	1	1	A1/1	Cx/1	12.00	30.00	✓	Straight	Straight Movement
Ax	1	2	C2/1	Ax/1	12.00	30.00	✓	Straight	Straight Movement
Bx	1	2	C1/1	Bx/1	12.00	30.00	✓	Offside	35.46
Cx	1	2	B1/1	Cx/1	12.00	30.00	✓	Nearside	20.00

Give Way Data

Arm	Traffic Stream	Opposed traffic	Use Step-wise Opposed Turn Model	Visibility restricted
(ALL)	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 (%)
B1	1	1	Cx/1	574	1800	100
		2	Ax/1	440	1800	100
C1	1	1	Bx/1	574	1800	100

Give Way Data - Movements - Conflicts

Arm	Traffic Stream	Movement	Destination traffic stream	Description	Controlling type	Controlling from traffic stream	Controlling to traffic stream	Percentage opposing (%)	Slope coefficient	Upstream signals visible	Conflict shift	Conflict duration
B1	1	1	Cx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.09		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0
		2	Ax/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.08		0	0
				T-junction	TrafficStreamMovement	A1/1	Cx/1	100	0.20		0	0
				opposing flow								
				T-junction opposing flow	TrafficStreamMovement	C2/1	Ax/1	100	0.13		0	0
				T-junction opposing flow	TrafficStreamMovement	C1/1	Bx/1	100	0.29		0	0
C1	1	1	Bx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.22		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
(ALL)	(untitled)				Farside	3.00	2.00	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	D	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(ALL)	11000

Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	100	100		0.00		

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
1	Library		✓	TrafficStream	Two-Way	A1/1	A1/1	Ax/1	Two-Way	B1/1	B1/1	Bx/1	Two-Way	C2/1	C1/1	Cx/1	✓

T-Junction Majors

T-Junction	Left Carriageway Width (m)	Right Carriageway Width (m)	Kerbed Central Reserve Width (m)	Width for C-B traffic (m)	Visibility for C-B traffic (m)
1	6.00	6.00	0.00	2.20	0.00

T-Junction Minors

T-Junction	B-C Lane Width (m)	B-A Lane Width (m)	B-C Visibility (m)	B-A Visibility (m)
1	2.20	2.20	0.00	0.00

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
1	574	0.09	0.22	440	0.08	0.20	0.13	0.29	574	0.22	0.22

Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1		✓	✓	Lane Balancing			✓			✓	1.25		

Normal Input Flows (Veh/hr)

From	To 1	To 2	To 3
1	0	171	270
2	201	0	175
3	251	169	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
1	1		A1/1	Ax/1	#0000FF
	2		B1/1	Bx/1	#FF0000
	3		Cs/1	Cx/1	#00FF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (Veh/hr)
1	1		1	2	A1/1, Bx/1	Normal	171
	2		1	3	A1/1, Cx/1	Normal	270
	3		2	3	B1/1, Cx/1	Normal	175
	4		2	1	B1/1, Ax/1	Normal	201
	5		3	2	Cs/1, C1/1, Bx/1	Normal	169
	6		3	1	Cs/1, C2/1, Ax/1	Normal	251

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (Veh)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	A1	1	12	635	441	9999	35	21.50	8.09	46.54	37.40	3.59	40.99
	Ax	1	0	Unrestricted	452	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	B1	1	55	65	376	1720	39	27.25	8.47	48.73	40.42	3.72	44.15
	Bx	1	0	Unrestricted	340	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	C1	1	47	92	169	1800	19	39.72	4.34	29.34	26.48	1.93	28.40
	C2	1	25	261	251	1800	54	9.20	3.11	21.03	9.10	1.50	10.61
	Cs	1	23	286	420	1800	100	0.30	0.04	0.20	0.50	0.00	0.50
	Cx	1	0	Unrestricted	445	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Calculated sat flow (Veh/hr)	Calculated capacity (Veh/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
08:00-09:00	A1	1	441	441	0		9999	3600	12		635	0.00	35	36
	Ax	1	452	452	0		Unrestricted	Unrestricted	0		Unrestricted	0.56	100	100
	B1	1	376	376	0		1720	688	55		65	0.00	39	40
	Bx	1	340	340	0		Unrestricted	Unrestricted	0		Unrestricted	1.03	100	100
	C1	1	169	169	0		1800	360	47		92	0.00	19	20
	C2	1	251	251	0		1800	1008	25		261	0.00	54	56
	Cs	1	420	420	0		1800	1800	23		286	0.00	100	100
	Cx	1	445	445	0		Unrestricted	Unrestricted	0		Unrestricted	0.82	100	100

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	A1	1	12.00	21.50	2.63	0.01	37.40	37.40	64.89	285.84	0.31	3.59	3.59
	Ax	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	B1	1	12.00	27.25	2.52	0.33	40.42	40.42	79.00	285.33	11.70	3.72	3.72
	Bx	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	C1	1	10.20	39.72	1.66	0.21	26.48	26.48	90.95	146.37	7.34	1.93	1.93
	C2	1	10.20	9.20	0.60	0.04	9.10	9.10	47.77	118.41	1.48	1.50	1.50
	Cs	1	12.00	0.30	0.00	0.04	0.50	0.50	0.00	0.00	0.00	0.00	0.00
	Cx	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (Veh)	Mean max queue (Veh)	Max queue storage (Veh)	Utilised storage (%)	Average storage excess queue (Veh)	Average limit excess queue (Veh)	Excess queue penalty (£ per hr)	Max end of green queue (Veh)	Max end of red queue (Veh)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))	Estimated blocking

08:00-09:00	A1	1	0.00	8.09	17.39	46.54	0.00	0.00	0.00	0.01	7.85	0.00	0.00	0.00	
	Ax	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			1.00	0.00	1.00	
	B1	1	0.00	8.47	17.39	48.73	0.00	0.00	0.00	0.43	6.70	0.00	0.00	0.00	
	Bx	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			35.00	0.00	35.00	
	C1	1	0.00	4.34	14.78	29.34	0.00	0.00	0.00	0.21	3.96	0.00	0.00	0.00	
	C2	1	0.00	3.11	14.78	21.03	0.00	0.00	0.00	0.04	2.69	0.00	0.00	0.00	
	Cs	1	0.00	0.04	17.39	0.20	0.00	0.00	0.00			0.00	0.00	0.00	
	Cx	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			22.00	0.00	22.00	

Traffic Stream Results: Journey times

Time Segment	Arm	Traffic Stream	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	A1	1	44.10	4.10	10.75	33.50
	Ax	1	45.20	1.51	30.00	12.00
	B1	1	37.60	4.10	9.17	39.25
	Bx	1	34.00	1.13	30.00	12.00
	C1	1	14.37	2.34	6.13	49.92
	C2	1	21.34	1.35	15.78	19.40
	Cs	1	42.00	1.44	29.26	12.30
	Cx	1	44.50	1.48	30.00	12.00

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	Mean Max Queue EoTS (Veh)	Max End of Green Queue EoTS (Veh)	Max End of Red Queue EoTS (Veh)	PCU Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	A1	1	0.00	0.00	✓	0.00	8.09	0.01	7.85	1.00	0.00	40.99	40.99
	Ax	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00	0.00
	B1	1	0.00	0.00	✓	0.00	8.48	0.43	6.70	1.00	0.00	44.15	44.15
	Bx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00	0.00
	C1	1	0.00	0.00	✓	0.00	4.34	0.21	3.96	1.00	0.00	28.40	28.40
	C2	1	0.00	0.00	✓	0.00	3.11	0.04	2.69	1.00	0.00	10.61	10.61
	Cs	1	0.00	0.00	✓	0.00	0.04			1.00	0.00	0.50	0.50
	Cx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00	0.00

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
08:00-09:00	(ALL)	(ALL)	0	0	0		11000	770	0		Unrestricted	0.00	7	7

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Uniform delay (Ped-min/min)	Random plus oversat delay (Ped-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)
08:00-09:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Average storage excess queue (Ped)	Average limit excess queue (Ped)	Excess queue penalty (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Journey times

Time Segment	Crossing	Side	Distance travelled (Ped-km/hr)	Time spent (Ped-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	(ALL)	(ALL)	0.00	0.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-min/min)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
1	20/12/2018 09:50:23	20/12/2018 09:50:23	08:00	100	124.65	8.02	54.65	B1/1	0	0	B1/1	Cs/1	B1/1	✓

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	55	0	2894	547	9.98	113.91	10.74	124.65

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	0	0	42	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))	Effective green (s (per cycle))
08:00-09:00	2894	2894	0		55		65	589	594

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	11.74	9.98	7.40	0.62	113.91	113.91	29.61	835.95	20.83	10.74	10.74

Network Results: Queues and blocking

Time Segment	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))
08:00-09:00	48.73	0.00	58.00	0.00	58.00

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
08:00-09:00	283.10	17.46	16.22

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	PCU Factor	Cost of traffic penalties (£ per hr)	Controller stream penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	0.00	0.00	✓	0.00	1.00	0.00	0.00	124.65	124.65

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

From \ To	1	2	3
1	0.0	45.5	45.5
2	51.3	0.0	51.3
3	43.7	74.2	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (Veh/hr)	Normal journey time (s)	Calculated Total Flow (Veh/hr)	Avg journey time (s)
1	1	2	171	45.50	171	45.50
2	1	3	270	45.50	270	45.50
3	2	3	175	51.25	175	51.25
4	2	1	201	51.25	201	51.25
5	3	2	169	74.22	169	74.22
6	3	1	251	43.70	251	43.70

Final Prediction Table

Traffic Stream Results

				SIGNALS			FLOWS		PERFORMANCE				PER PCU			QUEUES		WEIGHTS		PENALTIES	P.I.
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Second phase	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (Veh)	Max end of red queue (Veh)	Delay weighting multiplier (%)	Stop weighting multiplier (%)	Cost of traffic penalties (£ per hr)	P.I.
A1	1	Donore Road (W)	2	1	A		441	9999	35	0.00	12	635	33.50	21.50	64.89	8.09	7.85	100	100	0.00	40.99
Ax	1	Donore Road (W)					452	Unrestricted	100	1.00	0	Unrestricted	12.00	0.00	0.00	0.00		100	100	0.00	0.00
B1	1	Marlays Lane	2	1	C		376	1720	39	0.00	55	65	39.25	27.25	79.00	8.47	6.70	100	100	0.00	44.15
Bx	1	Marlays Lane					340	Unrestricted	100	35.00	0	Unrestricted	12.00	0.00	0.00	0.00		100	100	0.00	0.00
C1	1	Donore Road (E)	2	1	B		169	1800	19	0.00	47	92	49.92	39.72	90.95	4.34	3.96	100	100	0.00	28.40
C2	1	Donore Road (E)	2	1	A	B	251	1800	54	0.00	25	261	19.40	9.20	47.77	3.11	2.69	100	100	0.00	10.61
Cs	1	Donore Road (E)	2				420	1800	100	0.00	23	286	12.30	0.30	0.00	0.04		100	100	0.00	0.50
Cx	1	Donore Road (E)					445	Unrestricted	100	22.00	0	Unrestricted	12.00	0.00	0.00	0.00		100	100	0.00	0.00

Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE			PER PED		QUEUES	WEIGHTS	PENALTIES	P.I.
Pedestrian	Side	Name	Traffic node	Controller stream	Phase	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Degree of saturation (%)	Practical reserve capacity	Journey Time (s)	Mean Delay per Pe	Mean max queue (Ped)	Delay weighting (%)	Cost of traffic penalties (£ per hr)	P.I.

												d (s)				
(ALL)	(ALL)	(untitled)		1	D	0	11000	7	0	Unrestricted	0.00	0.00	0.00	100	0.00	0.00

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	283.10	17.46	16.22	7.40	0.62	113.91	10.74	0.00	124.65
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	283.10	17.46	16.22	7.40	0.62	113.91	10.74	0.00	124.65

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

A2 - 2018 - SURVEYED FLOWS - PM
D2 - 2018 - SURVEYED FLOWS - PM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-min/min)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
2	20/12/2018 09:50:26	20/12/2018 09:50:27	17:00	100	147.86	9.52	61.82	B1/1	0	0	B1/1	Cs/1	B1/1	✓

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2018 - SURVEYED FLOWS - PM		D2	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2018 - SURVEYED FLOWS - PM				17:00	

Network Options

Network timings

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

Signals options

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

Advanced

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

Traffic options

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

Advanced

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

Normal Traffic parameters

Dispersion type	Dispersion coefficient
Default	35

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Bus	1.00	70	15	0.47	30	85

Tram parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Tram	1.00	70	15	0.47	30	85

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order

Hill Climb (Fast)	15, 40, -1, 15, 40, 1, -1, 1	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05		✓	1

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
2		

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
A1			2
Ax			
B1			2
Bx			
C1			2
C2			2
Cs			2
Cx			

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
A1	1	Donore Road (W)			100.00	✓	Sum of lanes	9999	✓		Normal	
Ax	1	Donore Road (W)			100.00						Normal	
B1	1	Marlays Lane			100.00	✓	Sum of lanes	1800	✓	✓	Normal	
Bx	1	Marlays Lane			100.00						Normal	
C1	1	Donore Road (E)			85.00	✓	Sum of lanes	1800	✓	✓	Normal	
C2	1	Donore Road (E)			85.00	✓	Sum of lanes	1800	✓		Normal	
Cs	1	Donore Road (E)			100.00	✓	Sum of lanes	1800			Normal	
Cx	1	Donore Road (E)			100.00						Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Saturation flow (PCU/hr)
A1	1	1				9999
Ax	1	1				
B1	1	1				1800
Bx	1	1				
C1	1	1				1800
C2	1	1				1800
Cs	1	1				1800
Cx	1	1				

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
(ALL)	1	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
A1	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100
Ax	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100
B1	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
Bx	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100
C1	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
C2	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
Cs	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
Cx	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100

Normal - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	1	100	100

Flows

Arm	Traffic Stream	Total Flow (Veh/hr)	Normal Flow (Veh/hr)
A1	1	607	607
Ax	1	519	519
B1	1	325	325
Bx	1	573	573
C1	1	235	235
C2	1	336	336
Cs	1	571	571
Cx	1	411	411

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled	Second phase
A1	1	1	A		
B1	1	1	C		
C1	1	1	B		
C2	1	1	A	✓	B

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
(ALL)	1	12.00	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	1	1	B1/1	Ax/1	12.00	30.00	✓	Offside	45.00
Bx	1	1	A1/1	Bx/1	12.00	30.00	✓	Nearside	20.00
C1	1	1	Cs/1	C1/1	10.20	30.00	✓	Straight	Straight Movement
C2	1	1	Cs/1	C2/1	10.20	30.00	✓	Straight	Straight Movement
Cx	1	1	A1/1	Cx/1	12.00	30.00	✓	Straight	Straight Movement
Ax	1	2	C2/1	Ax/1	12.00	30.00	✓	Straight	Straight Movement
Bx	1	2	C1/1	Bx/1	12.00	30.00	✓	Offside	35.46
Cx	1	2	B1/1	Cx/1	12.00	30.00	✓	Nearside	20.00

Give Way Data

Arm	Traffic Stream	Opposed traffic	Use Step-wise Opposed Turn Model	Visibility restricted
(ALL)	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 (%)
B1	1	1	Cx/1	574	1800	100
		2	Ax/1	440	1800	100
C1	1	1	Bx/1	574	1800	100

Give Way Data - Movements - Conflicts

Arm	Traffic Stream	Movement	Destination traffic stream	Description	Controlling type	Controlling from traffic stream	Controlling to traffic stream	Percentage opposing (%)	Slope coefficient	Upstream signals visible	Conflict shift	Conflict duration
B1	1	1	Cx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.09		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0
		2	Ax/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.08		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.20		0	0
				T-junction opposing flow	TrafficStreamMovement	C2/1	Ax/1	100	0.13		0	0
				T-junction opposing flow	TrafficStreamMovement	C1/1	Bx/1	100	0.29		0	0
C1	1	1	Bx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.22		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
(ALL)	(untitled)				Farside	3.00	2.00	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	D	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(ALL)	11000

Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	100	100		0.00		

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
1	Library		✓	TrafficStream	Two-Way	A1/1	A1/1	Ax/1	Two-Way	B1/1	B1/1	Bx/1	Two-Way	C2/1	C1/1	Cx/1	✓

T-Junction Majors

T-Junction	Left Carriageway Width (m)	Right Carriageway Width (m)	Kerbed Central Reserve Width (m)	Width for C-B traffic (m)	Visibility for C-B traffic (m)
1	6.00	6.00	0.00	2.20	0.00

T-Junction Minors

T-Junction	B-C Lane Width (m)	B-A Lane Width (m)	B-C Visibility (m)	B-A Visibility (m)
1	2.20	2.20	0.00	0.00

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
1	574	0.09	0.22	440	0.08	0.20	0.13	0.29	574	0.22	0.22

Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit

1		✓	✓	Lane Balancing			✓			✓	1.25		

Normal Input Flows (Veh/hr)

From	To			
		1	2	3
	1	0	338	269
	2	183	0	142
	3	336	235	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
1	1		A1/1	Ax/1	#0000FF
	2		B1/1	Bx/1	#FF0000
	3		Cs/1	Cx/1	#00FF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (Veh/hr)
1	1		1	2	A1/1, Bx/1	Normal	338
	2		1	3	A1/1, Cx/1	Normal	269
	3		2	3	B1/1, Cx/1	Normal	142
	4		2	1	B1/1, Ax/1	Normal	183
	5		3	2	Cs/1, C1/1, Bx/1	Normal	235
	6		3	1	Cs/1, C2/1, Ax/1	Normal	336

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (Veh)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	A1	1	15	508	607	9999	40	18.62	10.47	60.18	44.58	4.63	49.21
	Ax	1	0	Unrestricted	519	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	B1	1	62	46	325	1696	30	36.06	8.26	47.49	46.23	3.66	49.89
	Bx	1	0	Unrestricted	573	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	C1	1	54	65	235	1800	23	38.15	6.00	40.59	35.36	2.67	38.03
	C2	1	29	213	336	1800	63	6.02	3.32	22.49	7.98	1.70	9.68
	Cs	1	32	184	571	1800	100	0.46	0.07	0.42	1.05	0.00	1.05
	Cx	1	0	Unrestricted	411	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Calculated sat flow (Veh/hr)	Calculated capacity (Veh/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
17:00-18:00	A1	1	607	607	0		9999	4100	15		508	0.00	40	41
	Ax	1	519	519	0		Unrestricted	Unrestricted	0		Unrestricted	0.47	100	100
	B1	1	325	325	0		1696	526	62		46	0.00	30	31
	Bx	1	573	573	0		Unrestricted	Unrestricted	0		Unrestricted	0.88	100	100
	C1	1	235	235	0		1800	432	54		65	0.00	23	24
	C2	1	336	336	0		1800	1170	29		213	0.00	63	65
	Cs	1	571	571	0		1800	1800	32		184	0.00	100	100
	Cx	1	411	411	0		Unrestricted	Unrestricted	0		Unrestricted	0.82	100	100

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	A1	1	12.00	18.62	3.13	0.01	44.58	44.58	60.89	369.16	0.46	4.63	4.63
	Ax	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	B1	1	12.00	36.06	2.76	0.49	46.23	46.23	89.87	274.49	17.58	3.66	3.66
	Bx	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	C1	1	10.20	38.15	2.17	0.32	35.36	35.36	90.47	201.17	11.44	2.67	2.67
	C2	1	10.20	6.02	0.50	0.06	7.98	7.98	40.33	131.36	4.15	1.70	1.70
	Cs	1	12.00	0.46	0.00	0.07	1.05	1.05	0.00	0.00	0.00	0.00	0.00
	Cx	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (Veh)	Mean max queue (Veh)	Max queue storage (Veh)	Utilised storage (%)	Average storage excess queue (Veh)	Average limit excess queue (Veh)	Excess queue penalty (£ per hr)	Max end of green queue (Veh)	Max end of red queue (Veh)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))	Estimated blocking
17:00-18:00	A1	1	0.00	10.47	17.39	60.18	0.00	0.00	0.00	0.01	9.96	0.00	0.00	0.00	
	Ax	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			0.00	0.00	0.00	
	B1	1	0.00	8.26	17.39	47.49	0.00	0.00	0.00	0.59	6.81	0.00	0.00	0.00	
	Bx	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			23.00	0.00	23.00	
	C1	1	0.00	6.00	14.78	40.59	0.00	0.00	0.00	0.32	5.28	0.00	0.00	0.00	
	C2	1	0.00	3.32	14.78	22.49	0.00	0.00	0.00	0.06	2.76	0.00	0.00	0.00	
	Cs	1	0.00	0.07	17.39	0.42	0.00	0.00	0.00			0.00	0.00	0.00	
	Cx	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			27.00	0.00	27.00	

Traffic Stream Results: Journey times

Time Segment	Arm	Traffic Stream	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
17:00-18:00	A1	1	60.70	5.16	11.76	30.62

	Ax	1	51.90	1.73	30.00	12.00
	B1	1	32.50	4.34	7.49	48.06
	Bx	1	57.30	1.91	30.00	12.00
	C1	1	19.98	3.16	6.33	48.35
	C2	1	28.56	1.51	18.86	16.22
	Cs	1	57.10	1.98	28.88	12.46
	Cx	1	41.10	1.37	30.00	12.00

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	Mean Max Queue EoTS (Veh)	Max End of Green Queue EoTS (Veh)	Max End of Red Queue EoTS (Veh)	PCU Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
17:00-18:00	A1	1	0.00	0.00	✓	0.00	10.47	0.01	9.96	1.00	0.00	49.21	49.21
	Ax	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00	0.00
	B1	1	0.00	0.00	✓	0.00	8.26	0.59	6.82	1.00	0.00	49.89	49.89
	Bx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00	0.00
	C1	1	0.00	0.00	✓	0.00	6.00	0.32	5.28	1.00	0.00	38.03	38.03
	C2	1	0.00	0.00	✓	0.00	3.32	0.06	2.76	1.00	0.00	9.68	9.68
	Cs	1	0.00	0.00	✓	0.00	0.07			1.00	0.00	1.05	1.05
	Cx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00	0.00

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
17:00-18:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
17:00-18:00	(ALL)	(ALL)	0	0	0		11000	770	0		Unrestricted	0.00	7	7

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Uniform delay (Ped-min/min)	Random plus oversat delay (Ped-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)
17:00-18:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Average storage excess queue (Ped)	Average limit excess queue (Ped)	Excess queue penalty (£ per hr)
17:00-18:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Journey times

Time Segment	Crossing	Side	Distance travelled (Ped-km/hr)	Time spent (Ped-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
17:00-18:00	(ALL)	(ALL)	0.00	0.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
17:00-18:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-min/min)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
2	20/12/2018 09:50:26	20/12/2018 09:50:27	17:00	100	147.86	9.52	61.82	B1/1	0	0	B1/1	Cs/1	B1/1	✓

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	62	0	3577	556	9.58	135.20	12.66	147.86

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
17:00-18:00	0	0	42	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))	Effective green (s (per cycle))
17:00-18:00	3577	3577	0		62		46	598	603

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	11.71	9.58	8.56	0.96	135.20	135.20	28.23	976.18	33.63	12.66	12.66

Network Results: Queues and blocking

Time Segment	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))
17:00-18:00	60.18	0.00	50.00	0.00	50.00

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
17:00-18:00	349.14	21.16	16.50

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	PCU Factor	Cost of traffic penalties (£ per hr)	Controller stream penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
17:00-18:00	0.00	0.00	✓	0.00	1.00	0.00	0.00	147.86	147.86

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

From	To 1	To 2	To 3
1	0.0	42.6	42.6
2	60.1	0.0	60.1
3	40.7	72.8	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (Veh/hr)	Normal journey time (s)	Calculated Total Flow (Veh/hr)	Avg journey time (s)
1	1	2	338	42.62	338	42.62
2	1	3	269	42.62	269	42.62
3	2	3	142	60.06	142	60.06
4	2	1	183	60.06	183	60.06
5	3	2	235	72.82	235	72.82
6	3	1	336	40.69	336	40.69

Final Prediction Table

Traffic Stream Results

				SIGNALS			FLOWS		PERFORMANCE				PER PCU			QUEUES		WEIGHTS		PENALTIES	P.I.
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Second phase	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (Veh)	Max end of red queue (Veh)	Delay weighting multiplier (%)	Stop weighting multiplier (%)	Cost of traffic penalties (£ per hr)	P.I.
A1	1	Donor Ro	2	1	A		607	9999	40	0.00	15	508	30.62	18.62	60.89	10.47	9.96	100	100	0.00	49.21
Ax	1	ad (W)																			
		Donor e Road (W)					519	Unrestricted	100	0.00	0	Unrestricted	12.00	0.00	0.00	0.00		100	100	0.00	0.00
B1	1	Marlays Lane	2	1	C		325	1696	30	0.00	62	46	48.06	36.06	89.87	8.26	6.81	100	100	0.00	49.89
Bx	1	Marlays Lane					573	Unrestricted	100	23.00	0	Unrestricted	12.00	0.00	0.00	0.00		100	100	0.00	0.00
C1	1	Donor e Road (E)	2	1	B		235	1800	23	0.00	54	65	48.35	38.15	90.47	6.00	5.28	100	100	0.00	38.03
C2	1	Donor e Road (E)	2	1	A	B	336	1800	63	0.00	29	213	16.22	6.02	40.33	3.32	2.76	100	100	0.00	9.68
Cs	1	Donor e Road (E)	2				571	1800	100	0.00	32	184	12.46	0.46	0.00	0.07		100	100	0.00	1.05
Cx	1	Donor e Road (E)					411	Unrestricted	100	27.00	0	Unrestricted	12.00	0.00	0.00	0.00		100	100	0.00	0.00

Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE			PER PED		QUEUES	WEIGHTS	PENALTIES	P.I.
Pedestrian	Side	Name	Traffic node	Controller stream	Phase	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Degree of saturation (%)	Practical reserve capacity	Journey Time (s)	Mean Delay per Ped (s)	Mean max queue (Ped)	Delay weighting (%)	Cost of traffic penalties (£ per hr)	P.I.
(ALL)	(ALL)	(untitled)		1	D	0	11000	7	0	Unrestricted	0.00	0.00	0.00	100	0.00	0.00

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	349.14	21.16	16.50	8.56	0.96	135.20	12.66	0.00	147.86
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	349.14	21.16	16.50	8.56	0.96	135.20	12.66	0.00	147.86

- *< = adjusted flow warning (upstream links/traffic streams are over-saturated)*

- ** = Traffic Stream - Normal, Bus or Tram Stop or Delay weighting has been set to a value other than 100%*
- *^ = Traffic Stream - Normal, Bus or Tram Stop or Delay Path weighting has been set to a value other than 100%*
- *+ = average link/traffic stream excess queue is greater than 0*
- ***P.I. = PERFORMANCE INDEX***

A3 - 2023 - OPENING YEAR - BASE - AM
D3 - 2023 - OPENING YEAR - BASE - AM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-min/min)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
3	20/12/2018 09:50:30	20/12/2018 09:50:31	08:00	100	134.02	8.63	56.24	B1/1	0	0	B1/1	Cs/1	B1/1	✓

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2023 - OPENING YEAR - BASE - AM		D3	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2023 - OPENING YEAR - BASE - AM				08:00	

Network Options

Network timings

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

Signals options

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

Advanced

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

Traffic options

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

Advanced

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

Normal Traffic parameters

Dispersion type	Dispersion coefficient
Default	35

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Bus	1.00	70	15	0.47	30	85

Tram parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Tram	1.00	70	15	0.47	30	85

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order
Hill Climb (Fast)	15, 40, -1, 15, 40, 1, -1, 1	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05		✓	1

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
2		

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
A1			2
Ax			
B1			2
Bx			
C1			2
C2			2
Cs			2
Cx			

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
A1	1	Donore Road (W)			100.00	✓	Sum of lanes	9999	✓		Normal	
Ax	1	Donore Road (W)			100.00						Normal	
B1	1	Marlays Lane			100.00	✓	Sum of lanes	1800	✓	✓	Normal	
Bx	1	Marlays Lane			100.00						Normal	
C1	1	Donore Road (E)			85.00	✓	Sum of lanes	1800	✓	✓	Normal	
C2	1	Donore Road (E)			85.00	✓	Sum of lanes	1800	✓		Normal	
Cs	1	Donore Road (E)			100.00	✓	Sum of lanes	1800			Normal	
Cx	1	Donore Road (E)			100.00						Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Saturation flow (PCU/hr)
A1	1	1				9999
Ax	1	1				
B1	1	1				1800
Bx	1	1				
C1	1	1				1800
C2	1	1				1800
Cs	1	1				1800
Cx	1	1				

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
(ALL)	1	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
A1	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100
Ax	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100
B1	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
Bx	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100
C1	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
C2	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
Cs	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
Cx	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100

Normal - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	1	100	100

Flows

Arm	Traffic Stream	Total Flow (Veh/hr)	Normal Flow (Veh/hr)
A1	1	466	466
Ax	1	477	477
B1	1	397	397
Bx	1	360	360
C1	1	179	179
C2	1	265	265
Cs	1	444	444
Cx	1	470	470

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled	Second phase
A1	1	1	A		
B1	1	1	C		
C1	1	1	B		
C2	1	1	A	✓	B

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
(ALL)	1	12.00	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	1	1	B1/1	Ax/1	12.00	30.00	✓	Offside	45.00
Bx	1	1	A1/1	Bx/1	12.00	30.00	✓	Nearside	20.00
C1	1	1	Cs/1	C1/1	10.20	30.00	✓	Straight	Straight Movement
C2	1	1	Cs/1	C2/1	10.20	30.00	✓	Straight	Straight Movement
Cx	1	1	A1/1	Cx/1	12.00	30.00	✓	Straight	Straight Movement
Ax	1	2	C2/1	Ax/1	12.00	30.00	✓	Straight	Straight Movement
Bx	1	2	C1/1	Bx/1	12.00	30.00	✓	Offside	35.46
Cx	1	2	B1/1	Cx/1	12.00	30.00	✓	Nearside	20.00

Give Way Data

Arm	Traffic Stream	Opposed traffic	Use Step-wise Opposed Turn Model	Visibility restricted
(ALL)	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 (%)
B1	1	1	Cx/1	574	1800	100
		2	Ax/1	440	1800	100
C1	1	1	Bx/1	574	1800	100

Give Way Data - Movements - Conflicts

Arm	Traffic Stream	Movement	Destination traffic stream	Description	Controlling type	Controlling from traffic stream	Controlling to traffic stream	Percentage opposing (%)	Slope coefficient	Upstream signals visible	Conflict shift	Conflict duration
B1	1	1	Cx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.09		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0
		2	Ax/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.08		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.20		0	0
				T-junction opposing flow	TrafficStreamMovement	C2/1	Ax/1	100	0.13		0	0
				T-junction opposing flow	TrafficStreamMovement	C1/1	Bx/1	100	0.29		0	0
C1	1	1	Bx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.22		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
(ALL)	(untitled)				Farside	3.00	2.00	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	D	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(ALL)	11000

Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	100	100		0.00		

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
1	Library		✓	TrafficStream	Two-Way	A1/1	A1/1	Ax/1	Two-Way	B1/1	B1/1	Bx/1	Two-Way	C2/1	C1/1	Cx/1	✓

T-Junction Majors

T-Junction	Left Carriageway Width (m)	Right Carriageway Width (m)	Kerbed Central Reserve Width (m)	Width for C-B traffic (m)	Visibility for C-B traffic (m)
1	6.00	6.00	0.00	2.20	0.00

T-Junction Minors

T-Junction	B-C Lane Width (m)	B-A Lane Width (m)	B-C Visibility (m)	B-A Visibility (m)
1	2.20	2.20	0.00	0.00

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
1	574	0.09	0.22	440	0.08	0.20	0.13	0.29	574	0.22	0.22

Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1		✓	✓	Lane Balancing			✓			✓	1.25		

Normal Input Flows (Veh/hr)

		To		
		1	2	3
From	1	0	181	285
	2	212	0	185
	3	265	179	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
1	1		A1/1	Ax/1	#0000FF

	2		B1/1	Bx/1	#FF0000
	3		Cs/1	Cx/1	#00FF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (Veh/hr)
1	1		1	2	A1/1, Bx/1	Normal	181
	2		1	3	A1/1, Cx/1	Normal	285
	3		2	3	B1/1, Cx/1	Normal	185
	4		2	1	B1/1, Ax/1	Normal	212
	5		3	2	Cs/1, C1/1, Bx/1	Normal	179
	6		3	1	Cs/1, C2/1, Ax/1	Normal	265

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (Veh)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	A1	1	13	576	466	9999	34	22.25	8.81	50.67	40.90	3.90	44.80
	Ax	1	0	Unrestricted	477	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	B1	1	56	60	397	1722	40	26.95	8.85	50.89	42.21	3.93	46.13
	Bx	1	0	Unrestricted	360	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	C1	1	50	81	179	1800	19	40.44	4.62	31.25	28.56	2.06	30.61
	C2	1	27	236	265	1800	53	9.80	3.36	22.74	10.24	1.66	11.90
	Cs	1	25	265	444	1800	100	0.33	0.04	0.23	0.57	0.00	0.57
	Cx	1	0	Unrestricted	470	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Calculated sat flow (Veh/hr)	Calculated capacity (Veh/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
08:00-09:00	A1	1	466	466	0		9999	3500	13		576	0.00	34	35
	Ax	1	477	477	0		Unrestricted	Unrestricted	0		Unrestricted	0.55	100	100
	B1	1	397	397	0		1722	706	56		60	0.00	40	41
	Bx	1	360	360	0		Unrestricted	Unrestricted	0		Unrestricted	1.03	100	100
	C1	1	179	179	0		1800	360	50		81	0.00	19	20
	C2	1	265	265	0		1800	990	27		236	0.00	53	55
	Cs	1	444	444	0		1800	1800	25		265	0.00	100	100
	Cx	1	470	470	0		Unrestricted	Unrestricted	0		Unrestricted	0.82	100	100

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise	Mean Delay	Uniform delay (Veh-	Random plus oversat	Unweighted cost of	Weighted cost of delay	Mean stop	Uniform stops	Random stops	Unweighted cost of	Weighted cost of stops
08:00-09:00	A1	1	12.00	22.25	2.87	0.01	40.90	40.90	66.75	310.69	0.37	3.90	3.90
	Ax	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	B1	1	12.00	26.95	2.61	0.36	42.21	42.21	78.87	300.30	12.83	3.93	3.93
	Bx	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	C1	1	10.20	40.44	1.77	0.24	28.56	28.56	91.65	155.38	8.67	2.06	2.06
	C2	1	10.20	9.80	0.67	0.05	10.24	10.24	49.99	128.96	3.51	1.66	1.66
	Cs	1	12.00	0.33	0.00	0.04	0.57	0.57	0.00	0.00	0.00	0.00	0.00
	Cx	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (Veh)	Mean max queue (Veh)	Max queue storage (Veh)	Utilised storage (%)	Average storage excess queue (Veh)	Average limit excess queue (Veh)	Excess queue penalty (£ per hr)	Max end of green queue (Veh)	Max end of red queue (Veh)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))	Estimated blocking
08:00-09:00	A1	1	0.00	8.81	17.39	50.67	0.00	0.00	0.00	0.01	8.42	0.00	0.00	0.00	
	Ax	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			0.00	0.00	0.00	
	B1	1	0.00	8.85	17.39	50.89	0.00	0.00	0.00	0.47	6.98	0.00	0.00	0.00	
	Bx	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			36.00	0.00	36.00	
	C1	1	0.00	4.62	14.78	31.25	0.00	0.00	0.00	0.24	4.22	0.00	0.00	0.00	
	C2	1	0.00	3.36	14.78	22.74	0.00	0.00	0.00	0.05	2.92	0.00	0.00	0.00	
	Cs	1	0.00	0.04	17.39	0.23	0.00	0.00	0.00			0.00	0.00	0.00	
	Cx	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			22.00	0.00	22.00	

Traffic Stream Results: Journey times

Time Segment	Arm	Traffic Stream	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	A1	1	46.60	4.43	10.51	34.25
	Ax	1	47.70	1.59	30.00	12.00
	B1	1	39.70	4.30	9.24	38.95
	Bx	1	36.00	1.20	30.00	12.00
	C1	1	15.22	2.52	6.04	50.64
	C2	1	22.53	1.47	15.30	20.00
	Cs	1	44.40	1.52	29.20	12.33
	Cx	1	47.00	1.57	30.00	12.00

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	Mean Max Queue EoTS (Veh)	Max End of Green Queue EoTS (Veh)	Max End of Red Queue EoTS (Veh)	PCU Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	A1	1	0.00	0.00	✓	0.00	8.81	0.01	8.42	1.00	0.00	44.80	44.80
	Ax	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00	0.00
	B1	1	0.00	0.00	✓	0.00	8.85	0.47	6.98	1.00	0.00	46.13	46.13
	Bx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00	0.00

	C1	1	0.00	0.00	✓	0.00	4.62	0.24	4.22	1.00	0.00	30.61	30.61
	C2	1	0.00	0.00	✓	0.00	3.36	0.05	2.92	1.00	0.00	11.90	11.90
	Cs	1	0.00	0.00	✓	0.00	0.04			1.00	0.00	0.57	0.57
	Cx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00	0.00

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
08:00-09:00	(ALL)	(ALL)	0	0	0		11000	770	0		Unrestricted	0.00	7	7

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Uniform delay (Ped-min/min)	Random plus oversat delay (Ped-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)
08:00-09:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Average storage excess queue (Ped)	Average limit excess queue (Ped)	Excess queue penalty (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Journey times

Time Segment	Crossing	Side	Distance travelled (Ped-km/hr)	Time spent (Ped-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	(ALL)	(ALL)	0.00	0.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-min/min)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
3	20/12/2018 09:50:30	20/12/2018 09:50:31	08:00	100	134.02	8.63	56.24	B1/1	0	0	B1/1	Cs/1	B1/1	✓

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	56	0	3058	546	10.15	122.48	11.54	134.02

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	0	0	42	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))	Effective green (s (per cycle))
08:00-09:00	3058	3058	0		56		60	588	593

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	11.74	10.15	7.92	0.70	122.48	122.48	30.11	895.34	25.37	11.54	11.54

Network Results: Queues and blocking

Time Segment	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))
08:00-09:00	50.89	0.00	58.00	0.00	58.00

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
08:00-09:00	299.14	18.60	16.09

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	PCU Factor	Cost of traffic penalties (£ per hr)	Controller stream penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	0.00	0.00	✓	0.00	1.00	0.00	0.00	134.02	134.02

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

From	To 1	To 2	To 3
1	0.0	46.3	46.3
2	51.0	0.0	51.0
3	44.3	75.0	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (Veh/hr)	Normal journey time (s)	Calculated Total Flow (Veh/hr)	Avg journey time (s)
1	1	2	181	46.25	181	46.25
2	1	3	285	46.25	285	46.25
3	2	3	185	50.95	185	50.95
4	2	1	212	50.95	212	50.95
5	3	2	179	74.97	179	74.97
6	3	1	265	44.33	265	44.33

Final Prediction Table

Traffic Stream Results

				SIGNALS			FLOWS		PERFORMANCE				PER PCU			QUEUES		WEIGHTS		PENALTIES	P.I.
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Second phase	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (Veh)	Max end of red queue (Veh)	Delay weighting multiplier (%)	Stop weighting multiplier (%)	Cost of traffic penalties (£ per hr)	P.I.
A1	1	Donore Road (W)	2	1	A		466	9999	34	0.00	13	576	34.25	22.25	66.75	8.81	8.42	100	100	0.00	44.80
Ax	1	Donore Road (W)					477	Unrestricted	100	0.00	0	Unrestricted	12.00	0.00	0.00	0.00		100	100	0.00	0.00
B1	1	Marlays Lane	2	1	C		397	1722	40	0.00	56	60	38.95	26.95	78.87	8.85	6.98	100	100	0.00	46.13
Bx	1	Marlays Lane					360	Unrestricted	100	36.00	0	Unrestricted	12.00	0.00	0.00	0.00		100	100	0.00	0.00
C1	1	Donore Road (E)	2	1	B		179	1800	19	0.00	50	81	50.64	40.44	91.65	4.62	4.22	100	100	0.00	30.61
C2	1	Donore Road (E)	2	1	A	B	265	1800	53	0.00	27	236	20.00	9.80	49.99	3.36	2.92	100	100	0.00	11.90
Cs	1	Donore Road (E)	2				444	1800	100	0.00	25	265	12.33	0.33	0.00	0.04		100	100	0.00	0.57
Cx	1	Donore Road (E)					470	Unrestricted	100	22.00	0	Unrestricted	12.00	0.00	0.00	0.00		100	100	0.00	0.00

Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE			PER PED		QUEUES	WEIGHTS	PENALTIES	P.I.
Pedestrian	Side	Name	Traffic node	Controller stream	Phase	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Degree of saturation (%)	Practical reserve capacity	Journey Time (s)	Mean Delay per Ped (s)	Mean max queue (Ped)	Delay weighting (%)	Cost of traffic penalties (£ per hr)	P.I.
(ALL)	(ALL)	(untitled)		1	D	0	11000	7	0	Unrestricted	0.00	0.00	0.00	100	0.00	0.00

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	299.14	18.60	16.09	7.92	0.70	122.48	11.54	0.00	134.02
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	299.14	18.60	16.09	7.92	0.70	122.48	11.54	0.00	134.02

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

A4 - 2023 - OPENING YEAR - BASE - PM
D4 - 2023 - OPENING YEAR - BASE - PM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-min/min)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
4	20/12/2018 09:50:33	20/12/2018 09:50:34	17:00	100	159.33	10.26	63.09	B1/1	0	0	B1/1	Cs/1	B1/1	✓

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2023 - OPENING YEAR - BASE - PM		D4	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2023 - OPENING YEAR - BASE - PM				17:00	

Network Options

Network timings

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

Signals options

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

Advanced

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

Traffic options

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

Advanced

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

Normal Traffic parameters

Dispersion type	Dispersion coefficient
Default	35

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Bus	1.00	70	15	0.47	30	85

Tram parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Tram	1.00	70	15	0.47	30	85

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order
Hill Climb (Fast)	15, 40, -1, 15, 40, 1, -1, 1	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05		✓	1

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
2		

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
A1			2
Ax			
B1			2
Bx			
C1			2
C2			2
Cs			2
Cx			

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red

A1	**1**	Donore Road (W)			100.00	✓	Sum of lanes	9999	✓		Normal	
Ax	**1**	Donore Road (W)			100.00						Normal	
B1	**1**	Marlays Lane			100.00	✓	Sum of lanes	1800	✓	✓	Normal	
Bx	**1**	Marlays Lane			100.00						Normal	
C1	**1**	Donore Road (E)			85.00	✓	Sum of lanes	1800	✓	✓	Normal	
C2	**1**	Donore Road (E)			85.00	✓	Sum of lanes	1800	✓		Normal	
Cs	**1**	Donore Road (E)			100.00	✓	Sum of lanes	1800			Normal	
Cx	**1**	Donore Road (E)			100.00						Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Saturation flow (PCU/hr)
A1	**1**	**1**				9999
Ax	**1**	**1**				
B1	**1**	**1**				1800
Bx	**1**	**1**				
C1	**1**	**1**				1800
C2	**1**	**1**				1800
Cs	**1**	**1**				1800
Cx	**1**	**1**				

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
(ALL)	**1**	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
A1	**1**	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100
Ax	**1**	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100
B1	**1**	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
Bx	**1**	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100
C1	**1**	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
C2	**1**	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
Cs	**1**	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
Cx	**1**	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100

Normal - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	**1**	100	100

Flows

Arm	Traffic Stream	Total Flow (Veh/hr)	Normal Flow (Veh/hr)
A1	**1**	641	641
Ax	**1**	548	548
B1	**1**	343	343
Bx	**1**	605	605
C1	**1**	248	248
C2	**1**	355	355
Cs	**1**	603	603
Cx	**1**	434	434

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled	Second phase
A1	**1**	1	A		
B1	**1**	1	C		
C1	**1**	1	B		
C2	**1**	1	A	✓	B

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
(ALL)	**1**	12.00	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	**1**	**1**	B1/1	Ax/1	12.00	30.00	✓	Offside	45.00
Bx	**1**	**1**	A1/1	Bx/1	12.00	30.00	✓	Nearside	20.00
C1	**1**	**1**	Cs/1	C1/1	10.20	30.00	✓	Straight	Straight Movement
C2	**1**	**1**	Cs/1	C2/1	10.20	30.00	✓	Straight	Straight Movement
Cx	**1**	**1**	A1/1	Cx/1	12.00	30.00	✓	Straight	Straight Movement
Ax	**1**	**2**	C2/1	Ax/1	12.00	30.00	✓	Straight	Straight Movement
Bx	**1**	**2**	C1/1	Bx/1	12.00	30.00	✓	Offside	35.46
Cx	**1**	**2**	B1/1	Cx/1	12.00	30.00	✓	Nearside	20.00

Give Way Data

Arm	Traffic Stream	Opposed traffic	Use Step-wise Opposed Turn Model	Visibility restricted
(ALL)	**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 (%)
B1	**1**	**1**	Cx/1	574	1800	100
		2	Ax/1	440	1800	100
C1	**1**	**1**	Bx/1	574	1800	100

Give Way Data - Movements - Conflicts

Arm	Traffic Stream	Movement	Destination traffic stream	Description	Controlling type	Controlling from traffic stream	Controlling to traffic stream	Percentage opposing (%)	Slope coefficient	Upstream signals visible	Conflict shift	Conflict duration
B1	**1**	**1**	**Cx/1**	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.09		0	0

				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0
		2	Ax/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.08		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.20		0	0
				T-junction opposing flow	TrafficStreamMovement	C2/1	Ax/1	100	0.13		0	0
				T-junction opposing flow	TrafficStreamMovement	C1/1	Bx/1	100	0.29		0	0
C1	1	1	Bx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.22		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
(ALL)	(untitled)				Farside	3.00	2.00	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	D	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(ALL)	11000

Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	100	100		0.00		

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
1	Library		✓	TrafficStream	Two-Way	A1/1	A1/1	Ax/1	Two-Way	B1/1	B1/1	Bx/1	Two-Way	C2/1	C1/1	Cx/1	✓

T-Junction Majors

T-Junction	Left Carriageway Width (m)	Right Carriageway Width (m)	Kerbed Central Reserve Width (m)	Width for C-B traffic (m)	Visibility for C-B traffic (m)
1	6.00	6.00	0.00	2.20	0.00

T-Junction Minors

T-Junction	B-C Lane Width (m)	B-A Lane Width (m)	B-C Visibility (m)	B-A Visibility (m)
1	2.20	2.20	0.00	0.00

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
1	574	0.09	0.22	440	0.08	0.20	0.13	0.29	574	0.22	0.22

Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1		✓	✓	Lane Balancing			✓			✓	1.25		

Normal Input Flows (Veh/hr)

From	To 1	To 2	To 3
1	0	357	284
2	193	0	150
3	355	248	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
1	1		A1/1	Ax/1	#0000FF
	2		B1/1	Bx/1	#FF0000
	3		Cs/1	Cx/1	#00FF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (Veh/hr)
1	1		1	2	A1/1, Bx/1	Normal	357
	2		1	3	A1/1, Cx/1	Normal	284
	3		2	3	B1/1, Cx/1	Normal	150
	4		2	1	B1/1, Ax/1	Normal	193
	5		3	2	Cs/1, C1/1, Bx/1	Normal	248
	6		3	1	Cs/1, C2/1, Ax/1	Normal	355

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (Veh)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	A1	1	16	462	641	9999	39	19.33	11.41	65.61	48.86	5.03	53.89
	Ax	1	0	Unrestricted	548	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	B1	1	63	43	343	1699	31	35.69	8.73	50.18	48.28	3.86	52.14
	Bx	1	0	Unrestricted	605	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	C1	1	57	57	248	1800	23	39.06	6.45	43.60	38.21	2.85	41.06
	C2	1	31	192	355	1800	62	6.53	3.72	25.15	9.15	1.88	11.03
	Cs	1	34	169	603	1800	100	0.50	0.08	0.48	1.20	0.00	1.20
	Cx	1	0	Unrestricted	434	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Calculated sat flow (Veh/hr)	Calculated capacity (Veh/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
17:00-18:00	A1	1	641	641	0		9999	4000	16		462	0.00	39	40
	Ax	1	548	548	0		Unrestricted	Unrestricted	0		Unrestricted	0.46	100	100
	B1	1	343	343	0		1699	544	63		43	0.00	31	32
	Bx	1	605	605	0		Unrestricted	Unrestricted	0		Unrestricted	0.89	100	100
	C1	1	248	248	0		1800	432	57		57	0.00	23	24
	C2	1	355	355	0		1800	1152	31		192	0.00	62	64
	Cs	1	603	603	0		1800	1800	34		169	0.00	100	100
	Cx	1	434	434	0		Unrestricted	Unrestricted	0		Unrestricted	0.82	100	100

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	A1	1	12.00	19.33	3.43	0.02	48.86	48.86	62.55	400.39	0.55	5.03	5.03
	Ax	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	B1	1	12.00	35.69	2.87	0.53	48.28	48.28	89.80	289.09	18.92	3.86	3.86
	Bx	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	C1	1	10.20	39.06	2.31	0.38	38.21	38.21	91.78	214.01	13.59	2.85	2.85
	C2	1	10.20	6.53	0.58	0.07	9.15	9.15	42.32	145.32	4.92	1.88	1.88
	Cs	1	12.00	0.50	0.00	0.08	1.20	1.20	0.00	0.00	0.00	0.00	0.00
	Cx	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (Veh)	Mean max queue (Veh)	Max queue storage (Veh)	Utilised storage (%)	Average storage excess queue (Veh)	Average limit excess queue (Veh)	Excess queue penalty (£ per hr)	Max end of green queue (Veh)	Max end of red queue (Veh)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))	Estimated blocking
17:00-18:00	A1	1	0.00	11.41	17.39	65.61	0.00	0.00	0.00	0.02	10.70	0.00	0.00	0.00	
	Ax	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			0.00	0.00	0.00	
	B1	1	0.00	8.73	17.39	50.18	0.00	0.00	0.00	0.63	7.11	0.00	0.00	0.00	
	Bx	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			24.00	0.00	24.00	
	C1	1	0.00	6.45	14.78	43.60	0.00	0.00	0.00	0.38	5.62	0.00	0.00	0.00	
	C2	1	0.00	3.72	14.78	25.15	0.00	0.00	0.00	0.07	3.03	0.00	0.00	0.00	
	Cs	1	0.00	0.08	17.39	0.48	0.00	0.00	0.00			0.00	0.00	0.00	
	Cx	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			27.00	0.00	27.00	

Traffic Stream Results: Journey times

Time Segment	Arm	Traffic Stream	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
17:00-18:00	A1	1	64.10	5.58	11.49	31.33
	Ax	1	54.80	1.83	30.00	12.00
	B1	1	34.30	4.54	7.55	47.69
	Bx	1	60.50	2.02	30.00	12.00
	C1	1	21.08	3.39	6.21	49.26
	C2	1	30.18	1.65	18.29	16.73
	Cs	1	60.30	2.09	28.79	12.50
	Cx	1	43.40	1.45	30.00	12.00

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	Mean Max Queue EoTS (Veh)	Max End of Green Queue EoTS (Veh)	Max End of Red Queue EoTS (Veh)	PCU Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
17:00-18:00	A1	1	0.00	0.00	✓	0.00	11.41	0.02	10.70	1.00	0.00	53.89	53.89
	Ax	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00	0.00
	B1	1	0.00	0.00	✓	0.00	8.73	0.63	7.11	1.00	0.00	52.14	52.14
	Bx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00	0.00
	C1	1	0.00	0.00	✓	0.00	6.45	0.38	5.62	1.00	0.00	41.06	41.06
	C2	1	0.00	0.00	✓	0.00	3.72	0.07	3.03	1.00	0.00	11.03	11.03
	Cs	1	0.00	0.00	✓	0.00	0.08			1.00	0.00	1.20	1.20
	Cx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00	0.00

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)

17:00-18:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
17:00-18:00	(ALL)	(ALL)	0	0	0		11000	770	0		Unrestricted	0.00	7	7

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Uniform delay (Ped-min/min)	Random plus oversat delay (Ped-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)
17:00-18:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Average storage excess queue (Ped)	Average limit excess queue (Ped)	Excess queue penalty (£ per hr)
17:00-18:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Journey times

Time Segment	Crossing	Side	Distance travelled (Ped-km/hr)	Time spent (Ped-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
17:00-18:00	(ALL)	(ALL)	0.00	0.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
17:00-18:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-min/min)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
4	20/12/2018 09:50:33	20/12/2018 09:50:34	17:00	100	159.33	10.26	63.09	B1/1	0	0	B1/1	Cs/1	B1/1	✓

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	63	0	3777	555	9.78	145.70	13.63	159.33

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
17:00-18:00	0	0	42	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))	Effective green (s (per cycle))
17:00-18:00	3777	3777	0		63		43	597	602

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	11.71	9.78	9.18	1.08	145.70	145.70	28.77	1048.82	37.99	13.63	13.63

Network Results: Queues and blocking

Time Segment	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))
17:00-18:00	65.61	0.00	51.00	0.00	51.00

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
17:00-18:00	368.66	22.55	16.35

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	PCU Factor	Cost of traffic penalties (£ per hr)	Controller stream penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
17:00-18:00	0.00	0.00	✓	0.00	1.00	0.00	0.00	159.33	159.33

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

From	To 1	To 2	To 3
1	0.0	43.3	43.3
2	59.7	0.0	59.7
3	41.2	73.8	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (Veh/hr)	Normal journey time (s)	Calculated Total Flow (Veh/hr)	Avg journey time (s)
1	1	2	357	43.33	357	43.33
2	1	3	284	43.33	284	43.33
3	2	3	150	59.69	150	59.69
4	2	1	193	59.69	193	59.69

5	3	2	248	73.76	248	73.76
6	3	1	355	41.24	355	41.24

Final Prediction Table

Traffic Stream Results

				SIGNALS			FLOWS		PERFORMANCE				PER PCU			QUEUES		WEIGHTS		PENALTIES	P.I.
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Second phase	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (Veh)	Max end of red queue (Veh)	Delay weighting multiplier (%)	Stop weighting multiplier (%)	Cost of traffic penalties (£ per hr)	P.I.
A1	1	Donore Road (W)	2	1	A		641	9999	39	0.00	16	462	31.33	19.33	62.55	11.41	10.70	100	100	0.00	53.89
Ax	1	Donore Road (W)					548	Unrestricted	100	0.00	0	Unrestricted	12.00	0.00	0.00	0.00		100	100	0.00	0.00
B1	1	Marlays Lane	2	1	C		343	1699	31	0.00	63	43	47.69	35.69	89.80	8.73	7.11	100	100	0.00	52.14
Bx	1	Marlays Lane					605	Unrestricted	100	24.00	0	Unrestricted	12.00	0.00	0.00	0.00		100	100	0.00	0.00
C1	1	Donore Road (E)	2	1	B		248	1800	23	0.00	57	57	49.26	39.06	91.78	6.45	5.62	100	100	0.00	41.06
C2	1	Donore Road (E)	2	1	A	B	355	1800	62	0.00	31	192	16.73	6.53	42.32	3.72	3.03	100	100	0.00	11.03
Cs	1	Donore Road (E)	2				603	1800	100	0.00	34	169	12.50	0.50	0.00	0.08		100	100	0.00	1.20
Cx	1	Donore Road (E)					434	Unrestricted	100	27.00	0	Unrestricted	12.00	0.00	0.00	0.00		100	100	0.00	0.00

Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE			PER PED		QUEUES	WEIGHTS	PENALTIES	P.I.
Pedestrian	Side	Name	Traffic node	Controller stream	Phase	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Degree of saturation (%)	Practical reserve capacity	Journey Time (s)	Mean Delay per Ped (s)	Mean max queue (Ped)	Delay weighting (%)	Cost of traffic penalties (£ per hr)	P.I.
(ALL)	(ALL)	(untitled)		1	D	0	11000	7	0	Unrestricted	0.00	0.00	0.00	100	0.00	0.00

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	368.66	22.55	16.35	9.18	1.08	145.70	13.63	0.00	159.33
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	368.66	22.55	16.35	9.18	1.08	145.70	13.63	0.00	159.33

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

A5 - 2023 - OPENING YEAR - BASE + DEV - AM
D5 - 2023 - OPENING YEAR - BASE + 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)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-min/min)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
5	20/12/2018 09:50:36	20/12/2018 09:50:37	08:00	100	159.68	10.29	60.22	B1/1	0	0	B1/1	Cs/1	B1/1	✓

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2023 - OPENING YEAR - BASE + DEV - AM		D5	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2023 - OPENING YEAR - BASE + DEV - AM				08:00	

Network Options

Network timings

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

Signals options

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

Advanced

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

Traffic options

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

Advanced

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

Normal Traffic parameters

Dispersion type	Dispersion coefficient
Default	35

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Bus	1.00	70	15	0.47	30	85

Tram parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Tram	1.00	70	15	0.47	30	85

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order
Hill Climb (Fast)	15, 40, -1, 15, 40, 1, -1, 1	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05		✓	1

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
2		

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
A1			2
Ax			
B1			2
Bx			
C1			2
C2			2
Cs			2
Cx			

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
A1	1	Donore Road (W)			100.00	✓	Sum of lanes	9999	✓		Normal	
Ax	1	Donore Road (W)			100.00						Normal	
B1	1	Marlays Lane			100.00	✓	Sum of lanes	1800	✓	✓	Normal	
Bx	1	Marlays Lane			100.00						Normal	
C1	1	Donore Road (E)			85.00	✓	Sum of lanes	1800	✓	✓	Normal	
C2	1	Donore Road (E)			85.00	✓	Sum of lanes	1800	✓		Normal	
Cs	1	Donore Road (E)			100.00	✓	Sum of lanes	1800			Normal	

Cx	1	Donore Road (E)			100.00						Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Saturation flow (PCU/hr)
A1	1	1				9999
Ax	1	1				
B1	1	1				1800
Bx	1	1				
C1	1	1				1800
C2	1	1				1800
Cs	1	1				1800
Cx	1	1				

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
(ALL)	1	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
A1	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100
Ax	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100
B1	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
Bx	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100
C1	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
C2	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
Cs	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
Cx	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100

Normal - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	1	100	100

Flows

Arm	Traffic Stream	Total Flow (Veh/hr)	Normal Flow (Veh/hr)
A1	1	485	485
Ax	1	529	529
B1	1	501	501
Bx	1	398	398
C1	1	198	198
C2	1	265	265
Cs	1	463	463
Cx	1	522	522

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled	Second phase
A1	1	1	A		
B1	1	1	C		
C1	1	1	B		
C2	1	1	A	✓	B

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
(ALL)	1	12.00	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	1	1	B1/1	Ax/1	12.00	30.00	✓	Offside	45.00
Bx	1	1	A1/1	Bx/1	12.00	30.00	✓	Nearside	20.00
C1	1	1	Cs/1	C1/1	10.20	30.00	✓	Straight	Straight Movement
C2	1	1	Cs/1	C2/1	10.20	30.00	✓	Straight	Straight Movement
Cx	1	1	A1/1	Cx/1	12.00	30.00	✓	Straight	Straight Movement
Ax	1	2	C2/1	Ax/1	12.00	30.00	✓	Straight	Straight Movement
Bx	1	2	C1/1	Bx/1	12.00	30.00	✓	Offside	35.46
Cx	1	2	B1/1	Cx/1	12.00	30.00	✓	Nearside	20.00

Give Way Data

Arm	Traffic Stream	Opposed traffic	Use Step-wise Opposed Turn Model	Visibility restricted
(ALL)	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 (%)
B1	1	1	Cx/1	574	1800	100
		2	Ax/1	440	1800	100
C1	1	1	Bx/1	574	1800	100

Give Way Data - Movements - Conflicts

Arm	Traffic Stream	Movement	Destination traffic stream	Description	Controlling type	Controlling from traffic stream	Controlling to traffic stream	Percentage opposing (%)	Slope coefficient	Upstream signals visible	Conflict shift	Conflict duration
B1	1	1	Cx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.09		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0
		2	Ax/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.08		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.20		0	0
				T-junction opposing flow	TrafficStreamMovement	C2/1	Ax/1	100	0.13		0	0
				T-junction opposing flow	TrafficStreamMovement	C1/1	Bx/1	100	0.29		0	0
C1	1	1	Bx/1	T-junction	TrafficStreamMovement	A1/1	Bx/1	100	0.22		0	0

				opposing flow								
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
(ALL)	(untitled)				Farside	3.00	2.00	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	D	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(ALL)	11000

Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	100	100		0.00		

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
1	Library		✓	TrafficStream	Two-Way	A1/1	A1/1	Ax/1	Two-Way	B1/1	B1/1	Bx/1	Two-Way	C2/1	C1/1	Cx/1	✓

T-Junction Majors

T-Junction	Left Carriageway Width (m)	Right Carriageway Width (m)	Kerbed Central Reserve Width (m)	Width for C-B traffic (m)	Visibility for C-B traffic (m)
1	6.00	6.00	0.00	2.20	0.00

T-Junction Minors

T-Junction	B-C Lane Width (m)	B-A Lane Width (m)	B-C Visibility (m)	B-A Visibility (m)
1	2.20	2.20	0.00	0.00

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
1	574	0.09	0.22	440	0.08	0.20	0.13	0.29	574	0.22	0.22

Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1		✓	✓	Lane Balancing			✓			✓	1.25		

Normal Input Flows (Veh/hr)

From	To 1	To 2	To 3
1	0	200	285
2	264	0	237
3	265	198	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
1	1		A1/1	Ax/1	#0000FF
	2		B1/1	Bx/1	#FF0000
	3		Cs/1	Cx/1	#00FF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (Veh/hr)
1	1		1	2	A1/1, Bx/1	Normal	200
	2		1	3	A1/1, Cx/1	Normal	285
	3		2	3	B1/1, Cx/1	Normal	237
	4		2	1	B1/1, Ax/1	Normal	264
	5		3	2	Cs/1, C1/1, Bx/1	Normal	198
	6		3	1	Cs/1, C2/1, Ax/1	Normal	265

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (Veh)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	A1	1	18	401	485	9999	26	28.17	10.26	58.99	53.89	4.56	58.45
	Ax	1	0	Unrestricted	529	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	B1	1	60	49	501	1733	47	23.30	10.75	61.82	46.04	4.74	50.78
	Bx	1	0	Unrestricted	398	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	C1	1	52	72	198	1800	20	40.26	5.13	34.67	31.44	2.28	33.73

	C2	1	31	193	265	1800	46	13.54	3.97	26.85	14.15	1.95	16.10
	Cs	1	26	250	463	1800	100	0.35	0.04	0.26	0.63	0.00	0.63
	Cx	1	0	Unrestricted	522	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Calculated sat flow (Veh/hr)	Calculated capacity (Veh/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
08:00-09:00	A1	1	485	485	0		9999	2700	18		401	0.00	26	27
	Ax	1	529	529	0		Unrestricted	Unrestricted	0		Unrestricted	0.55	100	100
	B1	1	501	501	0		1733	832	60		49	0.00	47	48
	Bx	1	398	398	0		Unrestricted	Unrestricted	0		Unrestricted	1.09	100	100
	C1	1	198	198	0		1800	378	52		72	0.00	20	21
	C2	1	265	265	0		1800	864	31		193	0.00	46	48
	Cs	1	463	463	0		1800	1800	26		250	0.00	100	100
	Cx	1	522	522	0		Unrestricted	Unrestricted	0		Unrestricted	0.81	100	100

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	A1	1	12.00	28.17	3.78	0.02	53.89	53.89	74.96	362.86	0.71	4.56	4.56
	Ax	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	B1	1	12.00	23.30	2.79	0.45	46.04	46.04	75.50	362.09	16.17	4.74	4.74
	Bx	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	C1	1	10.20	40.26	1.93	0.29	31.44	31.44	91.91	171.83	10.15	2.28	2.28
	C2	1	10.20	13.54	0.93	0.07	14.15	14.15	58.55	150.29	4.86	1.95	1.95
	Cs	1	12.00	0.35	0.00	0.04	0.63	0.63	0.00	0.00	0.00	0.00	0.00
	Cx	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (Veh)	Mean max queue (Veh)	Max queue storage (Veh)	Utilised storage (%)	Average storage excess queue (Veh)	Average limit excess queue (Veh)	Excess queue penalty (£ per hr)	Max end of green queue (Veh)	Max end of red queue (Veh)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))	Estimated blocking
08:00-09:00	A1	1	0.00	10.26	17.39	58.99	0.00	0.00	0.00	0.02	9.85	0.00	0.00	0.00	
	Ax	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			0.00	0.00	0.00	
	B1	1	0.00	10.75	17.39	61.82	0.00	0.00	0.00	0.59	7.83	0.00	0.00	0.00	
	Bx	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			43.00	0.00	43.00	
	C1	1	0.00	5.13	14.78	34.67	0.00	0.00	0.00	0.29	4.63	0.00	0.00	0.00	
	C2	1	0.00	3.97	14.78	26.85	0.00	0.00	0.00	0.07	3.45	0.00	0.00	0.00	
	Cs	1	0.00	0.04	17.39	0.26	0.00	0.00	0.00			0.00	0.00	0.00	
	Cx	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			22.00	0.00	22.00	

Traffic Stream Results: Journey times

Time Segment	Arm	Traffic Stream	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	A1	1	48.50	5.41	8.96	40.17
	Ax	1	52.90	1.76	30.00	12.00
	B1	1	50.10	4.91	10.20	35.30
	Bx	1	39.80	1.33	30.00	12.00
	C1	1	16.83	2.78	6.06	50.46
	C2	1	22.53	1.75	12.89	23.74
	Cs	1	46.30	1.59	29.16	12.35
	Cx	1	52.20	1.74	30.00	12.00

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	Mean Max Queue EoTS (Veh)	Max End of Green Queue EoTS (Veh)	Max End of Red Queue EoTS (Veh)	PCU Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	A1	1	0.00	0.00	✓	0.00	10.26	0.02	9.85	1.00	0.00	58.45	58.45
	Ax	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00	0.00
	B1	1	0.00	0.00	✓	0.00	10.75	0.59	7.83	1.00	0.00	50.78	50.78
	Bx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00	0.00
	C1	1	0.00	0.00	✓	0.00	5.13	0.29	4.63	1.00	0.00	33.73	33.73
	C2	1	0.00	0.00	✓	0.00	3.97	0.07	3.45	1.00	0.00	16.10	16.10
	Cs	1	0.00	0.00	✓	0.00	0.04			1.00	0.00	0.63	0.63
	Cx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00	0.00

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
08:00-09:00	(ALL)	(ALL)	0	0	0		11000	770	0		Unrestricted	0.00	7	7

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Uniform delay (Ped-min/min)	Random plus oversat delay (Ped-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)

08:00-09:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Average storage excess queue (Ped)	Average limit excess queue (Ped)	Excess queue penalty (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Journey times

Time Segment	Crossing	Side	Distance travelled (Ped-km/hr)	Time spent (Ped-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	(ALL)	(ALL)	0.00	0.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-min/min)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
5	20/12/2018 09:50:36	20/12/2018 09:50:37	08:00	100	159.68	10.29	60.22	B1/1	0	0	B1/1	Cs/1	B1/1	✓

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	60	0	3361	539	11.02	146.15	13.53	159.68

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	0	0	42	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))	Effective green (s (per cycle))
08:00-09:00	3361	3361	0		60		49	581	586

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	11.75	11.02	9.42	0.87	146.15	146.15	32.10	1047.08	31.89	13.53	13.53

Network Results: Queues and blocking

Time Segment	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))
08:00-09:00	61.82	0.00	65.00	0.00	65.00

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
08:00-09:00	329.16	21.26	15.48

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	PCU Factor	Cost of traffic penalties (£ per hr)	Controller stream penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	0.00	0.00	✓	0.00	1.00	0.00	0.00	159.68	159.68

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

From	To 1	To 2	To 3
1	0.0	52.2	52.2
2	47.3	0.0	47.3
3	48.1	74.8	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (Veh/hr)	Normal journey time (s)	Calculated Total Flow (Veh/hr)	Avg journey time (s)
1	1	2	200	52.17	200	52.17
2	1	3	285	52.17	285	52.17
3	2	3	237	47.30	237	47.30
4	2	1	264	47.30	264	47.30
5	3	2	198	74.81	198	74.81
6	3	1	265	48.09	265	48.09

Final Prediction Table

Traffic Stream Results

				SIGNALS			FLOWS		PERFORMANCE				PER PCU			QUEUES		WEIGHTS		PENALTIES	P.I.
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Second phase	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per	Wasted time total (s	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per	Mean stops per	Mean max queue (V	Max end of red qu	Delay weighting multiplier (%)	Stop weighting multiplier (%)	Cost of traffic penalties (£ per hr)	P.I.

									cycle))	(per cycle))				Veh (s)	Veh (%)	eh)	eue (Veh)				
A1	1	Donore Road (W)	2	1	A		485	9999	26	0.00	18	401	40.17	28.17	74.96	10.26	9.85	100	100	0.00	58.45
Ax	1	Donore Road (W)					529	Unrestricted	100	0.00	0	Unrestricted	12.00	0.00	0.00	0.00		100	100	0.00	0.00
B1	1	Malays Lane	2	1	C		501	1733	47	0.00	60	49	35.30	23.30	75.50	10.75	7.83	100	100	0.00	50.78
Bx	1	Malays Lane					398	Unrestricted	100	43.00	0	Unrestricted	12.00	0.00	0.00	0.00		100	100	0.00	0.00
C1	1	Donore Road (E)	2	1	B		198	1800	20	0.00	52	72	50.46	40.26	91.91	5.13	4.63	100	100	0.00	33.73
C2	1	Donore Road (E)	2	1	A	B	265	1800	46	0.00	31	193	23.74	13.54	58.55	3.97	3.45	100	100	0.00	16.10
Cs	1	Donore Road (E)	2				463	1800	100	0.00	26	250	12.35	0.35	0.00	0.04		100	100	0.00	0.63
Cx	1	Donore Road (E)					522	Unrestricted	100	22.00	0	Unrestricted	12.00	0.00	0.00	0.00		100	100	0.00	0.00

Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE			PER PED		QUEUES	WEIGHTS	PENALTIES	P.I.
Pedestrian	Side	Name	Traffic node	Controller stream	Phase	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Degree of saturation (%)	Practical reserve capacity	Journey Time (s)	Mean Delay per Ped (s)	Mean max queue (Ped)	Delay weighting (%)	Cost of traffic penalties (£ per hr)	P.I.
(ALL)	(ALL)	(untitled)		1	D	0	11000	7	0	Unrestricted	0.00	0.00	0.00	100	0.00	0.00

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	329.16	21.26	15.48	9.42	0.87	146.15	13.53	0.00	159.68
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	329.16	21.26	15.48	9.42	0.87	146.15	13.53	0.00	159.68

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

A6 - 2023 - OPENING YEAR - BASE + DEV - PM
D6 - 2023 - OPENING YEAR - BASE + 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)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-min/min)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
6	20/12/2018 09:50:39	20/12/2018 09:50:40	18:00	100	189.39	12.23	68.49	B1/1	0	0	B1/1	Cs/1	B1/1	✓

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2023 - OPENING YEAR - BASE + DEV - PM		D6	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2023 - OPENING YEAR - BASE + DEV - PM				18:00	

Network Options

Network timings

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

Signals options

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

Advanced

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

Traffic options

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

Advanced

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

Normal Traffic parameters

Dispersion type	Dispersion coefficient
Default	35

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Bus	1.00	70	15	0.47	30	85

Tram parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Tram	1.00	70	15	0.47	30	85

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order
Hill Climb (Fast)	15, 40, -1, 15, 40, 1, -1, 1	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05		✓	1

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
2		

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
A1			2
Ax			
B1			2
Bx			
C1			2
C2			2
Cs			2
Cx			

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
A1	1	Donore Road (W)			100.00	✓	Sum of lanes	9999	✓		Normal	
Ax	1	Donore Road (W)			100.00						Normal	
B1	1	Marlays Lane			100.00	✓	Sum of lanes	1800	✓	✓	Normal	
Bx	1	Marlays Lane			100.00						Normal	
C1	1	Donore Road (E)			85.00	✓	Sum of lanes	1800	✓	✓	Normal	
C2	1	Donore Road (E)			85.00	✓	Sum of lanes	1800	✓		Normal	
Cs	1	Donore Road (E)			100.00	✓	Sum of lanes	1800			Normal	
Cx	1	Donore Road (E)			100.00						Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Saturation flow (PCU/hr)
A1	1	1				9999
Ax	1	1				
B1	1	1				1800
Bx	1	1				
C1	1	1				1800

C2	1	1				1800
Cs	1	1				1800
Cx	1	1				

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
(ALL)	1	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
A1	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100
Ax	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100
B1	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
Bx	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100
C1	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
C2	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
Cs	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
Cx	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100

Normal - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	1	100	100

Flows

Arm	Traffic Stream	Total Flow (Veh/hr)	Normal Flow (Veh/hr)
A1	1	687	687
Ax	1	575	575
B1	1	397	397
Bx	1	697	697
C1	1	294	294
C2	1	355	355
Cs	1	649	649
Cx	1	461	461

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled	Second phase
A1	1	1	A		
B1	1	1	C		
C1	1	1	B		
C2	1	1	A	✓	B

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
(ALL)	1	12.00	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	1	1	B1/1	Ax/1	12.00	30.00	✓	Offside	45.00
Bx	1	1	A1/1	Bx/1	12.00	30.00	✓	Nearside	20.00
C1	1	1	Cs/1	C1/1	10.20	30.00	✓	Straight	Straight Movement
C2	1	1	Cs/1	C2/1	10.20	30.00	✓	Straight	Straight Movement
Cx	1	1	A1/1	Cx/1	12.00	30.00	✓	Straight	Straight Movement
Ax	1	2	C2/1	Ax/1	12.00	30.00	✓	Straight	Straight Movement
Bx	1	2	C1/1	Bx/1	12.00	30.00	✓	Offside	35.46
Cx	1	2	B1/1	Cx/1	12.00	30.00	✓	Nearside	20.00

Give Way Data

Arm	Traffic Stream	Opposed traffic	Use Step-wise Opposed Turn Model	Visibility restricted
(ALL)	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 (%)
B1	1	1	Cx/1	574	1800	100
		2	Ax/1	440	1800	100
C1	1	1	Bx/1	574	1800	100

Give Way Data - Movements - Conflicts

Arm	Traffic Stream	Movement	Destination traffic stream	Description	Controlling type	Controlling from traffic stream	Controlling to traffic stream	Percentage opposing (%)	Slope coefficient	Upstream signals visible	Conflict shift	Conflict duration
B1	1	1	Cx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.09		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0
		2	Ax/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.08		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.20		0	0
				T-junction opposing flow	TrafficStreamMovement	C2/1	Ax/1	100	0.13		0	0
				T-junction opposing flow	TrafficStreamMovement	C1/1	Bx/1	100	0.29		0	0
C1	1	1	Bx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.22		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
(ALL)	(untitled)				Farside	3.00	2.00	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	D	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(ALL)	11000

Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	100	100		0.00		

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
1	Library		✓	TrafficStream	Two-Way	A1/1	A1/1	Ax/1	Two-Way	B1/1	B1/1	Bx/1	Two-Way	C2/1	C1/1	Cx/1	✓

T-Junction Majors

T-Junction	Left Carriageway Width (m)	Right Carriageway Width (m)	Kerbed Central Reserve Width (m)	Width for C-B traffic (m)	Visibility for C-B traffic (m)
1	6.00	6.00	0.00	2.20	0.00

T-Junction Minors

T-Junction	B-C Lane Width (m)	B-A Lane Width (m)	B-C Visibility (m)	B-A Visibility (m)
1	2.20	2.20	0.00	0.00

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
1	574	0.09	0.22	440	0.08	0.20	0.13	0.29	574	0.22	0.22

Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1		✓	✓	Lane Balancing			✓			✓	1.25		

Normal Input Flows (Veh/hr)

From \ To	1	2	3
1	0	403	284
2	220	0	177
3	355	294	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
1	1		A1/1	Ax/1	#0000FF
	2		B1/1	Bx/1	#FF0000
	3		Cs/1	Cx/1	#00FF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (Veh/hr)
1	1		1	2	A1/1, Bx/1	Normal	403
	2		1	3	A1/1, Cx/1	Normal	284
	3		2	3	B1/1, Cx/1	Normal	177
	4		2	1	B1/1, Ax/1	Normal	220
	5		3	2	Cs/1, C1/1, Bx/1	Normal	294
	6		3	1	Cs/1, C2/1, Ax/1	Normal	355

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (Veh)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
18:00-19:00	A1	1	19	372	687	9999	35	22.12	13.00	74.75	59.95	5.77	65.71
	Ax	1	0	Unrestricted	575	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	B1	1	68	31	397	1705	33	36.13	10.22	58.75	56.58	4.54	61.12
	Bx	1	0	Unrestricted	697	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	C1	1	63	43	294	1800	25	39.15	7.71	52.16	45.40	3.42	48.82
	C2	1	32	183	355	1800	60	7.36	3.92	26.52	10.31	1.99	12.30
	Cs	1	36	150	649	1800	100	0.56	0.10	0.58	1.44	0.00	1.44

	Cx	1	0	Unrestricted	461	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Calculated sat flow (Veh/hr)	Calculated capacity (Veh/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
18:00-19:00	A1	1	687	687	0		9999	3600	19		372	0.00	35	36
	Ax	1	575	575	0		Unrestricted	Unrestricted	0		Unrestricted	0.47	100	100
	B1	1	397	397	0		1705	580	68		31	0.00	33	34
	Bx	1	697	697	0		Unrestricted	Unrestricted	0		Unrestricted	0.90	100	100
	C1	1	294	294	0		1800	468	63		43	0.00	25	26
	C2	1	355	355	0		1800	1116	32		183	0.00	60	62
	Cs	1	649	649	0		1800	1800	36		150	0.00	100	100
	Cx	1	461	461	0		Unrestricted	Unrestricted	0		Unrestricted	0.83	100	100

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
18:00-19:00	A1	1	12.00	22.12	4.20	0.02	59.95	59.95	66.94	459.03	0.81	5.77	5.77
	Ax	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	B1	1	12.00	36.13	3.25	0.73	56.58	56.58	91.18	336.04	25.96	4.54	4.54
	Bx	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	C1	1	10.20	39.15	2.67	0.52	45.40	45.40	92.86	254.44	18.56	3.42	3.42
	C2	1	10.20	7.36	0.65	0.07	10.31	10.31	44.69	153.34	5.32	1.99	1.99
	Cs	1	12.00	0.56	0.00	0.10	1.44	1.44	0.00	0.00	0.00	0.00	0.00
	Cx	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (Veh)	Mean max queue (Veh)	Max queue storage (Veh)	Utilised storage (%)	Average storage excess queue (Veh)	Average limit excess queue (Veh)	Excess queue penalty (£ per hr)	Max end of green queue (Veh)	Max end of red queue (Veh)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))	Estimated blocking
18:00-19:00	A1	1	0.00	13.00	17.39	74.75	0.00	0.00	0.00	0.02	12.24	0.00	0.00	0.00	
	Ax	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			0.00	0.00	0.00	
	B1	1	0.00	10.22	17.39	58.75	0.00	0.00	0.00	0.84	8.12	0.00	0.00	0.00	
	Bx	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			25.00	0.00	25.00	
	C1	1	0.00	7.71	14.78	52.16	0.00	0.00	0.00	0.52	6.57	0.00	0.00	0.00	
	C2	1	0.00	3.92	14.78	26.52	0.00	0.00	0.00	0.07	3.23	0.00	0.00	0.00	
	Cs	1	0.00	0.10	17.39	0.58	0.00	0.00	0.00			0.00	0.00	0.00	
	Cx	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			28.00	0.00	28.00	

Traffic Stream Results: Journey times

Time Segment	Arm	Traffic Stream	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
18:00-19:00	A1	1	68.70	6.51	10.55	34.12
	Ax	1	57.50	1.92	30.00	12.00
	B1	1	39.70	5.31	7.48	48.13
	Bx	1	69.70	2.32	30.00	12.00
	C1	1	24.99	4.03	6.20	49.35
	C2	1	30.18	1.73	17.42	17.56
	Cs	1	64.90	2.26	28.65	12.56
	Cx	1	46.10	1.54	30.00	12.00

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	Mean Max Queue EoTS (Veh)	Max End of Green Queue EoTS (Veh)	Max End of Red Queue EoTS (Veh)	PCU Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
18:00-19:00	A1	1	0.00	0.00	✓	0.00	13.00	0.02	12.24	1.00	0.00	65.71	65.71
	Ax	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00	0.00
	B1	1	0.00	0.00	✓	0.00	10.22	0.85	8.13	1.00	0.00	61.12	61.12
	Bx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00	0.00
	C1	1	0.00	0.00	✓	0.00	7.71	0.53	6.57	1.00	0.00	48.82	48.82
	C2	1	0.00	0.00	✓	0.00	3.92	0.07	3.23	1.00	0.00	12.30	12.30
	Cs	1	0.00	0.00	✓	0.00	0.10			1.00	0.00	1.44	1.44
	Cx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00	0.00

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
18:00-19:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))

18:00-19:00	(ALL)	(ALL)	0	0	0		11000	770	0		Unrestricted	0.00	7	7

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Uniform delay (Ped-min/min)	Random plus oversat delay (Ped-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)
18:00-19:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Average storage excess queue (Ped)	Average limit excess queue (Ped)	Excess queue penalty (£ per hr)
18:00-19:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Journey times

Time Segment	Crossing	Side	Distance travelled (Ped-km/hr)	Time spent (Ped-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
18:00-19:00	(ALL)	(ALL)	0.00	0.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
18:00-19:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-min/min)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
6	20/12/2018 09:50:39	20/12/2018 09:50:40	18:00	100	189.39	12.23	68.49	B1/1	0	0	B1/1	Cs/1	B1/1	✓

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
18:00-19:00	68	0	4115	553	10.70	173.67	15.72	189.39

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
18:00-19:00	0	0	42	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))	Effective green (s (per cycle))
18:00-19:00	4115	4115	0		68		31	595	600

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
18:00-19:00	11.72	10.70	10.78	1.46	173.67	173.67	30.46	1202.86	50.64	15.72	15.72

Network Results: Queues and blocking

Time Segment	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))
18:00-19:00	74.75	0.00	53.00	0.00	53.00

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
18:00-19:00	401.77	25.62	15.68

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	PCU Factor	Cost of traffic penalties (£ per hr)	Controller stream penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
18:00-19:00	0.00	0.00	✓	0.00	1.00	0.00	0.00	189.39	189.39

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

From	To 1	To 2	To 3
1	0.0	46.1	46.1
2	60.1	0.0	60.1
3	42.1	73.9	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (Veh/hr)	Normal journey time (s)	Calculated Total Flow (Veh/hr)	Avg journey time (s)
1	1	2	403	46.12	403	46.12
2	1	3	284	46.12	284	46.12
3	2	3	177	60.13	177	60.13
4	2	1	220	60.13	220	60.13
5	3	2	294	73.91	294	73.91
6	3	1	355	42.12	355	42.12

Final Prediction Table

Traffic Stream Results

				SIGNALS			FLOWS		PERFORMANCE					PER PCU			QUEUES		WEIGHTS		PENALTIES	P.I.
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Second phase	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (Veh)	Max end of red queue (Veh)	Delay weighting multiplier (%)	Stop weighting multiplier (%)	Cost of traffic penalties (£ per hr)	P.I.
A1	1	Donore Road (W)	2	1	A		687	9999	35	0.00	19	372	34.12	22.12	66.94	13.00	12.24	100	100	0.00	65.71
Ax	1	Donore Road (W)					575	Unrestricted	100	0.00	0	Unrestricted	12.00	0.00	0.00	0.00		100	100	0.00	0.00
B1	1	Malays Lane	2	1	C		397	1705	33	0.00	68	31	48.13	36.13	91.18	10.22	8.12	100	100	0.00	61.12
Bx	1	Malays Lane					697	Unrestricted	100	25.00	0	Unrestricted	12.00	0.00	0.00	0.00		100	100	0.00	0.00
C1	1	Donore Road (E)	2	1	B		294	1800	25	0.00	63	43	49.35	39.15	92.86	7.71	6.57	100	100	0.00	48.82
C2	1	Donore Road (E)	2	1	A	B	355	1800	60	0.00	32	183	17.56	7.36	44.69	3.92	3.23	100	100	0.00	12.30
Cs	1	Donore Road (E)	2				649	1800	100	0.00	36	150	12.56	0.56	0.00	0.10		100	100	0.00	1.44
Cx	1	Donore Road (E)					461	Unrestricted	100	28.00	0	Unrestricted	12.00	0.00	0.00	0.00		100	100	0.00	0.00

Pedestrian Crossing Results

	SIGNALS	FLOWS	PERFORMANCE	PER PED	QUEUES	WEIGHTS	PENALTIES	P.I.

Pedestrian	Side	Name	Traffic node	Controller stream	Phase	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Degree of saturation (%)	Practical reserve capacity	Journey Time (s)	Mean Delay per Ped (s)	Mean max queue (Ped)	Delay weighting (%)	Cost of traffic penalties (£ per hr)	P.I.
(ALL)	(ALL)	(untitled)		1	D	0	11000	7	0	Unrestricted	0.00	0.00	0.00	100	0.00	0.00

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	401.77	25.62	15.68	10.78	1.46	173.67	15.72	0.00	189.39
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	401.77	25.62	15.68	10.78	1.46	173.67	15.72	0.00	189.39

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

A7 - 2023 - OPENING YEAR - BASE + DEV + COM(PHASE 1)- AM
D7 - 2023 - OPENING YEAR - BASE + DEV + COM(PHASE 1)- AM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-min/min)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
7	20/12/2018 09:50:42	20/12/2018 09:50:43	08:00	100	165.71	10.68	61.77	B1/1	0	0	B1/1	Cs/1	B1/1	✓

Analysis Set Details

Name	Description	Demand set	Include in report	Locked

2023 - OPENING YEAR - BASE + DEV + COM(PHASE 1)- AM		D7	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2023 - OPENING YEAR - BASE + DEV + COM(PHASE 1)- AM				08:00	

Network Options

Network timings

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

Signals options

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

Advanced

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

Traffic options

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

Advanced

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

Normal Traffic parameters

Dispersion type	Dispersion coefficient
Default	35

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Bus	1.00	70	15	0.47	30	85

Tram parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Tram	1.00	70	15	0.47	30	85

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order
Hill Climb (Fast)	15, 40, -1, 15, 40, 1, -1, 1	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05		✓	1

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
2		

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
A1			2
Ax			
B1			2
Bx			
C1			2
C2			2
Cs			2
Cx			

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
A1	1	Donore Road (W)			100.00	✓	Sum of lanes	9999	✓		Normal	

Ax	**1**	Donore Road (W)			100.00						Normal	
B1	**1**	Marlays Lane			100.00	✓	Sum of lanes	1800	✓	✓	Normal	
Bx	**1**	Marlays Lane			100.00						Normal	
C1	**1**	Donore Road (E)			85.00	✓	Sum of lanes	1800	✓	✓	Normal	
C2	**1**	Donore Road (E)			85.00	✓	Sum of lanes	1800	✓		Normal	
Cs	**1**	Donore Road (E)			100.00	✓	Sum of lanes	1800			Normal	
Cx	**1**	Donore Road (E)			100.00						Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Saturation flow (PCU/hr)
A1	**1**	**1**				9999
Ax	**1**	**1**				
B1	**1**	**1**				1800
Bx	**1**	**1**				
C1	**1**	**1**				1800
C2	**1**	**1**				1800
Cs	**1**	**1**				1800
Cx	**1**	**1**				

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
(ALL)	**1**	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
A1	**1**	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100
Ax	**1**	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100
B1	**1**	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
Bx	**1**	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100
C1	**1**	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
C2	**1**	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
Cs	**1**	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
Cx	**1**	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100

Normal - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	**1**	100	100

Flows

Arm	Traffic Stream	Total Flow (Veh/hr)	Normal Flow (Veh/hr)
A1	**1**	490	490
Ax	**1**	541	541
B1	**1**	525	525
Bx	**1**	408	408
C1	**1**	203	203
C2	**1**	265	265
Cs	**1**	468	468
Cx	**1**	534	534

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled	Second phase
A1	**1**	1	A		
B1	**1**	1	C		
C1	**1**	1	B		
C2	**1**	1	A	✓	B

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
(ALL)	**1**	12.00	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	**1**	**1**	B1/1	Ax/1	12.00	30.00	✓	Offside	45.00
Bx	**1**	**1**	A1/1	Bx/1	12.00	30.00	✓	Nearside	20.00
C1	**1**	**1**	Cs/1	C1/1	10.20	30.00	✓	Straight	Straight Movement
C2	**1**	**1**	Cs/1	C2/1	10.20	30.00	✓	Straight	Straight Movement
Cx	**1**	**1**	A1/1	Cx/1	12.00	30.00	✓	Straight	Straight Movement
Ax	**1**	**2**	C2/1	Ax/1	12.00	30.00	✓	Straight	Straight Movement
Bx	**1**	**2**	C1/1	Bx/1	12.00	30.00	✓	Offside	35.46
Cx	**1**	**2**	B1/1	Cx/1	12.00	30.00	✓	Nearside	20.00

Give Way Data

Arm	Traffic Stream	Opposed traffic	Use Step-wise Opposed Turn Model	Visibility restricted
(ALL)	**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 (%)
B1	**1**	**1**	Cx/1	574	1800	100
		2	Ax/1	440	1800	100
C1	**1**	**1**	Bx/1	574	1800	100

Give Way Data - Movements - Conflicts

Arm	Traffic Stream	Movement	Destination traffic stream	Description	Controlling type	Controlling from traffic stream	Controlling to traffic stream	Percentage opposing (%)	Slope coefficient	Upstream signals visible	Conflict shift	Conflict duration
B1	1	1	Cx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.09		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0
		2	Ax/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.08		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.20		0	0
				T-junction opposing flow	TrafficStreamMovement	C2/1	Ax/1	100	0.13		0	0
				T-junction opposing flow	TrafficStreamMovement	C1/1	Bx/1	100	0.29		0	0
C1	1	1	Bx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.22		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
(ALL)	(untitled)				Farside	3.00	2.00	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	D	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(ALL)	11000

Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	100	100		0.00		

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
1	Library		✓	TrafficStream	Two-Way	A1/1	A1/1	Ax/1	Two-Way	B1/1	B1/1	Bx/1	Two-Way	C2/1	C1/1	Cx/1	✓

T-Junction Majors

T-Junction	Left Carriageway Width (m)	Right Carriageway Width (m)	Kerbed Central Reserve Width (m)	Width for C-B traffic (m)	Visibility for C-B traffic (m)
1	6.00	6.00	0.00	2.20	0.00

T-Junction Minors

T-Junction	B-C Lane Width (m)	B-A Lane Width (m)	B-C Visibility (m)	B-A Visibility (m)
1	2.20	2.20	0.00	0.00

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
1	574	0.09	0.22	440	0.08	0.20	0.13	0.29	574	0.22	0.22

Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1		✓	✓	Lane Balancing			✓			✓	1.25		

Normal Input Flows (Veh/hr)

From	To 1	To 2	To 3
1	0	205	285
2	276	0	249
3	265	203	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
1	1		A1/1	Ax/1	#0000FF
	2		B1/1	Bx/1	#FF0000
	3		Cs/1	Cx/1	#00FF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (Veh/hr)
1	1		1	2	A1/1, Bx/1	Normal	205
	2		1	3	A1/1, Cx/1	Normal	285
	3		2	3	B1/1, Cx/1	Normal	249
	4		2	1	B1/1, Ax/1	Normal	276
	5		3	2	Cs/1, C1/1, Bx/1	Normal	203
	6		3	1	Cs/1, C2/1, Ax/1	Normal	265

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (Veh)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	A1	1	19	378	490	9999	25	28.97	10.50	60.39	55.99	4.67	60.65
	Ax	1	0	Unrestricted	541	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	B1	1	62	46	525	1735	48	23.06	11.29	64.90	47.76	4.98	52.74
	Bx	1	0	Unrestricted	408	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	C1	1	54	68	203	1800	20	40.64	5.33	36.04	32.54	2.35	34.90
	C2	1	31	187	265	1800	45	14.14	4.12	27.87	14.78	1.99	16.77
	Cs	1	26	246	468	1800	100	0.35	0.05	0.26	0.65	0.00	0.65
	Cx	1	0	Unrestricted	534	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Calculated sat flow (Veh/hr)	Calculated capacity (Veh/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
08:00-09:00	A1	1	490	490	0		9999	2600	19		378	0.00	25	26
	Ax	1	541	541	0		Unrestricted	Unrestricted	0		Unrestricted	0.54	100	100
	B1	1	525	525	0		1735	850	62		46	0.00	48	49
	Bx	1	408	408	0		Unrestricted	Unrestricted	0		Unrestricted	1.10	100	100
	C1	1	203	203	0		1800	378	54		68	0.00	20	21
	C2	1	265	265	0		1800	846	31		187	0.00	45	47
	Cs	1	468	468	0		1800	1800	26		246	0.00	100	100
	Cx	1	534	534	0		Unrestricted	Unrestricted	0		Unrestricted	0.80	100	100

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	A1	1	12.00	28.97	3.92	0.02	55.99	55.99	75.98	371.50	0.79	4.67	4.67
	Ax	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	B1	1	12.00	23.06	2.87	0.50	47.76	47.76	75.60	379.18	17.69	4.98	4.98
	Bx	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	C1	1	10.20	40.64	1.98	0.31	32.54	32.54	92.39	176.60	10.96	2.35	2.35
	C2	1	10.20	14.14	0.97	0.07	14.78	14.78	60.03	153.98	5.11	1.99	1.99
	Cs	1	12.00	0.35	0.00	0.05	0.65	0.65	0.00	0.00	0.00	0.00	0.00
	Cx	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (Veh)	Mean max queue (Veh)	Max queue storage (Veh)	Utilised storage (%)	Average storage excess queue (Veh)	Average limit excess queue (Veh)	Excess queue penalty (£ per hr)	Max end of green queue (Veh)	Max end of red queue (Veh)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))	Estimated blocking
08:00-09:00	A1	1	0.00	10.50	17.39	60.39	0.00	0.00	0.00	0.02	10.09	0.00	0.00	0.00	
	Ax	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			0.00	0.00	0.00	
	B1	1	0.00	11.29	17.39	64.90	0.00	0.00	0.00	0.64	8.08	0.00	0.00	0.00	
	Bx	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			43.00	0.00	43.00	
	C1	1	0.00	5.33	14.78	36.04	0.00	0.00	0.00	0.31	4.76	0.00	0.00	0.00	
	C2	1	0.00	4.12	14.78	27.87	0.00	0.00	0.00	0.07	3.53	0.00	0.00	0.00	
	Cs	1	0.00	0.05	17.39	0.26	0.00	0.00	0.00			0.00	0.00	0.00	
	Cx	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			22.00	0.00	22.00	

Traffic Stream Results: Journey times

Time Segment	Arm	Traffic Stream	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	A1	1	49.00	5.58	8.79	40.97
	Ax	1	54.10	1.80	30.00	12.00
	B1	1	52.50	5.11	10.27	35.06
	Bx	1	40.80	1.36	30.00	12.00
	C1	1	17.26	2.87	6.02	50.84
	C2	1	22.53	1.79	12.57	24.34
	Cs	1	46.80	1.61	29.15	12.35
	Cx	1	53.40	1.78	30.00	12.00

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation	Ped gap accepting penalty	Warmed up	Warmed up error	Mean Max Queue	Max End of Gree	Max End of Red	PCU Factor	Cost of traffic penaltie	Unweighted performan	Performance Index (£ per hr)

			penalty (£ per hr)	(£ per hr)			EoTS (Veh)	n Queue EoTS (Veh)	Queue EoTS (Veh)		s (£ per hr)	ce index (£ per hr)	
08:00-09:00	A1	1	0.00	0.00	✓	0.00	10.50	0.02	10.09	1.00	0.00	60.65	60.65
	Ax	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00	0.00
	B1	1	0.00	0.00	✓	0.00	11.29	0.64	8.08	1.00	0.00	52.74	52.74
	Bx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00	0.00
	C1	1	0.00	0.00	✓	0.00	5.33	0.31	4.76	1.00	0.00	34.90	34.90
	C2	1	0.00	0.00	✓	0.00	4.12	0.07	3.53	1.00	0.00	16.77	16.77
	Cs	1	0.00	0.00	✓	0.00	0.05			1.00	0.00	0.65	0.65
	Cx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00	0.00

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
08:00-09:00	(ALL)	(ALL)	0	0	0		11000	770	0		Unrestricted	0.00	7	7

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Uniform delay (Ped-min/min)	Random plus oversat delay (Ped-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)
08:00-09:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Average storage excess queue (Ped)	Average limit excess queue (Ped)	Excess queue penalty (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Journey times

Time Segment	Crossing	Side	Distance travelled (Ped-km/hr)	Time spent (Ped-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	(ALL)	(ALL)	0.00	0.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-min/min)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
7	20/12/2018 09:50:42	20/12/2018 09:50:43	08:00	100	165.71	10.68	61.77	B1/1	0	0	B1/1	Cs/1	B1/1	✓

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	62	0	3434	538	11.20	151.72	13.99	165.71

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	0	0	42	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))	Effective green (s (per cycle))
08:00-09:00	3434	3434	0		62		46	580	585

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	11.75	11.20	9.74	0.94	151.72	151.72	32.49	1081.26	34.55	13.99	13.99

Network Results: Queues and blocking

Time Segment	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))
08:00-09:00	64.90	0.00	65.00	0.00	65.00

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
08:00-09:00	336.38	21.90	15.36

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	PCU Factor	Cost of traffic penalties (£ per hr)	Controller stream penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	0.00	0.00	✓	0.00	1.00	0.00	0.00	165.71	165.71

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

From	To 1	To 2	To 3
1	0.0	53.0	53.0
2	47.1	0.0	47.1
3	48.7	75.2	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (Veh/hr)	Normal journey time (s)	Calculated Total Flow (Veh/hr)	Avg journey time (s)
1	1	2	205	52.97	205	52.97
2	1	3	285	52.97	285	52.97
3	2	3	249	47.06	249	47.06
4	2	1	276	47.06	276	47.06
5	3	2	203	75.20	203	75.20
6	3	1	265	48.69	265	48.69

Final Prediction Table

Traffic Stream Results

				SIGNALS			FLOWS		PERFORMANCE				PER PCU			QUEUES		WEIGHTS		PENALTIES	P.I.
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Second phase	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (Veh)	Mean end of red queue (Veh)	Delay weighting multiplier (%)	Stop weighting multiplier (%)	Cost of traffic penalties (£ per hr)	P.I.
A1	1	Donore Road (W)	2	1	A		490	9999	25	0.00	19	378	40.97	28.97	75.98	10.50	10.09	100	100	0.00	60.65
Ax	1	Donore Road (W)					541	Unrestricted	100	0.00	0	Unrestricted	12.00	0.00	0.00	0.00		100	100	0.00	0.00
B1	1	Marlays Lane	2	1	C		525	1735	48	0.00	62	46	35.06	23.06	75.60	11.29	8.08	100	100	0.00	52.74
Bx	1	Marlays Lane					408	Unrestricted	100	43.00	0	Unrestricted	12.00	0.00	0.00	0.00		100	100	0.00	0.00
C1	1	Donore Road (E)	2	1	B		203	1800	20	0.00	54	68	50.84	40.64	92.39	5.33	4.76	100	100	0.00	34.90
C2	1	Donore Road (E)	2	1	A	B	265	1800	45	0.00	31	187	24.34	14.14	60.03	4.12	3.53	100	100	0.00	16.77
Cs	1	Donore Road (E)	2				468	1800	100	0.00	26	246	12.35	0.35	0.00	0.05		100	100	0.00	0.65
Cx	1	Donore Road (E)					534	Unrestricted	100	22.00	0	Unrestricted	12.00	0.00	0.00	0.00		100	100	0.00	0.00

Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE			PER PED		QUEUES	WEIGHTS	PENALTIES	P.I.
Pedestrian	Side	Name	Traffic node	Controller stream	Phase	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Degree of saturation (%)	Practical reserve capacity	Journey Time (s)	Mean Delay per Ped (s)	Mean max queue (Ped)	Delay weighting (%)	Cost of traffic penalties (£ per hr)	P.I.
(ALL)	(ALL)	(untitled)		1	D	0	11000	7	0	Unrestricted	0.00	0.00	0.00	100	0.00	0.00

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	336.38	21.90	15.36	9.74	0.94	151.72	13.99	0.00	165.71
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	336.38	21.90	15.36	9.74	0.94	151.72	13.99	0.00	165.71

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

A8 - 2023 - OPENING YEAR - BASE + DEV + COM(PHASE 1) - PM
D8 - 2023 - OPENING YEAR - BASE + DEV + COM(PHASE 1) - PM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-min/min)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
8	20/12/2018 09:50:46	20/12/2018 09:50:47	18:00	100	196.71	12.71	68.44	B1/1	0	0	B1/1	Cs/1	B1/1	✓

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2023 - OPENING YEAR - BASE + DEV + COM(PHASE 1) - PM		D8	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2023 - OPENING YEAR - BASE + DEV + COM(PHASE 1) - PM				18:00	

Network Options

Network timings

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

Signals options

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

Advanced

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

Traffic options

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

Advanced

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

Normal Traffic parameters

Dispersion type	Dispersion coefficient
Default	35

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Bus	1.00	70	15	0.47	30	85

Tram parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Tram	1.00	70	15	0.47	30	85

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order
Hill Climb (Fast)	15, 40, -1, 15, 40, 1, -1, 1	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05		✓	1

Economics

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

14.20	2.60	14.20

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
2		

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
A1			2
Ax			
B1			2
Bx			
C1			2
C2			2
Cs			2
Cx			

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
A1	1	Donore Road (W)			100.00	✓	Sum of lanes	9999	✓		Normal	
Ax	1	Donore Road (W)			100.00						Normal	
B1	1	Marlays Lane			100.00	✓	Sum of lanes	1800	✓	✓	Normal	
Bx	1	Marlays Lane			100.00						Normal	
C1	1	Donore Road (E)			85.00	✓	Sum of lanes	1800	✓	✓	Normal	
C2	1	Donore Road (E)			85.00	✓	Sum of lanes	1800	✓		Normal	
Cs	1	Donore Road (E)			100.00	✓	Sum of lanes	1800			Normal	
Cx	1	Donore Road (E)			100.00						Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Saturation flow (PCU/hr)
A1	1	1				9999
Ax	1	1				
B1	1	1				1800
Bx	1	1				
C1	1	1				1800
C2	1	1				1800
Cs	1	1				1800
Cx	1	1				

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
(ALL)	1	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
A1	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100
Ax	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100
B1	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
Bx	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100
C1	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
C2	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
Cs	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
Cx	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100

Normal - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	1	100	100

Flows

Arm	Traffic Stream	Total Flow (Veh/hr)	Normal Flow (Veh/hr)
A1	1	698	698
Ax	1	581	581
B1	1	409	409
Bx	1	719	719
C1	1	305	305
C2	1	355	355
Cs	1	660	660
Cx	1	467	467

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled	Second phase
A1	1	1	A		
B1	1	1	C		
C1	1	1	B		
C2	1	1	A	✓	B

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
(ALL)	1	12.00	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	1	1	B1/1	Ax/1	12.00	30.00	✓	Offside	45.00
Bx	1	1	A1/1	Bx/1	12.00	30.00	✓	Nearside	20.00
C1	1	1	Cs/1	C1/1	10.20	30.00	✓	Straight	Straight Movement
C2	1	1	Cs/1	C2/1	10.20	30.00	✓	Straight	Straight Movement
Cx	1	1	A1/1	Cx/1	12.00	30.00	✓	Straight	Straight Movement
Ax	1	2	C2/1	Ax/1	12.00	30.00	✓	Straight	Straight Movement
Bx	1	2	C1/1	Bx/1	12.00	30.00	✓	Offside	35.46
Cx	1	2	B1/1	Cx/1	12.00	30.00	✓	Nearside	20.00

Give Way Data

Arm	Traffic Stream	Opposed traffic	Use Step-wise Opposed Turn Model	Visibility restricted
(ALL)	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 (%)
B1	1	1	Cx/1	574	1800	100
		2	Ax/1	440	1800	100
C1	1	1	Bx/1	574	1800	100

Give Way Data - Movements - Conflicts

Arm	Traffic Stream	Movement	Destination traffic stream	Description	Controlling type	Controlling from traffic stream	Controlling to traffic stream	Percentage opposing (%)	Slope coefficient	Upstream signals visible	Conflict shift	Conflict duration
B1	1	1	Cx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.09		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0
		2	Ax/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.08		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.20		0	0
				T-junction opposing flow	TrafficStreamMovement	C2/1	Ax/1	100	0.13		0	0
				T-junction	TrafficStreamMovement	C1/1	Bx/1	100	0.29		0	0
				opposing flow								
C1	1	1	Bx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.22		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
(ALL)	(untitled)				Farside	3.00	2.00	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	D	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(ALL)	11000

Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	100	100		0.00		

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
1	Library		✓	TrafficStream	Two-Way	A1/1	A1/1	Ax/1	Two-Way	B1/1	B1/1	Bx/1	Two-Way	C2/1	C1/1	Cx/1	✓

T-Junction Majors

T-Junction	Left Carriageway Width (m)	Right Carriageway Width (m)	Kerbed Central Reserve Width (m)	Width for C-B traffic (m)	Visibility for C-B traffic (m)
1	6.00	6.00	0.00	2.20	0.00

T-Junction Minors

T-Junction	B-C Lane Width (m)	B-A Lane Width (m)	B-C Visibility (m)	B-A Visibility (m)
1	2.20	2.20	0.00	0.00

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
1	574	0.09	0.22	440	0.08	0.20	0.13	0.29	574	0.22	0.22

Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1		✓	✓	Lane Balancing			✓			✓	1.25		

Normal Input Flows (Veh/hr)

From	To 1	To 2	To 3
1	0	414	284
2	226	0	183
3	355	305	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
1	1		A1/1	Ax/1	#0000FF
	2		B1/1	Bx/1	#FF0000
	3		Cs/1	Cx/1	#00FF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (Veh/hr)
1	1		1	2	A1/1, Bx/1	Normal	414
	2		1	3	A1/1, Cx/1	Normal	284
	3		2	3	B1/1, Cx/1	Normal	183
	4		2	1	B1/1, Ax/1	Normal	226
	5		3	2	Cs/1, C1/1, Bx/1	Normal	305
	6		3	1	Cs/1, C2/1, Ax/1	Normal	355

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s	Mean Delay	Mean max queue	Utilised storage (%)	Weighted cost of delay	Weighted cost of stops	Performance Index (£ per hr)
18:00-19:00	A1	1	20	351	698	9999	34	22.85	13.40	77.07	62.90	5.95	68.85
	Ax	1	0	Unrestricted	581	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	B1	1	68	32	409	1707	34	35.31	10.50	60.38	56.96	4.65	61.61
	Bx	1	0	Unrestricted	719	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	C1	1	65	38	305	1800	25	40.06	8.14	55.07	48.19	3.59	51.78
	C2	1	32	178	355	1800	59	7.80	4.12	27.87	10.92	2.05	12.97
	Cs	1	37	145	660	1800	100	0.58	0.11	0.61	1.51	0.00	1.51
	Cx	1	0	Unrestricted	467	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Calculated sat flow (Veh/hr)	Calculated capacity (Veh/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
18:00-19:00	A1	1	698	698	0		9999	3500	20		351	0.00	34	35
	Ax	1	581	581	0		Unrestricted	Unrestricted	0		Unrestricted	0.47	100	100
	B1	1	409	409	0		1707	598	68		32	0.00	34	35
	Bx	1	719	719	0		Unrestricted	Unrestricted	0		Unrestricted	0.90	100	100
	C1	1	305	305	0		1800	468	65		38	0.00	25	26
	C2	1	355	355	0		1800	1098	32		178	0.00	59	61
	Cs	1	660	660	0		1800	1800	37		145	0.00	100	100
	Cx	1	467	467	0		Unrestricted	Unrestricted	0		Unrestricted	0.83	100	100

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
18:00-19:00	A1	1	12.00	22.85	4.40	0.02	62.90	62.90	67.95	473.36	0.89	5.95	5.95
	Ax	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	B1	1	12.00	35.31	3.28	0.73	56.96	56.96	90.70	345.05	25.90	4.65	4.65
	Bx	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	C1	1	10.20	40.06	2.79	0.60	48.19	48.19	93.98	265.40	21.24	3.59	3.59
	C2	1	10.20	7.80	0.69	0.08	10.92	10.92	46.06	157.97	5.53	2.05	2.05
	Cs	1	12.00	0.58	0.00	0.11	1.51	1.51	0.00	0.00	0.00	0.00	0.00
	Cx	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (Veh)	Mean max queue (Veh)	Max queue storage (Veh)	Utilised storage (%)	Average storage excess queue (Veh)	Average limit excess queue (Veh)	Excess queue penalty (£ per hr)	Max end of green queue (Veh)	Max end of red queue (Veh)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))	Estimated blocking
18:00-19:00	A1	1	0.00	13.40	17.39	77.07	0.00	0.00	0.00	0.02	12.63	0.00	0.00	0.00	
	Ax	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			0.00	0.00	0.00	
	B1	1	0.00	10.50	17.39	60.38	0.00	0.00	0.00	0.84	8.23	0.00	0.00	0.00	
	Bx	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			26.00	0.00	26.00	
	C1	1	0.00	8.14	14.78	55.07	0.00	0.00	0.00	0.60	6.87	0.00	0.00	0.00	
	C2	1	0.00	4.12	14.78	27.87	0.00	0.00	0.00	0.08	3.33	0.00	0.00	0.00	
	Cs	1	0.00	0.11	17.39	0.61	0.00	0.00	0.00			0.00	0.00	0.00	
	Cx	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			28.00	0.00	28.00	

Traffic Stream Results: Journey times

Time Segment	Arm	Traffic Stream	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
18:00-19:00	A1	1	69.80	6.76	10.33	34.85
	Ax	1	58.10	1.94	30.00	12.00
	B1	1	40.90	5.37	7.61	47.31
	Bx	1	71.90	2.40	30.00	12.00
	C1	1	25.93	4.26	6.09	50.26
	C2	1	30.18	1.77	17.00	18.00
	Cs	1	66.00	2.31	28.62	12.58
	Cx	1	46.70	1.56	30.00	12.00

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	Mean Max Queue EoTS (Veh)	Max End of Green Queue EoTS (Veh)	Max End of Red Queue EoTS (Veh)	PCU Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
18:00-19:00	A1	1	0.00	0.00	✓	0.00	13.40	0.02	12.63	1.00	0.00	68.85	68.85
	Ax	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00	0.00
	B1	1	0.00	0.00	✓	0.00	10.51	0.85	8.23	1.00	0.00	61.61	61.61
	Bx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00	0.00
	C1	1	0.00	0.00	✓	0.00	8.15	0.61	6.87	1.00	0.00	51.78	51.78
	C2	1	0.00	0.00	✓	0.00	4.12	0.08	3.33	1.00	0.00	12.97	12.97
	Cs	1	0.00	0.00	✓	0.00	0.11			1.00	0.00	1.51	1.51
	Cx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00	0.00

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
18:00-19:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
18:00-19:00	(ALL)	(ALL)	0	0	0		11000	770	0		Unrestricted	0.00	7	7

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Uniform delay (Ped-min/min)	Random plus oversat delay (Ped-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)
18:00-19:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Average storage excess queue (Ped)	Average limit excess queue (Ped)	Excess queue penalty (£ per hr)
18:00-19:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Journey times

Time Segment	Crossing	Side	Distance travelled (Ped-km/hr)	Time spent (Ped-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
18:00-19:00	(ALL)	(ALL)	0.00	0.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
18:00-19:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-min/min)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
8	20/12/2018 09:50:46	20/12/2018 09:50:47	18:00	100	196.71	12.71	68.44	B1/1	0	0	B1/1	Cs/1	B1/1	✓

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
18:00-19:00	68	0	4194	552	10.91	180.47	16.24	196.71

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
18:00-19:00	0	0	42	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))	Effective green (s (per cycle))
18:00-19:00	4194	4194	0		68		32	594	599

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
18:00-19:00	11.72	10.91	11.17	1.54	180.47	180.47	30.89	1241.80	53.57	16.24	16.24

Network Results: Queues and blocking

Time Segment	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))
18:00-19:00	77.07	0.00	54.00	0.00	54.00

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
18:00-19:00	409.50	26.36	15.54

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	PCU Factor	Cost of traffic penalties (£ per hr)	Controller stream penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
18:00-19:00	0.00	0.00	✓	0.00	1.00	0.00	0.00	196.71	196.71

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

From \ To	1	2	3
1	0.0	46.8	46.8
2	59.3	0.0	59.3
3	42.6	74.8	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (Veh/hr)	Normal journey time (s)	Calculated Total Flow (Veh/hr)	Avg journey time (s)
1	1	2	414	46.85	414	46.85
2	1	3	284	46.85	284	46.85
3	2	3	183	59.31	183	59.31
4	2	1	226	59.31	226	59.31
5	3	2	305	74.83	305	74.83
6	3	1	355	42.57	355	42.57

Final Prediction Table

Traffic Stream Results

				SIGNALS			FLOWS		PERFORMANCE				PER PCU			QUEUES		WEIGHTS		PENALTIES	P.I.
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Second phase	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	Journey Time (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (Veh)	Max ended of red queue (Veh)	Delay weighting multiplier (%)	Stop weighting multiplier (%)	Cost of traffic penalties (£ per hr)	P.I.
A1	1	Donore Road (W)	2	1	A		698	9999	34	0.00	20	351	34.85	22.85	67.95	13.40	12.63	100	100	0.00	68.85
Ax	1	Donore Road (W)					581	Unrestricted	100	0.00	0	Unrestricted	12.00	0.00	0.00	0.00		100	100	0.00	0.00
B1	1	Malays Lane	2	1	C		409	1707	34	0.00	68	32	47.31	35.31	90.70	10.50	8.23	100	100	0.00	61.61
Bx	1	Malays Lane					719	Unrestricted	100	26.00	0	Unrestricted	12.00	0.00	0.00	0.00		100	100	0.00	0.00
C1	1	Donore Road (E)	2	1	B		305	1800	25	0.00	65	38	50.26	40.06	93.98	8.14	6.87	100	100	0.00	51.78
C2	1	Donore Road (E)	2	1	A	B	355	1800	59	0.00	32	178	18.00	7.80	46.06	4.12	3.33	100	100	0.00	12.97
Cs	1	Donor	2				660	1800	100	0.00	37	145	12.58	0.58	0.00	0.11		100	100	0.00	1.51

		e Road (E)																		
Cx	1	Donore Road (E)				467	Unrestricted	100	28.00	0	Unrestricted	12.00	0.00	0.00	0.00		100	100	0.00	0.00

Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE			PER PED		QUEUES	WEIGHTS	PENALTIES	P.I.
Pedestrian	Side	Name	Traffic node	Controller stream	Phase	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Degree of saturation (%)	Practical reserve capacity	Journey Time (s)	Mean Delay per Ped (s)	Mean max queue (Ped)	Delay weighting (%)	Cost of traffic penalties (£ per hr)	P.I.
(ALL)	(ALL)	(untitled)		1	D	0	11000	7	0	Unrestricted	0.00	0.00	0.00	100	0.00	0.00

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	409.50	26.36	15.54	11.17	1.54	180.47	16.24	0.00	196.71
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	409.50	26.36	15.54	11.17	1.54	180.47	16.24	0.00	196.71

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

A9 - 2028 - BASE - AM
D9 - 2028 - BASE - AM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-min/min)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst over	Network within capacity
9	20/12/2018 09:50:49	20/12/2018 09:50:50	08:00	100	141.32	9.10	58.51	B1/1	0	0	B1/1	Cs/1	B1/1 all PRC	✓

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2028 - BASE - AM		D9	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2028 - BASE - AM				08:00	

Network Options

Network timings

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

Signals options

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

Advanced

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

Traffic options

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

Advanced

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

Normal Traffic parameters

Dispersion type	Dispersion coefficient
Default	35

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Bus	1.00	70	15	0.47	30	85

Tram parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Tram	1.00	70	15	0.47	30	85

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order
Hill Climb (Fast)	15, 40, -1, 15, 40, 1, -1, 1	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05		✓	1

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
2		

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
A1			2
Ax			
B1			2
Bx			
C1			2
C2			2
Cs			2
Cx			

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
A1	1	Donore Road (W)			100.00	✓	Sum of lanes	9999	✓		Normal	
Ax	1	Donore Road (W)			100.00						Normal	
B1	1	Marlays Lane			100.00	✓	Sum of lanes	1800	✓	✓	Normal	
Bx	1	Marlays Lane			100.00						Normal	
C1	1	Donore Road (E)			85.00	✓	Sum of lanes	1800	✓	✓	Normal	
C2	1	Donore Road (E)			85.00	✓	Sum of lanes	1800	✓		Normal	
Cs	1	Donore Road (E)			100.00	✓	Sum of lanes	1800			Normal	
Cx	1	Donore Road (E)			100.00						Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Saturation flow (PCU/hr)
A1	1	1				9999
Ax	1	1				
B1	1	1				1800
Bx	1	1				
C1	1	1				1800
C2	1	1				1800
Cs	1	1				1800
Cx	1	1				

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
(ALL)	1	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
A1	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100
Ax	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100
B1	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
Bx	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100
C1	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
C2	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
Cs	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100

Cx	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100

Normal - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	1	100	100

Flows

Arm	Traffic Stream	Total Flow (Veh/hr)	Normal Flow (Veh/hr)
A1	1	485	485
Ax	1	497	497
B1	1	413	413
Bx	1	374	374
C1	1	186	186
C2	1	276	276
Cs	1	462	462
Cx	1	489	489

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled	Second phase
A1	1	1	A		
B1	1	1	C		
C1	1	1	B		
C2	1	1	A	✓	B

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
(ALL)	1	12.00	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	1	1	B1/1	Ax/1	12.00	30.00	✓	Offside	45.00
Bx	1	1	A1/1	Bx/1	12.00	30.00	✓	Nearside	20.00
C1	1	1	Cs/1	C1/1	10.20	30.00	✓	Straight	Straight Movement
C2	1	1	Cs/1	C2/1	10.20	30.00	✓	Straight	Straight Movement
Cx	1	1	A1/1	Cx/1	12.00	30.00	✓	Straight	Straight Movement
Ax	1	2	C2/1	Ax/1	12.00	30.00	✓	Straight	Straight Movement
Bx	1	2	C1/1	Bx/1	12.00	30.00	✓	Offside	35.46
Cx	1	2	B1/1	Cx/1	12.00	30.00	✓	Nearside	20.00

Give Way Data

Arm	Traffic Stream	Opposed traffic	Use Step-wise Opposed Turn Model	Visibility restricted
(ALL)	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 (%)
B1	1	1	Cx/1	574	1800	100
		2	Ax/1	440	1800	100
C1	1	1	Bx/1	574	1800	100

Give Way Data - Movements - Conflicts

Arm	Traffic Stream	Movement	Destination traffic stream	Description	Controlling type	Controlling from traffic stream	Controlling to traffic stream	Percentage opposing (%)	Slope coefficient	Upstream signals visible	Conflict shift	Conflict duration
B1	1	1	Cx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.09		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0
		2	Ax/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.08		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.20		0	0
				T-junction opposing flow	TrafficStreamMovement	C2/1	Ax/1	100	0.13		0	0
				T-junction opposing flow	TrafficStreamMovement	C1/1	Bx/1	100	0.29		0	0
C1	1	1	Bx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.22		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
(ALL)	(untitled)				Farside	3.00	2.00	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	D	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(ALL)	11000

Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	100	100		0.00		

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
1	Library		✓	TrafficStream	Two-Way	A1/1	A1/1	Ax/1	Two-Way	B1/1	B1/1	Bx/1	Two-Way	C2/1	C1/1	Cx/1	✓

T-Junction Majors

T-Junction	Left Carriageway Width (m)	Right Carriageway Width (m)	Kerbed Central Reserve Width (m)	Width for C-B traffic (m)	Visibility for C-B traffic (m)
1	6.00	6.00	0.00	2.20	0.00

T-Junction Minors

T-Junction	B-C Lane Width (m)	B-A Lane Width (m)	B-C Visibility (m)	B-A Visibility (m)
1	2.20	2.20	0.00	0.00

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
1	574	0.09	0.22	440	0.08	0.20	0.13	0.29	574	0.22	0.22

Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1		✓	✓	Lane Balancing			✓			✓	1.25		

Normal Input Flows (Veh/hr)

From \ To	1	2	3
1	0	188	297
2	221	0	192
3	276	186	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
1	1		A1/1	Ax/1	#0000FF
	2		B1/1	Bx/1	#FF0000
	3		Cs/1	Cx/1	#00FF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (Veh/hr)
1	1		1	2	A1/1, Bx/1	Normal	188
	2		1	3	A1/1, Cx/1	Normal	297
	3		2	3	B1/1, Cx/1	Normal	192
	4		2	1	B1/1, Ax/1	Normal	221
	5		3	2	Cs/1, C1/1, Bx/1	Normal	186
	6		3	1	Cs/1, C2/1, Ax/1	Normal	276

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (Veh)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	A1	1	14	531	485	9999	33	23.00	9.31	53.52	44.00	4.13	48.13
	Ax	1	0	Unrestricted	497	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	B1	1	59	54	413	1722	40	27.54	9.36	53.81	44.87	4.15	49.02
	Bx	1	0	Unrestricted	374	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	C1	1	49	83	186	1800	20	39.38	4.78	32.36	28.89	2.12	31.01
	C2	1	28	223	276	1800	53	9.90	3.58	24.22	10.78	1.75	12.53
	Cs	1	26	251	462	1800	100	0.35	0.04	0.25	0.63	0.00	0.63
	Cx	1	0	Unrestricted	489	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Calculated sat flow (Veh/hr)	Calculated capacity (Veh/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
08:00-09:00	A1	1	485	485	0		9999	3400	14		531	0.00	33	34
	Ax	1	497	497	0		Unrestricted	Unrestricted	0		Unrestricted	0.55	100	100
	B1	1	413	413	0		1722	706	59		54	0.00	40	41

	Bx	1	374	374	0		Unrestricted	Unrestricted	0		Unrestricted	1.03	100	100
	C1	1	186	186	0		1800	378	49		83	0.00	20	21
	C2	1	276	276	0		1800	990	28		223	0.00	53	55
	Cs	1	462	462	0		1800	1800	26		251	0.00	100	100
	Cx	1	489	489	0		Unrestricted	Unrestricted	0		Unrestricted	0.82	100	100

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	A1	1	12.00	23.00	3.09	0.01	44.00	44.00	67.89	328.84	0.43	4.13	4.13
	Ax	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	B1	1	12.00	27.54	2.75	0.41	44.87	44.87	80.13	316.33	14.62	4.15	4.15
	Bx	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	C1	1	10.20	39.38	1.80	0.24	28.89	28.89	90.84	160.54	8.42	2.12	2.12
	C2	1	10.20	9.90	0.71	0.05	10.78	10.78	50.47	135.43	3.86	1.75	1.75
	Cs	1	12.00	0.35	0.00	0.04	0.63	0.63	0.00	0.00	0.00	0.00	0.00
	Cx	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (Veh)	Mean max queue (Veh)	Max queue storage (Veh)	Utilised storage (%)	Average storage excess queue (Veh)	Average limit excess queue (Veh)	Excess queue penalty (£ per hr)	Max end of green queue (Veh)	Max end of red queue (Veh)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))	Estimated blocking
08:00-09:00	A1	1	0.00	9.31	17.39	53.52	0.00	0.00	0.00	0.01	8.90	0.00	0.00	0.00	
	Ax	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			0.00	0.00	0.00	
	B1	1	0.00	9.36	17.39	53.81	0.00	0.00	0.00	0.52	7.29	0.00	0.00	0.00	
	Bx	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			36.00	0.00	36.00	
	C1	1	0.00	4.78	14.78	32.36	0.00	0.00	0.00	0.24	4.32	0.00	0.00	0.00	
	C2	1	0.00	3.58	14.78	24.22	0.00	0.00	0.00	0.05	3.04	0.00	0.00	0.00	
	Cs	1	0.00	0.04	17.39	0.25	0.00	0.00	0.00			0.00	0.00	0.00	
	Cx	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			23.00	0.00	23.00	

Traffic Stream Results: Journey times

Time Segment	Arm	Traffic Stream	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	A1	1	48.50	4.72	10.29	35.00
	Ax	1	49.70	1.66	30.00	12.00
	B1	1	41.30	4.54	9.10	39.54
	Bx	1	37.40	1.25	30.00	12.00
	C1	1	15.81	2.56	6.17	49.58
	C2	1	23.46	1.54	15.22	20.10
	Cs	1	46.20	1.58	29.16	12.35
	Cx	1	48.90	1.63	30.00	12.00

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	Mean Max Queue EoTS (Veh)	Max End of Green Queue EoTS (Veh)	Max End of Red Queue EoTS (Veh)	PCU Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	A1	1	0.00	0.00	✓	0.00	9.31	0.01	8.90	1.00	0.00	48.13	48.13
	Ax	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00	0.00
	B1	1	0.00	0.00	✓	0.00	9.36	0.53	7.29	1.00	0.00	49.02	49.02
	Bx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00	0.00
	C1	1	0.00	0.00	✓	0.00	4.78	0.24	4.32	1.00	0.00	31.01	31.01
	C2	1	0.00	0.00	✓	0.00	3.58	0.05	3.04	1.00	0.00	12.53	12.53
	Cs	1	0.00	0.00	✓	0.00	0.04			1.00	0.00	0.63	0.63
	Cx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00	0.00

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
08:00-09:00	(ALL)	(ALL)	0	0	0		11000	770	0		Unrestricted	0.00	7	7

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Uniform delay (Ped-min/min)	Random plus oversat delay (Ped-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)
08:00-09:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Average storage excess queue (Ped)	Average limit excess queue (Ped)	Excess queue penalty (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Journey times

Time Segment	Crossing	Side	Distance travelled (Ped-km/hr)	Time spent (Ped-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	(ALL)	(ALL)	0.00	0.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-min/min)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
9	20/12/2018 09:50:49	20/12/2018 09:50:50	08:00	100	141.32	9.10	58.51	B1/1	0	0	B1/1	Cs/1	B1/1	✓

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	59	0	3182	546	10.29	129.17	12.14	141.32

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	0	0	42	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))	Effective green (s (per cycle))
08:00-09:00	3182	3182	0		59		54	588	593

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	11.74	10.29	8.34	0.76	129.17	129.17	30.44	941.13	27.33	12.14	12.14

Network Results: Queues and blocking

Time Segment	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))
08:00-09:00	53.81	0.00	59.00	0.00	59.00

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
08:00-09:00	311.27	19.47	15.99

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	PCU Factor	Cost of traffic penalties (£ per hr)	Controller stream penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	0.00	0.00	✓	0.00	1.00	0.00	0.00	141.32	141.32

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

From \ To	1	2	3
1	0.0	47.0	47.0
2	51.5	0.0	51.5
3	44.4	73.9	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (Veh/hr)	Normal journey time (s)	Calculated Total Flow (Veh/hr)	Avg journey time (s)
1	1	2	188	47.00	188	47.00
2	1	3	297	47.00	297	47.00
3	2	3	192	51.54	192	51.54
4	2	1	221	51.54	221	51.54
5	3	2	186	73.93	186	73.93
6	3	1	276	44.45	276	44.45

Final Prediction Table

Traffic Stream Results

				SIGNALS			FLOWS		PERFORMANCE				PER PCU			QUEUES		WEIGHTS		PENALTIES	P.I.
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Second phase	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (Veh)	Max end of red queue (Veh)	Delay weighting multiplier (%)	Stop weighting multiplier (%)	Cost of traffic penalties (£ per hr)	P.I.

A1	1	Donore Road (W)	2	1	A		485	9999	33	0.00	14	531	35.00	23.00	67.89	9.31	8.90	100	100	0.00	48.13
Ax	1	Donore Road (W)					497	Unrestricted	100	0.00	0	Unrestricted	12.00	0.00	0.00	0.00		100	100	0.00	0.00
B1	1	Marlays Lane	2	1	C		413	1722	40	0.00	59	54	39.54	27.54	80.13	9.36	7.29	100	100	0.00	49.02
Bx	1	Marlays Lane					374	Unrestricted	100	36.00	0	Unrestricted	12.00	0.00	0.00	0.00		100	100	0.00	0.00
C1	1	Donore Road (E)	2	1	B		186	1800	20	0.00	49	83	49.58	39.38	90.84	4.78	4.32	100	100	0.00	31.01
C2	1	Donore Road (E)	2	1	A	B	276	1800	53	0.00	28	223	20.10	9.90	50.47	3.58	3.04	100	100	0.00	12.53
Cs	1	Donore Road (E)	2				462	1800	100	0.00	26	251	12.35	0.35	0.00	0.04		100	100	0.00	0.63
Cx	1	Donore Road (E)					489	Unrestricted	100	23.00	0	Unrestricted	12.00	0.00	0.00	0.00		100	100	0.00	0.00

Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE			PER PED		QUEUES	WEIGHTS	PENALTIES	P.I.
Pedestrian	Side	Name	Traffic node	Controller stream	Phase	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Degree of saturation (%)	Practical reserve capacity	Journey Time (s)	Mean Delay per Ped (s)	Mean max queue (Ped)	Delay weighting (%)	Cost of traffic penalties (£ per hr)	P.I.
(ALL)	(ALL)	(untitled)		1	D	0	11000	7	0	Unrestricted	0.00	0.00	0.00	100	0.00	0.00

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	311.27	19.47	15.99	8.34	0.76	129.17	12.14	0.00	141.32
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	311.27	19.47	15.99	8.34	0.76	129.17	12.14	0.00	141.32

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

A10 - 2028 - BASE - PM
D10 - 2028 - BASE - PM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-min/min)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
10	20/12/2018 09:50:52	20/12/2018 09:50:53	18:00	100	168.46	10.85	65.67	B1/1	0	0	B1/1	Cs/1	B1/1	✓

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2028 - BASE - PM		D10	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2028 - BASE - PM				18:00	

Network Options

Network timings

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

Signals options

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

Advanced

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

Traffic options

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

Advanced

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

Normal Traffic parameters

Dispersion type	Dispersion coefficient
Default	35

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Bus	1.00	70	15	0.47	30	85

Tram parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Tram	1.00	70	15	0.47	30	85

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order
Hill Climb (Fast)	15, 40, -1, 15, 40, 1, -1, 1	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05		✓	1

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
2		

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
A1			2
Ax			
B1			2
Bx			
C1			2
C2			2
Cs			2
Cx			

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
A1	1	Donore Road (W)			100.00	✓	Sum of lanes	9999	✓		Normal	
Ax	1	Donore Road (W)			100.00						Normal	
B1	1	Marlays Lane			100.00	✓	Sum of lanes	1800	✓	✓	Normal	
Bx	1	Marlays Lane			100.00						Normal	
C1	1	Donore Road (E)			85.00	✓	Sum of lanes	1800	✓	✓	Normal	
C2	1	Donore Road (E)			85.00	✓	Sum of lanes	1800	✓		Normal	
Cs	1	Donore Road (E)			100.00	✓	Sum of lanes	1800			Normal	
Cx	1	Donore Road (E)			100.00						Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Saturation flow (PCU/hr)
A1	1	1				9999
Ax	1	1				

B1	1	1				1800
Bx	1	1				
C1	1	1				1800
C2	1	1				1800
Cs	1	1				1800
Cx	1	1				

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
(ALL)	1	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
A1	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100
Ax	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100
B1	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
Bx	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100
C1	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
C2	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
Cs	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
Cx	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100

Normal - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	1	100	100

Flows

Arm	Traffic Stream	Total Flow (Veh/hr)	Normal Flow (Veh/hr)
A1	1	667	667
Ax	1	570	570
B1	1	357	357
Bx	1	629	629
C1	1	258	258
C2	1	369	369
Cs	1	627	627
Cx	1	452	452

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled	Second phase
A1	1	1	A		
B1	1	1	C		
C1	1	1	B		
C2	1	1	A	✓	B

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
(ALL)	1	12.00	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	1	1	B1/1	Ax/1	12.00	30.00	✓	Offside	45.00
Bx	1	1	A1/1	Bx/1	12.00	30.00	✓	Nearside	20.00
C1	1	1	Cs/1	C1/1	10.20	30.00	✓	Straight	Straight Movement
C2	1	1	Cs/1	C2/1	10.20	30.00	✓	Straight	Straight Movement
Cx	1	1	A1/1	Cx/1	12.00	30.00	✓	Straight	Straight Movement
Ax	1	2	C2/1	Ax/1	12.00	30.00	✓	Straight	Straight Movement
Bx	1	2	C1/1	Bx/1	12.00	30.00	✓	Offside	35.46
Cx	1	2	B1/1	Cx/1	12.00	30.00	✓	Nearside	20.00

Give Way Data

Arm	Traffic Stream	Opposed traffic	Use Step-wise Opposed Turn Model	Visibility restricted
(ALL)	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 (%)
B1	1	1	Cx/1	574	1800	100
		2	Ax/1	440	1800	100
C1	1	1	Bx/1	574	1800	100

Give Way Data - Movements - Conflicts

Arm	Traffic Stream	Movement	Destination traffic stream	Description	Controlling type	Controlling from traffic stream	Controlling to traffic stream	Percentage opposing (%)	Slope coefficient	Upstream signals visible	Conflict shift	Conflict duration
B1	1	1	Cx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.09		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0
		2	Ax/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.08		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.20		0	0
				T-junction opposing flow	TrafficStreamMovement	C2/1	Ax/1	100	0.13		0	0
				T-junction	TrafficStreamMovement	C1/1	Bx/1	100	0.29		0	0

				opposing flow								
C1	1	1	Bx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.22		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
(ALL)	(untitled)				Farside	3.00	2.00	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	D	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(ALL)	11000

Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	100	100		0.00		

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
1	Library		✓	TrafficStream	Two-Way	A1/1	A1/1	Ax/1	Two-Way	B1/1	B1/1	Bx/1	Two-Way	C2/1	C1/1	Cx/1	✓

T-Junction Majors

T-Junction	Left Carriageway Width (m)	Right Carriageway Width (m)	Kerbed Central Reserve Width (m)	Width for C-B traffic (m)	Visibility for C-B traffic (m)
1	6.00	6.00	0.00	2.20	0.00

T-Junction Minors

T-Junction	B-C Lane Width (m)	B-A Lane Width (m)	B-C Visibility (m)	B-A Visibility (m)
1	2.20	2.20	0.00	0.00

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
1	574	0.09	0.22	440	0.08	0.20	0.13	0.29	574	0.22	0.22

Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1		✓	✓	Lane Balancing			✓			✓	1.25		

Normal Input Flows (Veh/hr)

From	To 1	To 2	To 3
1	0	371	296
2	201	0	156
3	369	258	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
1	1		A1/1	Ax/1	#0000FF
	2		B1/1	Bx/1	#FF0000
	3		Cs/1	Cx/1	#00FF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (Veh/hr)
1	1		1	2	A1/1, Bx/1	Normal	371
	2		1	3	A1/1, Cx/1	Normal	296
	3		2	3	B1/1, Cx/1	Normal	156
	4		2	1	B1/1, Ax/1	Normal	201
	5		3	2	Cs/1, C1/1, Bx/1	Normal	258
	6		3	1	Cs/1, C2/1, Ax/1	Normal	369

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s	Mean Delay	Mean max queu	Utilised storage (%)	Weighted cost of delay	Weighted cost of stops	Performance Index (£ per hr)

							(per cycle))	per Veh (s)	e (Veh)		(£ per hr)	(£ per hr)	
18:00-19:00	A1	1	17	426	667	9999	38	20.05	12.06	69.35	52.74	5.34	58.08
	Ax	1	0	Unrestricted	570	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	B1	1	66	37	357	1699	31	36.63	9.25	53.17	51.59	4.07	55.66
	Bx	1	0	Unrestricted	629	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	C1	1	57	57	258	1800	24	38.16	6.62	44.76	38.83	2.94	41.78
	C2	1	32	181	369	1800	62	6.63	3.87	26.17	9.65	1.97	11.62
	Cs	1	35	158	627	1800	100	0.53	0.09	0.53	1.32	0.00	1.32
	Cx	1	0	Unrestricted	452	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Calculated sat flow (Veh/hr)	Calculated capacity (Veh/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
18:00-19:00	A1	1	667	667	0		9999	3900	17		426	0.00	38	39
	Ax	1	570	570	0		Unrestricted	Unrestricted	0		Unrestricted	0.46	100	100
	B1	1	357	357	0		1699	544	66		37	0.00	31	32
	Bx	1	629	629	0		Unrestricted	Unrestricted	0		Unrestricted	0.89	100	100
	C1	1	258	258	0		1800	450	57		57	0.00	24	25
	C2	1	369	369	0		1800	1152	32		181	0.00	62	64
	Cs	1	627	627	0		1800	1800	35		158	0.00	100	100
	Cx	1	452	452	0		Unrestricted	Unrestricted	0		Unrestricted	0.82	100	100

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
18:00-19:00	A1	1	12.00	20.05	3.70	0.02	52.74	52.74	63.84	425.19	0.64	5.34	5.34
	Ax	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	B1	1	12.00	36.63	3.01	0.62	51.59	51.59	91.01	302.95	21.97	4.07	4.07
	Bx	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	C1	1	10.20	38.16	2.35	0.38	38.83	38.83	90.90	220.97	13.55	2.94	2.94
	C2	1	10.20	6.63	0.60	0.08	9.65	9.65	42.62	151.87	5.41	1.97	1.97
	Cs	1	12.00	0.53	0.00	0.09	1.32	1.32	0.00	0.00	0.00	0.00	0.00
	Cx	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (Veh)	Mean max queue (Veh)	Max queue storage (Veh)	Utilised storage (%)	Average storage excess queue (Veh)	Average limit excess queue (Veh)	Excess queue penalty (£ per hr)	Max end of green queue (Veh)	Max end of red queue (Veh)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))	Estimated blocking
18:00-19:00	A1	1	0.00	12.06	17.39	69.35	0.00	0.00	0.00	0.02	11.32	0.00	0.00	0.00	
	Ax	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			0.00	0.00	0.00	
	B1	1	0.00	9.25	17.39	53.17	0.00	0.00	0.00	0.72	7.46	0.00	0.00	0.00	
	Bx	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			24.00	0.00	24.00	
	C1	1	0.00	6.62	14.78	44.76	0.00	0.00	0.00	0.38	5.76	0.00	0.00	0.00	
	C2	1	0.00	3.87	14.78	26.17	0.00	0.00	0.00	0.08	3.15	0.00	0.00	0.00	
	Cs	1	0.00	0.09	17.39	0.53	0.00	0.00	0.00			0.00	0.00	0.00	
	Cx	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			27.00	0.00	27.00	

Traffic Stream Results: Journey times

Time Segment	Arm	Traffic Stream	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
18:00-19:00	A1	1	66.70	5.94	11.23	32.05
	Ax	1	57.00	1.90	30.00	12.00
	B1	1	35.70	4.82	7.40	48.63
	Bx	1	62.90	2.10	30.00	12.00
	C1	1	21.93	3.47	6.33	48.36
	C2	1	31.37	1.73	18.18	16.83
	Cs	1	62.70	2.18	28.72	12.53
	Cx	1	45.20	1.51	30.00	12.00

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	Mean Max Queue EoTS (Veh)	Max End of Green Queue EoTS (Veh)	Max End of Red Queue EoTS (Veh)	PCU Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
18:00-19:00	A1	1	0.00	0.00	✓	0.00	12.06	0.02	11.32	1.00	0.00	58.08	58.08
	Ax	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00	0.00
	B1	1	0.00	0.00	✓	0.00	9.25	0.72	7.47	1.00	0.00	55.66	55.66
	Bx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00	0.00
	C1	1	0.00	0.00	✓	0.00	6.62	0.38	5.76	1.00	0.00	41.78	41.78
	C2	1	0.00	0.00	✓	0.00	3.87	0.08	3.15	1.00	0.00	11.62	11.62
	Cs	1	0.00	0.00	✓	0.00	0.09			1.00	0.00	1.32	1.32
	Cx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00	0.00

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
18:00-19:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
18:00-19:00	(ALL)	(ALL)	0	0	0		11000	770	0		Unrestricted	0.00	7	7

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Uniform delay (Ped-min/min)	Random plus oversat delay (Ped-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)
18:00-19:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Average storage excess queue (Ped)	Average limit excess queue (Ped)	Excess queue penalty (£ per hr)
18:00-19:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Journey times

Time Segment	Crossing	Side	Distance travelled (Ped-km/hr)	Time spent (Ped-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
18:00-19:00	(ALL)	(ALL)	0.00	0.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
18:00-19:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-min/min)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
10	20/12/2018 09:50:52	20/12/2018 09:50:53	18:00	100	168.46	10.85	65.67	B1/1	0	0	B1/1	Cs/1	B1/1	✓

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
18:00-19:00	66	0	3929	555	9.95	154.13	14.33	168.46

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
18:00-19:00	0	0	42	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))	Effective green (s (per cycle))
18:00-19:00	3929	3929	0		66		37	597	602

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
18:00-19:00	11.71	9.95	9.67	1.19	154.13	154.13	29.08	1100.98	41.56	14.33	14.33

Network Results: Queues and blocking

Time Segment	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))
18:00-19:00	69.35	0.00	51.00	0.00	51.00

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
18:00-19:00	383.50	23.64	16.22

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	PCU Factor	Cost of traffic penalties (£ per hr)	Controller stream penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
18:00-19:00	0.00	0.00	✓	0.00	1.00	0.00	0.00	168.46	168.46

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

		To		
		1	2	3
From	1	0.0	44.0	44.0
	2	60.6	0.0	60.6
	3	41.4	72.9	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (Veh/hr)	Normal journey time (s)	Calculated Total Flow (Veh/hr)	Avg journey time (s)
1	1	2	371	44.05	371	44.05
2	1	3	296	44.05	296	44.05
3	2	3	156	60.63	156	60.63
4	2	1	201	60.63	201	60.63
5	3	2	258	72.89	258	72.89
6	3	1	369	41.37	369	41.37

Final Prediction Table

Traffic Stream Results

				SIGNALS			FLOWS		PERFORMANCE				PER PCU			QUEUES		WEIGHTS		PENALTIES	P.I.
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Second phase	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	Journey Time (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (Veh)	Max end of red queue (Veh)	Delay weighting multiplier (%)	Stop weighting multiplier (%)	Cost of traffic penalties (£ per hr)	P.I.
A1	1	Donore Road (W)	2	1	A		667	9999	38	0.00	17	426	32.05	20.05	63.84	12.06	11.32	100	100	0.00	58.08
Ax	1	Donore Road (W)					570	Unrestricted	100	0.00	0	Unrestricted	12.00	0.00	0.00	0.00		100	100	0.00	0.00
B1	1	Malays Lane	2	1	C		357	1699	31	0.00	66	37	48.63	36.63	91.01	9.25	7.46	100	100	0.00	55.66
Bx	1	Malays Lane					629	Unrestricted	100	24.00	0	Unrestricted	12.00	0.00	0.00	0.00		100	100	0.00	0.00
C1	1	Donore Road (E)	2	1	B		258	1800	24	0.00	57	57	48.36	38.16	90.90	6.62	5.76	100	100	0.00	41.78
C2	1	Donore Road (E)	2	1	A	B	369	1800	62	0.00	32	181	16.83	6.63	42.62	3.87	3.15	100	100	0.00	11.62
Cs	1	Donor	2				627	1800	100	0.00	35	158	12.53	0.53	0.00	0.09		100	100	0.00	1.32
Cx	1	Donore Road (E)																			
		Donore Road (E)					452	Unrestricted	100	27.00	0	Unrestricted	12.00	0.00	0.00	0.00		100	100	0.00	0.00

Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE			PER PED		QUEUES	WEIGHTS	PENALTIES	P.I.
Pedestrian	Side	Name	Traffic node	Controller stream	Phase	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Degree of saturation (%)	Practical reserve capacity	Journey Time (s)	Mean Delay per Ped (s)	Mean max queue (Ped)	Delay weighting (%)	Cost of traffic penalties (£ per hr)	P.I.
(ALL)	(ALL)	(untitled)		1	D	0	11000	7	0	Unrestricted	0.00	0.00	0.00	100	0.00	0.00

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	383.50	23.64	16.22	9.67	1.19	154.13	14.33	0.00	168.46
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	383.50	23.64	16.22	9.67	1.19	154.13	14.33	0.00	168.46

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

A11 - 2028 - BASE + DEV - AM
D11 - 2028 - BASE + 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)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst over	Network within capacity

						min/ min)							all PRC	
11	20/12/2018 09:50:56	20/12/2018 09:50:57	08:00	100	167.44	10.79	62.15	B1/1	0	0	B1/1	Cs/1	B1/1	✓

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2028 - BASE + DEV - AM		D11	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2028 - BASE + DEV - AM				08:00	

Network Options

Network timings

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

Signals options

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

Advanced

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

Traffic options

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

Advanced

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

Normal Traffic parameters

Dispersion type	Dispersion coefficient
Default	35

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Bus	1.00	70	15	0.47	30	85

Tram parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Tram	1.00	70	15	0.47	30	85

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order
Hill Climb (Fast)	15, 40, -1, 15, 40, 1, -1, 1	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05		✓	1

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
2		

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
A1			2
Ax			
B1			2
Bx			
C1			2
C2			2
Cs			2
Cx			

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
A1	1	Donore Road (W)			100.00	✓	Sum of lanes	9999	✓		Normal	
Ax	1	Donore Road (W)			100.00						Normal	
B1	1	Marlays Lane			100.00	✓	Sum of lanes	1800	✓	✓	Normal	
Bx	1	Marlays Lane			100.00						Normal	
C1	1	Donore Road (E)			85.00	✓	Sum of lanes	1800	✓	✓	Normal	
C2	1	Donore Road (E)			85.00	✓	Sum of lanes	1800	✓		Normal	
Cs	1	Donore Road (E)			100.00	✓	Sum of lanes	1800			Normal	
Cx	1	Donore Road (E)			100.00						Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Saturation flow (PCU/hr)
A1	1	1				9999
Ax	1	1				
B1	1	1				1800
Bx	1	1				
C1	1	1				1800
C2	1	1				1800
Cs	1	1				1800
Cx	1	1				

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
(ALL)	1	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
A1	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100
Ax	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100
B1	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
Bx	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100
C1	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
C2	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
Cs	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
Cx	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100

Normal - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	1	100	100

Flows

Arm	Traffic Stream	Total Flow (Veh/hr)	Normal Flow (Veh/hr)
A1	1	504	504
Ax	1	549	549
B1	1	517	517
Bx	1	412	412
C1	1	205	205
C2	1	276	276
Cs	1	481	481
Cx	1	541	541

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled	Second phase
A1	1	1	A		
B1	1	1	C		
C1	1	1	B		
C2	1	1	A	✓	B

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
(ALL)	1	12.00	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	1	1	B1/1	Ax/1	12.00	30.00	✓	Offside	45.00
Bx	1	1	A1/1	Bx/1	12.00	30.00	✓	Nearside	20.00
C1	1	1	Cs/1	C1/1	10.20	30.00	✓	Straight	Straight Movement
C2	1	1	Cs/1	C2/1	10.20	30.00	✓	Straight	Straight Movement
Cx	1	1	A1/1	Cx/1	12.00	30.00	✓	Straight	Straight Movement
Ax	1	2	C2/1	Ax/1	12.00	30.00	✓	Straight	Straight Movement
Bx	1	2	C1/1	Bx/1	12.00	30.00	✓	Offside	35.46
Cx	1	2	B1/1	Cx/1	12.00	30.00	✓	Nearside	20.00

Give Way Data

Arm	Traffic Stream	Opposed traffic	Use Step-wise Opposed Turn Model	Visibility restricted
(ALL)	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 (%)
B1	1	1	Cx/1	574	1800	100
		2	Ax/1	440	1800	100
C1	1	1	Bx/1	574	1800	100

Give Way Data - Movements - Conflicts

Arm	Traffic Stream	Movement	Destination traffic stream	Description	Controlling type	Controlling from traffic stream	Controlling to traffic stream	Percentage opposing (%)	Slope coefficient	Upstream signals visible	Conflict shift	Conflict duration
B1	1	1	Cx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.09		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0
		2	Ax/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.08		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.20		0	0
				T-junction opposing flow	TrafficStreamMovement	C2/1	Ax/1	100	0.13		0	0
				T-junction opposing flow	TrafficStreamMovement	C1/1	Bx/1	100	0.29		0	0
C1	1	1	Bx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.22		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
(ALL)	(untitled)				Farside	3.00	2.00	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	D	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(ALL)	11000

Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	100	100		0.00		

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
1	Library		✓	TrafficStream	Two-Way	A1/1	A1/1	Ax/1	Two-Way	B1/1	B1/1	Bx/1	Two-Way	C2/1	C1/1	Cx/1	✓

T-Junction Majors

T-Junction	Left Carriageway Width (m)	Right Carriageway Width (m)	Kerbed Central Reserve Width (m)	Width for C-B traffic (m)	Visibility for C-B traffic (m)
1	6.00	6.00	0.00	2.20	0.00

T-Junction Minors

T-Junction	B-C Lane Width (m)	B-A Lane Width (m)	B-C Visibility (m)	B-A Visibility (m)
1	2.20	2.20	0.00	0.00

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
1	574	0.09	0.22	440	0.08	0.20	0.13	0.29	574	0.22	0.22

Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1		✓	✓	Lane Balancing			✓			✓	1.25		

Normal Input Flows (Veh/hr)

From \ To	1	2	3
1	0	207	297
2	273	0	244
3	276	205	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
1	1		A1/1	Ax/1	#0000FF
	2		B1/1	Bx/1	#FF0000
	3		Cs/1	Cx/1	#00FF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (Veh/hr)
1	1		1	2	A1/1, Bx/1	Normal	207
	2		1	3	A1/1, Cx/1	Normal	297
	3		2	3	B1/1, Cx/1	Normal	244
	4		2	1	B1/1, Ax/1	Normal	273
	5		3	2	Cs/1, C1/1, Bx/1	Normal	205
	6		3	1	Cs/1, C2/1, Ax/1	Normal	276

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (Veh)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	A1	1	19	382	504	9999	26	28.22	10.66	61.30	56.11	4.74	60.84
	Ax	1	0	Unrestricted	549	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	B1	1	62	45	517	1733	47	23.82	11.28	64.85	48.57	4.97	53.55
	Bx	1	0	Unrestricted	412	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	C1	1	54	66	205	1800	20	40.81	5.39	36.44	33.00	2.39	35.39
	C2	1	32	182	276	1800	46	13.69	4.21	28.51	14.91	2.06	16.97
	Cs	1	27	237	481	1800	100	0.36	0.05	0.28	0.69	0.00	0.69
	Cx	1	0	Unrestricted	541	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Calculated sat flow (Veh/hr)	Calculated capacity (Veh/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
08:00-09:00	A1	1	504	504	0		9999	2700	19		382	0.00	26	27
	Ax	1	549	549	0		Unrestricted	Unrestricted	0		Unrestricted	0.54	100	100
	B1	1	517	517	0		1733	832	62		45	0.00	47	48
	Bx	1	412	412	0		Unrestricted	Unrestricted	0		Unrestricted	1.08	100	100
	C1	1	205	205	0		1800	378	54		66	0.00	20	21
	C2	1	276	276	0		1800	864	32		182	0.00	46	48
	Cs	1	481	481	0		1800	1800	27		237	0.00	100	100
	Cx	1	541	541	0		Unrestricted	Unrestricted	0		Unrestricted	0.80	100	100

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	A1	1	12.00	28.22	3.93	0.02	56.11	56.11	74.97	377.08	0.77	4.74	4.74
	Ax	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	B1	1	12.00	23.82	2.91	0.51	48.57	48.57	76.70	378.45	18.08	4.97	4.97
	Bx	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	C1	1	10.20	40.81	2.01	0.32	33.00	33.00	92.91	179.16	11.30	2.39	2.39
	C2	1	10.20	13.69	0.97	0.07	14.91	14.91	59.53	158.95	5.36	2.06	2.06
	Cs	1	12.00	0.36	0.00	0.05	0.69	0.69	0.00	0.00	0.00	0.00	0.00
	Cx	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (Veh)	Mean max queue (Veh)	Max queue storage (Veh)	Utilised storage (%)	Average storage excess queue (Veh)	Average limit excess queue (Veh)	Excess queue penalty (£ per hr)	Max end of green queue (Veh)	Max end of red queue (Veh)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))	Estimated blocking
08:00-09:00	A1	1	0.00	10.66	17.39	61.30	0.00	0.00	0.00	0.02	10.24	0.00	0.00	0.00	
	Ax	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			0.00	0.00	0.00	
	B1	1	0.00	11.28	17.39	64.85	0.00	0.00	0.00	0.65	8.12	0.00	0.00	0.00	
	Bx	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			42.00	0.00	42.00	
	C1	1	0.00	5.39	14.78	36.44	0.00	0.00	0.00	0.32	4.82	0.00	0.00	0.00	
	C2	1	0.00	4.21	14.78	28.51	0.00	0.00	0.00	0.07	3.60	0.00	0.00	0.00	
	Cs	1	0.00	0.05	17.39	0.28	0.00	0.00	0.00			0.00	0.00	0.00	
	Cx	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			22.00	0.00	22.00	

Traffic Stream Results: Journey times

Time Segment	Arm	Traffic Stream	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	A1	1	50.40	5.63	8.95	40.22
	Ax	1	54.90	1.83	30.00	12.00
	B1	1	51.70	5.14	10.05	35.82
	Bx	1	41.20	1.37	30.00	12.00

	C1	1	17.43	2.90	6.00	51.01
	C2	1	23.46	1.83	12.81	23.89
	Cs	1	48.10	1.65	29.12	12.36
	Cx	1	54.10	1.80	30.00	12.00

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	Mean Max Queue EoTS (Veh)	Max End of Green Queue EoTS (Veh)	Max End of Red Queue EoTS (Veh)	PCU Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	A1	1	0.00	0.00	✓	0.00	10.66	0.02	10.24	1.00	0.00	60.84	60.84
	Ax	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00	0.00
	B1	1	0.00	0.00	✓	0.00	11.28	0.65	8.12	1.00	0.00	53.55	53.55
	Bx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00	0.00
	C1	1	0.00	0.00	✓	0.00	5.39	0.32	4.82	1.00	0.00	35.39	35.39
	C2	1	0.00	0.00	✓	0.00	4.21	0.07	3.60	1.00	0.00	16.97	16.97
	Cs	1	0.00	0.00	✓	0.00	0.05			1.00	0.00	0.69	0.69
	Cx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00	0.00

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
08:00-09:00	(ALL)	(ALL)	0	0	0		11000	770	0		Unrestricted	0.00	7	7

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Uniform delay (Ped-min/min)	Random plus oversat delay (Ped-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)
08:00-09:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Average storage excess queue (Ped)	Average limit excess queue (Ped)	Excess queue penalty (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Journey times

Time Segment	Crossing	Side	Distance travelled (Ped-km/hr)	Time spent (Ped-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	(ALL)	(ALL)	0.00	0.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-min/min)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
11	20/12/2018 09:50:56	20/12/2018 09:50:57	08:00	100	167.44	10.79	62.15	B1/1	0	0	B1/1	Cs/1	B1/1	✓

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	62	0	3485	539	11.15	153.28	14.16	167.44

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	0	0	42	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))	Effective green (s (per cycle))
08:00-09:00	3485	3485	0		62		45	581	586

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)

08:00-09:00	11.75	11.15	9.82	0.97	153.28	153.28	32.40	1093.64	35.51	14.16	14.16

Network Results: Queues and blocking

Time Segment	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))
08:00-09:00	64.85	0.00	64.00	0.00	64.00

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
08:00-09:00	341.29	22.17	15.39

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	PCU Factor	Cost of traffic penalties (£ per hr)	Controller stream penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	0.00	0.00	✓	0.00	1.00	0.00	0.00	167.44	167.44

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

From \ To	1	2	3
1	0.0	52.2	52.2
2	47.8	0.0	47.8
3	48.3	75.4	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (Veh/hr)	Normal journey time (s)	Calculated Total Flow (Veh/hr)	Avg journey time (s)
1	1	2	207	52.22	207	52.22
2	1	3	297	52.22	297	52.22
3	2	3	244	47.82	244	47.82
4	2	1	273	47.82	273	47.82
5	3	2	205	75.37	205	75.37
6	3	1	276	48.26	276	48.26

Final Prediction Table

Traffic Stream Results

				SIGNALS			FLOWS		PERFORMANCE				PER PCU			QUEUES		WEIGHTS			PENALTIES	P.I.
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Second phase	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cy	Wasted time total (s (pe	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Ve	Mean stops per Ve	Mean max queue (V	Max end of red queu	Delay weighting multiplier (%)	Stop weighting multiplier (%)	Cost of traffic penalties (£ per hr)	P.I.
A1	1	Donore Road (W)	2	1	A		504	9999	26	0.00	19	382	40.22	28.22	74.97	10.66	10.24	100	100	0.00	60.84
Ax	1	Donore Road (W)					549	Unrestricted	100	0.00	0	Unrestricted	12.00	0.00	0.00	0.00		100	100	0.00	0.00
B1	1	Marlays Lane	2	1	C		517	1733	47	0.00	62	45	35.82	23.82	76.70	11.28	8.12	100	100	0.00	53.55
Bx	1	Marlays Lane					412	Unrestricted	100	42.00	0	Unrestricted	12.00	0.00	0.00	0.00		100	100	0.00	0.00
C1	1	Donore Road (E)	2	1	B		205	1800	20	0.00	54	66	51.01	40.81	92.91	5.39	4.82	100	100	0.00	35.39
C2	1	Donore Road (E)	2	1	A	B	276	1800	46	0.00	32	182	23.89	13.69	59.53	4.21	3.60	100	100	0.00	16.97
Cs	1	Donore Road (E)	2				481	1800	100	0.00	27	237	12.36	0.36	0.00	0.05		100	100	0.00	0.69
Cx	1	Donore Road (E)					541	Unrestricted	100	22.00	0	Unrestricted	12.00	0.00	0.00	0.00		100	100	0.00	0.00

Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE			PER PED		QUEUES	WEIGHTS	PENALTIES	P.I.
Pedestrian	Side	Name	Traffic node	Controller stream	Phase	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Degree of saturation (%)	Practical reserve capacity	Journey Time (s)	Mean Delay per Ped (s)	Mean max queue (Ped)	Delay weighting (%)	Cost of traffic penalties (£ per hr)	P.I.
(ALL)	(ALL)	(untitled)		1	D	0	11000	7	0	Unrestricted	0.00	0.00	0.00	100	0.00	0.00

Network Results

	Distance travelled	Time spent	Mean journey	Uniform delay	Random plus oversat	Weighted cost of	Weighted cost of	Excess queue	Performance Index (£ per hr)

	(PCU-km/hr)	(PCU-hr/hr)	speed (kph)	(Veh-min/min)	delay (Veh-min/min)	delay (£ per hr)	stops (£ per hr)	penalty (£ per hr)	
Normal traffic	341.29	22.17	15.39	9.82	0.97	153.28	14.16	0.00	167.44
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	341.29	22.17	15.39	9.82	0.97	153.28	14.16	0.00	167.44

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

A12 - 2028 - BASE + DEV - PM
D12 - 2028 - BASE + 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)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-min/min)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
12	20/12/2018 09:51:00	20/12/2018 09:51:01	18:00	100	199.34	12.88	68.78	B1/1	0	0	B1/1	Cs/1	B1/1	✓

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2028 - BASE + DEV - PM		D12	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2028 - BASE + DEV - PM				18:00	

Network Options

Network timings

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

Signals options

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

Advanced

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

Traffic options

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

Advanced

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

Normal Traffic parameters

Dispersion type	Dispersion coefficient
Default	35

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Bus	1.00	70	15	0.47	30	85

Tram parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Tram	1.00	70	15	0.47	30	85

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order

Hill Climb (Fast)	15, 40, -1, 15, 40, 1, -1, 1	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05		✓	1

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
2		

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
A1			2
Ax			
B1			2
Bx			
C1			2
C2			2
Cs			2
Cx			

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
A1	1	Donore Road (W)			100.00	✓	Sum of lanes	9999	✓		Normal	
Ax	1	Donore Road (W)			100.00						Normal	
B1	1	Marlays Lane			100.00	✓	Sum of lanes	1800	✓	✓	Normal	
Bx	1	Marlays Lane			100.00						Normal	
C1	1	Donore Road (E)			85.00	✓	Sum of lanes	1800	✓	✓	Normal	
C2	1	Donore Road (E)			85.00	✓	Sum of lanes	1800	✓		Normal	
Cs	1	Donore Road (E)			100.00	✓	Sum of lanes	1800			Normal	
Cx	1	Donore Road (E)			100.00						Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Saturation flow (PCU/hr)
A1	1	1				9999
Ax	1	1				
B1	1	1				1800
Bx	1	1				
C1	1	1				1800
C2	1	1				1800
Cs	1	1				1800
Cx	1	1				

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
(ALL)	1	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
A1	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100
Ax	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100
B1	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
Bx	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100
C1	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
C2	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
Cs	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
Cx	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100

Normal - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	1	100	100

Flows

Arm	Traffic Stream	Total Flow (Veh/hr)	Normal Flow (Veh/hr)
A1	1	713	713
Ax	1	597	597
B1	1	411	411
Bx	1	721	721
C1	1	304	304
C2	1	369	369
Cs	1	673	673
Cx	1	479	479

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled	Second phase
A1	1	1	A		
B1	1	1	C		

C1	1	1	B		
C2	1	1	A	✓	B

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
(ALL)	1	12.00	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	1	1	B1/1	Ax/1	12.00	30.00	✓	Offside	45.00
Bx	1	1	A1/1	Bx/1	12.00	30.00	✓	Nearside	20.00
C1	1	1	Cs/1	C1/1	10.20	30.00	✓	Straight	Straight Movement
C2	1	1	Cs/1	C2/1	10.20	30.00	✓	Straight	Straight Movement
Cx	1	1	A1/1	Cx/1	12.00	30.00	✓	Straight	Straight Movement
Ax	1	2	C2/1	Ax/1	12.00	30.00	✓	Straight	Straight Movement
Bx	1	2	C1/1	Bx/1	12.00	30.00	✓	Offside	35.46
Cx	1	2	B1/1	Cx/1	12.00	30.00	✓	Nearside	20.00

Give Way Data

Arm	Traffic Stream	Opposed traffic	Use Step-wise Opposed Turn Model	Visibility restricted
(ALL)	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 (%)
B1	1	1	Cx/1	574	1800	100
		2	Ax/1	440	1800	100
C1	1	1	Bx/1	574	1800	100

Give Way Data - Movements - Conflicts

Arm	Traffic Stream	Movement	Destination traffic stream	Description	Controlling type	Controlling from traffic stream	Controlling to traffic stream	Percentage opposing (%)	Slope coefficient	Upstream signals visible	Conflict shift	Conflict duration
B1	1	1	Cx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.09		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0
		2	Ax/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.08		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.20		0	0
				T-junction opposing flow	TrafficStreamMovement	C2/1	Ax/1	100	0.13		0	0
				T-junction opposing flow	TrafficStreamMovement	C1/1	Bx/1	100	0.29		0	0
C1	1	1	Bx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.22		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
(ALL)	(untitled)				Farside	3.00	2.00	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	D	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(ALL)	11000

Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	100	100		0.00		

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
1	Library		✓	TrafficStream	Two-Way	A1/1	A1/1	Ax/1	Two-Way	B1/1	B1/1	Bx/1	Two-Way	C2/1	C1/1	Cx/1	✓

T-Junction Majors

T-Junction	Left Carriageway Width (m)	Right Carriageway Width (m)	Kerbed Central Reserve Width (m)	Width for C-B traffic (m)	Visibility for C-B traffic (m)
1	6.00	6.00	0.00	2.20	0.00

T-Junction Minors

T-Junction	B-C Lane Width (m)	B-A Lane Width (m)	B-C Visibility (m)	B-A Visibility (m)
1	2.20	2.20	0.00	0.00

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
1	574	0.09	0.22	440	0.08	0.20	0.13	0.29	574	0.22	0.22

Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1		✓	✓	Lane Balancing			✓			✓	1.25		

Normal Input Flows (Veh/hr)

From \ To	1	2	3
1	0	417	296
2	228	0	183
3	369	304	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
1	1		A1/1	Ax/1	#0000FF
	2		B1/1	Bx/1	#FF0000
	3		Cs/1	Cx/1	#00FF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (Veh/hr)
1	1		1	2	A1/1, Bx/1	Normal	417
	2		1	3	A1/1, Cx/1	Normal	296
	3		2	3	B1/1, Cx/1	Normal	183
	4		2	1	B1/1, Ax/1	Normal	228
	5		3	2	Cs/1, C1/1, Bx/1	Normal	304
	6		3	1	Cs/1, C2/1, Ax/1	Normal	369

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (Veh)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
18:00-19:00	A1	1	20	342	713	9999	34	22.88	13.69	78.73	64.35	6.07	70.42
	Ax	1	0	Unrestricted	597	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	B1	1	69	31	411	1707	34	35.45	10.56	60.75	57.47	4.68	62.15
	Bx	1	0	Unrestricted	721	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	C1	1	65	39	304	1800	25	39.97	8.11	54.85	47.93	3.57	51.50
	C2	1	34	168	369	1800	59	7.91	4.29	29.00	11.52	2.16	13.68
	Cs	1	37	141	673	1800	100	0.60	0.11	0.64	1.58	0.00	1.58
	Cx	1	0	Unrestricted	479	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Calculated sat flow (Veh/hr)	Calculated capacity (Veh/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
18:00-19:00	A1	1	713	713	0		9999	3500	20		342	0.00	34	35
	Ax	1	597	597	0		Unrestricted	Unrestricted	0		Unrestricted	0.46	100	100
	B1	1	411	411	0		1707	598	69		31	0.00	34	35
	Bx	1	721	721	0		Unrestricted	Unrestricted	0		Unrestricted	0.90	100	100
	C1	1	304	304	0		1800	468	65		39	0.00	25	26
	C2	1	369	369	0		1800	1098	34		168	0.00	59	61
	Cs	1	673	673	0		1800	1800	37		141	0.00	100	100
	Cx	1	479	479	0		Unrestricted	Unrestricted	0		Unrestricted	0.83	100	100

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
18:00-19:00	A1	1	12.00	22.88	4.51	0.03	64.35	64.35	67.95	483.54	0.94	6.07	6.07
	Ax	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	B1	1	12.00	35.45	3.30	0.75	57.47	57.47	90.88	347.09	26.42	4.68	4.68
	Bx	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	C1	1	10.20	39.97	2.78	0.59	47.93	47.93	93.75	264.02	20.98	3.57	3.57

	C2	1	10.20	7.91	0.73	0.08	11.52	11.52	46.70	166.22	6.09	2.16	2.16
	Cs	1	12.00	0.60	0.00	0.11	1.58	1.58	0.00	0.00	0.00	0.00	0.00
	Cx	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (Veh)	Mean max queue (Veh)	Max queue storage (Veh)	Utilised storage (%)	Average storage excess queue (Veh)	Average limit excess queue (Veh)	Excess queue penalty (£ per hr)	Max end of green queue (Veh)	Max end of red queue (Veh)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))	Estimated blocking
18:00-19:00	A1	1	0.00	13.69	17.39	78.73	0.00	0.00	0.00	0.03	12.90	0.00	0.00	0.00	
	Ax	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			0.00	0.00	0.00	
	B1	1	0.00	10.56	17.39	60.75	0.00	0.00	0.00	0.86	8.28	0.00	0.00	0.00	
	Bx	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			26.00	0.00	26.00	
	C1	1	0.00	8.11	14.78	54.85	0.00	0.00	0.00	0.59	6.84	0.00	0.00	0.00	
	C2	1	0.00	4.29	14.78	29.00	0.00	0.00	0.00	0.08	3.47	0.00	0.00	0.00	
	Cs	1	0.00	0.11	17.39	0.64	0.00	0.00	0.00			0.00	0.00	0.00	
	Cx	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			28.00	0.00	28.00	

Traffic Stream Results: Journey times

Time Segment	Arm	Traffic Stream	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
18:00-19:00	A1	1	71.30	6.91	10.32	34.88
	Ax	1	59.70	1.99	30.00	12.00
	B1	1	41.10	5.42	7.59	47.45
	Bx	1	72.10	2.40	30.00	12.00
	C1	1	25.84	4.24	6.10	50.17
	C2	1	31.37	1.86	16.89	18.11
	Cs	1	67.30	2.35	28.58	12.60
	Cx	1	47.90	1.60	30.00	12.00

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	Mean Max Queue EoTS (Veh)	Max End of Green Queue EoTS (Veh)	Max End of Red Queue EoTS (Veh)	PCU Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
18:00-19:00	A1	1	0.00	0.00	✓	0.00	13.69	0.03	12.90	1.00	0.00	70.42	70.42
	Ax	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00	0.00
	B1	1	0.00	0.00	✓	0.00	10.57	0.87	8.29	1.00	0.00	62.15	62.15
	Bx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00	0.00
	C1	1	0.00	0.00	✓	0.00	8.11	0.60	6.85	1.00	0.00	51.50	51.50
	C2	1	0.00	0.00	✓	0.00	4.29	0.09	3.47	1.00	0.00	13.68	13.68
	Cs	1	0.00	0.00	✓	0.00	0.11			1.00	0.00	1.58	1.58
	Cx	1	0.00	0.00	✓	0.00	0.00	0.00			1.00	0.00	0.00	0.00

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
18:00-19:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
18:00-19:00	(ALL)	(ALL)	0	0	0		11000	770	0		Unrestricted	0.00	7	7

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Uniform delay (Ped-min/min)	Random plus oversat delay (Ped-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)
18:00-19:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Average storage excess queue (Ped)	Average limit excess queue (Ped)	Excess queue penalty (£ per hr)
18:00-19:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Journey times

Time Segment	Crossing	Side	Distance travelled (Ped-km/hr)	Time spent (Ped-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
18:00-19:00	(ALL)	(ALL)	0.00	0.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
18:00-19:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00	0.00

Network Results

Run Summary

Analysis	Run start time	Run finish time	Modelling start	Network Cycle	Performance	Total network	Highest	Item with high	Number of oversatur	Percentage of oversatur	Item with worst	Item with worst	Item with wor	Network withi

set used			time (HH:mm)	Time (s)	Index (£ per hr)	delay (Veh-min/min)	DOS (%)	est DOS	ated items	ated items (%)	signalised PRC	unsignalised PRC	st overall PRC	n capacity
12	20/12/2018 09:51:00	20/12/2018 09:51:01	18:00	100	199.34	12.88	68.78	B1/1	0	0	B1/1	Cs/1	B1/1	✓

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
18:00-19:00	69	0	4267	552	10.86	182.84	16.49	199.34

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
18:00-19:00	0	0	42	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))	Effective green (s (per cycle))
18:00-19:00	4267	4267	0		69		31	594	599

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
18:00-19:00	11.72	10.86	11.31	1.56	182.84	182.84	30.83	1260.87	54.43	16.49	16.49

Network Results: Queues and blocking

Time Segment	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))
18:00-19:00	78.73	0.00	54.00	0.00	54.00

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
18:00-19:00	416.61	26.76	15.57

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	PCU Factor	Cost of traffic penalties (£ per hr)	Controller stream penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
18:00-19:00	0.00	0.00	✓	0.00	1.00	0.00	0.00	199.34	199.34

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

From	To 1	To 2	To 3
1	0.0	46.9	46.9
2	59.4	0.0	59.4
3	42.7	74.8	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (Veh/hr)	Normal journey time (s)	Calculated Total Flow (Veh/hr)	Avg journey time (s)
1	1	2	417	46.88	417	46.88
2	1	3	296	46.88	296	46.88
3	2	3	183	59.45	183	59.45
4	2	1	228	59.45	228	59.45
5	3	2	304	74.76	304	74.76
6	3	1	369	42.71	369	42.71

Final Prediction Table

Traffic Stream Results

				SIGNALS			FLOWS		PERFORMANCE				PER PCU			QUEUES		WEIGHTS		PENALTIES	P.I.
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Second phase	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (Veh)	Max end of red queue (Veh)	Delay weighting multiplier (%)	Stop weighting multiplier (%)	Cost of traffic penalties (£ per hr)	P.I.
A1	1	Donore Road (W)	2	1	A		713	9999	34	0.00	20	342	34.88	22.88	67.95	13.69	12.90	100	100	0.00	70.42
Ax	1	Donore Road (W)					597	Unrestricted	100	0.00	0	Unrestricted	12.00	0.00	0.00	0.00		100	100	0.00	0.00
B1	1	Marlays Lane	2	1	C		411	1707	34	0.00	69	31	47.45	35.45	90.88	10.56	8.28	100	100	0.00	62.15
Bx	1	Marlays Lane					721	Unrestricted	100	26.00	0	Unrestricted	12.00	0.00	0.00	0.00		100	100	0.00	0.00
C1	1	Donore Ro	2	1	B		304	1800	25	0.00	65	39	50.17	39.97	93.75	8.11	6.84	100	100	0.00	51.50

		ad (E)																			
C2	1	Donore Road (E)	2	1	A	B	369	1800	59	0.00	34	168	18.11	7.91	46.70	4.29	3.47	100	100	0.00	13.68
Cs	1	Donore Road (E)	2				673	1800	100	0.00	37	141	12.60	0.60	0.00	0.11		100	100	0.00	1.58
Cx	1	Donore Road (E)					479	Unrestricted	100	28.00	0	Unrestricted	12.00	0.00	0.00	0.00		100	100	0.00	0.00

Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE			PER PED		QUEUES	WEIGHTS	PENALTIES	P.I.
Pedestrian	Side	Name	Traffic node	Controller stream	Phase	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Degree of saturation (%)	Practical reserve capacity	Journey Time (s)	Mean Delay per Ped (s)	Mean max queue (Ped)	Delay weighting (%)	Cost of traffic penalties (£ per hr)	P.I.
(ALL)	(ALL)	(untitled)		1	D	0	11000	7	0	Unrestricted	0.00	0.00	0.00	100	0.00	0.00

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	416.61	26.76	15.57	11.31	1.56	182.84	16.49	0.00	199.34
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	416.61	26.76	15.57	11.31	1.56	182.84	16.49	0.00	199.34

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

A13 - 2028 - BASE + DEV + COM(PHASES 1 AND 2) - AM
D13 - 2028 - BASE + DEV + COM(PHASES 1 AND 2) - AM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-min/min)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
13	20/12/2018 09:51:04	20/12/2018 09:51:04	08:00	100	179.29	11.57	63.55	B1/1	0	0	B1/1	Cs/1	B1/1	✓

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2028 - BASE + DEV + COM(PHASES 1 AND 2) - AM		D13	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2028 - BASE + DEV + COM(PHASES 1 AND 2) - AM				08:00	

Network Options

Network timings

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

Signals options

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

Advanced

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

Traffic options

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

Advanced

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

Normal Traffic parameters

Dispersion type	Dispersion coefficient
Default	35

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Bus	1.00	70	15	0.47	30	85

Tram parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Tram	1.00	70	15	0.47	30	85

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order
Hill Climb (Fast)	15, 40, -1, 15, 40, 1, -1, 1	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05		✓	1

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
2		

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
A1			2
Ax			
B1			2
Bx			
C1			2
C2			2
Cs			2
Cx			

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
A1	1	Donore Road (W)			100.00	✓	Sum of lanes	9999	✓		Normal	
Ax	1	Donore Road (W)			100.00						Normal	
B1	1	Marlays Lane			100.00	✓	Sum of lanes	1800	✓	✓	Normal	
Bx	1	Marlays Lane			100.00						Normal	
C1	1	Donore Road (E)			85.00	✓	Sum of lanes	1800	✓	✓	Normal	
C2	1	Donore Road (E)			85.00	✓	Sum of lanes	1800	✓		Normal	
Cs	1	Donore Road (E)			100.00	✓	Sum of lanes	1800			Normal	
Cx	1	Donore Road (E)			100.00						Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Saturation flow (PCU/hr)
A1	1	1				9999
Ax	1	1				
B1	1	1				1800
Bx	1	1				
C1	1	1				1800
C2	1	1				1800
Cs	1	1				1800
Cx	1	1				

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
(ALL)	1	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time

A1	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100
Ax	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100
B1	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
Bx	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100
C1	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
C2	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
Cs	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
Cx	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100

Normal - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	1	100	100

Flows

Arm	Traffic Stream	Total Flow (Veh/hr)	Normal Flow (Veh/hr)
A1	1	513	513
Ax	1	572	572
B1	1	563	563
Bx	1	430	430
C1	1	214	214
C2	1	276	276
Cs	1	490	490
Cx	1	564	564

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled	Second phase
A1	1	1	A		
B1	1	1	C		
C1	1	1	B		
C2	1	1	A	✓	B

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
(ALL)	1	12.00	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	1	1	B1/1	Ax/1	12.00	30.00	✓	Offside	45.00
Bx	1	1	A1/1	Bx/1	12.00	30.00	✓	Nearside	20.00
C1	1	1	Cs/1	C1/1	10.20	30.00	✓	Straight	Straight Movement
C2	1	1	Cs/1	C2/1	10.20	30.00	✓	Straight	Straight Movement
Cx	1	1	A1/1	Cx/1	12.00	30.00	✓	Straight	Straight Movement
Ax	1	2	C2/1	Ax/1	12.00	30.00	✓	Straight	Straight Movement
Bx	1	2	C1/1	Bx/1	12.00	30.00	✓	Offside	35.46
Cx	1	2	B1/1	Cx/1	12.00	30.00	✓	Nearside	20.00

Give Way Data

Arm	Traffic Stream	Opposed traffic	Use Step-wise Opposed Turn Model	Visibility restricted
(ALL)	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 (%)
B1	1	1	Cx/1	574	1800	100
		2	Ax/1	440	1800	100
C1	1	1	Bx/1	574	1800	100

Give Way Data - Movements - Conflicts

Arm	Traffic Stream	Movement	Destination traffic stream	Description	Controlling type	Controlling from traffic stream	Controlling to traffic stream	Percentage opposing (%)	Slope coefficient	Upstream signals visible	Conflict shift	Conflict duration
B1	1	1	Cx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.09		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0
		2	Ax/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.08		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.20		0	0
				T-junction opposing flow	TrafficStreamMovement	C2/1	Ax/1	100	0.13		0	0
				T-junction opposing flow	TrafficStreamMovement	C1/1	Bx/1	100	0.29		0	0
C1	1	1	Bx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.22		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
(ALL)	(untitled)				Farside	3.00	2.00	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	D	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(ALL)	11000

Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	100	100		0.00		

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
1	Library		✓	TrafficStream	Two-Way	A1/1	A1/1	Ax/1	Two-Way	B1/1	B1/1	Bx/1	Two-Way	C2/1	C1/1	Cx/1	✓

T-Junction Majors

T-Junction	Left Carriageway Width (m)	Right Carriageway Width (m)	Kerbed Central Reserve Width (m)	Width for C-B traffic (m)	Visibility for C-B traffic (m)
1	6.00	6.00	0.00	2.20	0.00

T-Junction Minors

T-Junction	B-C Lane Width (m)	B-A Lane Width (m)	B-C Visibility (m)	B-A Visibility (m)
1	2.20	2.20	0.00	0.00

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
1	574	0.09	0.22	440	0.08	0.20	0.13	0.29	574	0.22	0.22

Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1		✓	✓	Lane Balancing			✓			✓	1.25		

Normal Input Flows (Veh/hr)

		To		
		1	2	3
From	1	0	216	297
	2	296	0	267
	3	276	214	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
1	1		A1/1	Ax/1	#0000FF
	2		B1/1	Bx/1	#FF0000
	3		Cs/1	Cx/1	#00FF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (Veh/hr)
1	1		1	2	A1/1, Bx/1	Normal	216
	2		1	3	A1/1, Cx/1	Normal	297
	3		2	3	B1/1, Cx/1	Normal	267
	4		2	1	B1/1, Ax/1	Normal	296
	5		3	2	Cs/1, C1/1, Bx/1	Normal	214
	6		3	1	Cs/1, C2/1, Ax/1	Normal	276

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (Veh)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	A1	1	21	321	513	9999	23	30.65	11.43	65.72	62.03	5.06	67.09
	Ax	1	0	Unrestricted	572	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	B1	1	64	42	563	1737	50	22.28	11.97	68.81	49.48	5.28	54.76
	Bx	1	0	Unrestricted	430	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	C1	1	57	59	214	1800	20	41.57	5.66	38.26	35.09	2.52	37.60
	C2	1	34	164	276	1800	43	15.54	4.46	30.16	16.92	2.18	19.11
	Cs	1	27	231	490	1800	100	0.37	0.05	0.29	0.72	0.00	0.72
	Cx	1	0	Unrestricted	564	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Calculated sat flow (Veh/hr)	Calculated capacity (Veh/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
08:00-09:00	A1	1	513	513	0		9999	2400	21		321	0.00	23	24
	Ax	1	572	572	0		Unrestricted	Unrestricted	0		Unrestricted	0.53	100	100
	B1	1	563	563	0		1737	886	64		42	0.00	50	51
	Bx	1	430	430	0		Unrestricted	Unrestricted	0		Unrestricted	1.11	100	100
	C1	1	214	214	0		1800	378	57		59	0.00	20	21
	C2	1	276	276	0		1800	810	34		164	0.00	43	45
	Cs	1	490	490	0		1800	1800	27		231	0.00	100	100
	Cx	1	564	564	0		Unrestricted	Unrestricted	0		Unrestricted	0.79	100	100

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	A1	1	12.00	30.65	4.34	0.03	62.03	62.03	78.74	402.87	1.05	5.06	5.06
	Ax	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	B1	1	12.00	22.28	2.93	0.55	49.48	49.48	74.87	401.86	19.63	5.28	5.28
	Bx	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	C1	1	10.20	41.57	2.11	0.37	35.09	35.09	93.79	187.76	12.95	2.52	2.52
	C2	1	10.20	15.54	1.10	0.09	16.92	16.92	63.12	167.92	6.29	2.18	2.18
	Cs	1	12.00	0.37	0.00	0.05	0.72	0.72	0.00	0.00	0.00	0.00	0.00
	Cx	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (Veh)	Mean max queue (Veh)	Max queue storage (Veh)	Utilised storage (%)	Average storage excess queue (Veh)	Average limit excess queue (Veh)	Excess queue penalty (£ per hr)	Max end of green queue (Veh)	Max end of red queue (Veh)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))	Estimated blocking
08:00-09:00	A1	1	0.00	11.43	17.39	65.72	0.00	0.00	0.00	0.03	10.86	0.00	0.00	0.00	
	Ax	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			0.00	0.00	0.00	
	B1	1	0.00	11.97	17.39	68.81	0.00	0.00	0.00	0.71	8.37	0.00	0.00	0.00	
	Bx	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			44.00	0.00	44.00	
	C1	1	0.00	5.66	14.78	38.26	0.00	0.00	0.00	0.37	5.06	0.00	0.00	0.00	
	C2	1	0.00	4.46	14.78	30.16	0.00	0.00	0.00	0.09	3.84	0.00	0.00	0.00	
	Cs	1	0.00	0.05	17.39	0.29	0.00	0.00	0.00			0.00	0.00	0.00	
	Cx	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			22.00	0.00	22.00	

Traffic Stream Results: Journey times

Time Segment	Arm	Traffic Stream	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	A1	1	51.30	6.08	8.44	42.65
	Ax	1	57.20	1.91	30.00	12.00
	B1	1	56.30	5.36	10.50	34.28
	Bx	1	43.00	1.43	30.00	12.00
	C1	1	18.19	3.08	5.91	51.77
	C2	1	23.46	1.97	11.89	25.74
	Cs	1	49.00	1.68	29.09	12.37
	Cx	1	56.40	1.88	30.00	12.00

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	Mean Max Queue EoTS (Veh)	Max End of Green Queue EoTS (Veh)	Max End of Red Queue EoTS (Veh)	PCU Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	A1	1	0.00	0.00	✓	0.00	11.43	0.03	10.86	1.00	0.00	67.09	67.09
	Ax	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00	0.00
	B1	1	0.00	0.00	✓	0.00	11.97	0.71	8.37	1.00	0.00	54.76	54.76
	Bx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00	0.00
	C1	1	0.00	0.00	✓	0.00	5.66	0.37	5.06	1.00	0.00	37.60	37.60
	C2	1	0.00	0.00	✓	0.00	4.46	0.09	3.84	1.00	0.00	19.11	19.11
	Cs	1	0.00	0.00	✓	0.00	0.05			1.00	0.00	0.72	0.72
	Cx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00	0.00

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
08:00-09:00	(ALL)	(ALL)	0	0	0		11000	770	0		Unrestricted	0.00	7	7

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Uniform delay (Ped-min/min)	Random plus oversat delay (Ped-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)
08:00-09:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Average storage excess queue (Ped)	Average limit excess queue (Ped)	Excess queue penalty (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Journey times

Time Segment	Crossing	Side	Distance travelled (Ped-km/hr)	Time spent (Ped-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	(ALL)	(ALL)	0.00	0.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-min/min)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
13	20/12/2018 09:51:04	20/12/2018 09:51:04	08:00	100	179.29	11.57	63.55	B1/1	0	0	B1/1	Cs/1	B1/1	✓

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	64	0	3622	536	11.50	164.24	15.05	179.29

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	0	0	42	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve	Actual green (s	Effective green (s	capacity (%)	(per cycle))	(per cycle))
08:00-09:00	3622	3622	0		64					42	578	583

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	11.76	11.50	10.48	1.08	164.24	164.24	33.14	1160.42	39.92	15.05	15.05

Network Results: Queues and blocking

Time Segment	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))
08:00-09:00	68.81	0.00	66.00	0.00	66.00

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
08:00-09:00	354.85	23.39	15.17

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	PCU Factor	Cost of traffic penalties (£ per hr)	Controller stream penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	0.00	0.00	✓	0.00	1.00	0.00	0.00	179.29	179.29

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

From	To 1	To 2	To 3
1	0.0	54.7	54.7
2	46.3	0.0	46.3
3	50.1	76.1	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (Veh/hr)	Normal journey time (s)	Calculated Total Flow (Veh/hr)	Avg journey time (s)
1	1	2	216	54.65	216	54.65
2	1	3	297	54.65	297	54.65
3	2	3	267	46.28	267	46.28
4	2	1	296	46.28	296	46.28
5	3	2	214	76.14	214	76.14
6	3	1	276	50.12	276	50.12

Final Prediction Table

Traffic Stream Results

				SIGNALS			FLOWS		PERFORMANCE				PER PCU			QUEUES		WEIGHTS		PENALTIES	P.I.
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Second phase	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (Veh)	Max end of red queue (Veh)	Delay weighting multiplier (%)	Stop weighting multiplier (%)	Cost of traffic penalties (£ per hr)	P.I.
A1	1	Doncaster Road (W)	2	1	A		513	9999	23	0.00	21	321	42.65	30.65	78.74	11.43	10.86	100	100	0.00	67.09
Ax	1	Doncaster Road (W)					572	Unrestricted	100	0.00	0	Unrestricted	12.00	0.00	0.00	0.00		100	100	0.00	0.00
B1	1	Marlays Lane	2	1	C		563	1737	50	0.00	64	42	34.28	22.28	74.87	11.97	8.37	100	100	0.00	54.76
Bx	1	Marlays Lane					430	Unrestricted	100	44.00	0	Unrestricted	12.00	0.00	0.00	0.00		100	100	0.00	0.00
C1	1	Doncaster Road (E)	2	1	B		214	1800	20	0.00	57	59	51.77	41.57	93.79	5.66	5.06	100	100	0.00	37.60
C2	1	Doncaster Road (E)	2	1	A	B	276	1800	43	0.00	34	164	25.74	15.54	63.12	4.46	3.84	100	100	0.00	19.11
Cs	1	Doncaster Road (E)	2				490	1800	100	0.00	27	231	12.37	0.37	0.00	0.05		100	100	0.00	0.72
Cx	1	Doncaster Road (E)					564	Unrestricted	100	22.00	0	Unrestricted	12.00	0.00	0.00	0.00		100	100	0.00	0.00

Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE			PER PED		QUEUES	WEIGHTS	PENALTIES	P.I.
Pedestrian	Side	Name	Traffic	Controller	Phase	Calculated Flow	Calculated sat	Actual green	Degree of saturation	Practical reserve	Journey Time (s)	Mean Del	Mean max queue	Delay weigh	Cost of traffic penalti	P.I.

			node	stream		Entering (Ped/hr)	flow (Ped/hr)	n (s (per cycle))	tion (%)	capacity		ay per Ped (s)	e (Ped)	ting (%)	es (£ per hr)	
(ALL)	(ALL)	(untitled)		1	D	0	11000	7	0	Unrestricted	0.00	0.00	0.00	100	0.00	0.00

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	354.85	23.39	15.17	10.48	1.08	164.24	15.05	0.00	179.29
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	354.85	23.39	15.17	10.48	1.08	164.24	15.05	0.00	179.29

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

A14 - 2028 - BASE + DEV + COM(PHASES 1 AND 2) - PM
D14 - 2028 - BASE + DEV + COM(PHASES 1 AND 2) - PM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-min/min)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
14	20/12/2018 09:51:07	20/12/2018 09:51:08	18:00	100	214.33	13.86	70.67	B1/1	0	0	B1/1	Cs/1	B1/1	✓

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2028 - BASE + DEV + COM(PHASES 1 AND 2) - PM		D14	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2028 - BASE + DEV + COM(PHASES 1 AND 2) - PM				18:00	

Network Options

Network timings

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

Signals options

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

Advanced

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

Traffic options

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

Advanced

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

Normal Traffic parameters

Dispersion type	Dispersion coefficient
Default	35

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Bus	1.00	70	15	0.47	30	85

Tram parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Tram	1.00	70	15	0.47	30	85

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order
Hill Climb (Fast)	15, 40, -1, 15, 40, 1, -1, 1	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05		✓	1

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
2		

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
A1			2
Ax			
B1			2
Bx			
C1			2
C2			2
Cs			2
Cx			

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
A1	1	Donore Road (W)			100.00	✓	Sum of lanes	9999	✓		Normal	
Ax	1	Donore Road (W)			100.00						Normal	
B1	1	Marlays Lane			100.00	✓	Sum of lanes	1800	✓	✓	Normal	

Bx	1	Marlays Lane			100.00						Normal	
C1	1	Donore Road (E)			85.00	✓	Sum of lanes	1800	✓	✓	Normal	
C2	1	Donore Road (E)			85.00	✓	Sum of lanes	1800	✓		Normal	
Cs	1	Donore Road (E)			100.00	✓	Sum of lanes	1800			Normal	
Cx	1	Donore Road (E)			100.00						Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Saturation flow (PCU/hr)
A1	1	1				9999
Ax	1	1				
B1	1	1				1800
Bx	1	1				
C1	1	1				1800
C2	1	1				1800
Cs	1	1				1800
Cx	1	1				

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
(ALL)	1	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
A1	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100
Ax	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100
B1	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
Bx	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100
C1	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
C2	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
Cs	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
Cx	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100

Normal - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	1	100	100

Flows

Arm	Traffic Stream	Total Flow (Veh/hr)	Normal Flow (Veh/hr)
A1	1	734	734
Ax	1	609	609
B1	1	435	435
Bx	1	762	762
C1	1	324	324
C2	1	369	369
Cs	1	693	693
Cx	1	491	491

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled	Second phase
A1	1	1	A		
B1	1	1	C		
C1	1	1	B		
C2	1	1	A	✓	B

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
(ALL)	1	12.00	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	1	1	B1/1	Ax/1	12.00	30.00	✓	Offside	45.00
Bx	1	1	A1/1	Bx/1	12.00	30.00	✓	Nearside	20.00
C1	1	1	Cs/1	C1/1	10.20	30.00	✓	Straight	Straight Movement
C2	1	1	Cs/1	C2/1	10.20	30.00	✓	Straight	Straight Movement
Cx	1	1	A1/1	Cx/1	12.00	30.00	✓	Straight	Straight Movement
Ax	1	2	C2/1	Ax/1	12.00	30.00	✓	Straight	Straight Movement
Bx	1	2	C1/1	Bx/1	12.00	30.00	✓	Offside	35.46
Cx	1	2	B1/1	Cx/1	12.00	30.00	✓	Nearside	20.00

Give Way Data

Arm	Traffic Stream	Opposed traffic	Use Step-wise Opposed Turn Model	Visibility restricted
(ALL)	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 (%)
B1	1	1	Cx/1	574	1800	100
		2	Ax/1	440	1800	100
C1	1	1	Bx/1	574	1800	100

Give Way Data - Movements - Conflicts

Arm	Traffic	Movement	Destination traffic stream	Description	Controlling type	Controlling from	Controlling to	Percentage	Slope coefficient	Upstream	Conflict shift	Conflict

	Stream					traffic stream	traffic stream	opposing (%)		signals visible		duration
B1	1	1	Cx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.09		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0
		2	Ax/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.08		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.20		0	0
				T-junction opposing flow	TrafficStreamMovement	C2/1	Ax/1	100	0.13		0	0
				T-junction opposing flow	TrafficStreamMovement	C1/1	Bx/1	100	0.29		0	0
C1	1	1	Bx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.22		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
(ALL)	(untitled)				Farside	3.00	2.00	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	D	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(ALL)	11000

Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	100	100		0.00		

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
1	Library		✓	TrafficStream	Two-Way	A1/1	A1/1	Ax/1	Two-Way	B1/1	B1/1	Bx/1	Two-Way	C2/1	C1/1	Cx/1	✓

T-Junction Majors

T-Junction	Left Carriageway Width (m)	Right Carriageway Width (m)	Kerbed Central Reserve Width (m)	Width for C-B traffic (m)	Visibility for C-B traffic (m)
1	6.00	6.00	0.00	2.20	0.00

T-Junction Minors

T-Junction	B-C Lane Width (m)	B-A Lane Width (m)	B-C Visibility (m)	B-A Visibility (m)
1	2.20	2.20	0.00	0.00

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
1	574	0.09	0.22	440	0.08	0.20	0.13	0.29	574	0.22	0.22

Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1		✓	✓	Lane Balancing			✓			✓	1.25		

Normal Input Flows (Veh/hr)

From	To 1	To 2	To 3
1	0	438	296
2	240	0	195
3	369	324	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
1	1		A1/1	Ax/1	#0000FF
	2		B1/1	Bx/1	#FF0000
	3		Cs/1	Cx/1	#00FF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (Veh/hr)
1	1		1	2	A1/1, Bx/1	Normal	438
	2		1	3	A1/1, Cx/1	Normal	296
	3		2	3	B1/1, Cx/1	Normal	195
	4		2	1	B1/1, Ax/1	Normal	240
	5		3	2	Cs/1, C1/1, Bx/1	Normal	324
	6		3	1	Cs/1, C2/1, Ax/1	Normal	369

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (Veh)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
18:00-19:00	A1	1	22	317	734	9999	33	23.66	14.51	83.41	68.51	6.42	74.93
	Ax	1	0	Unrestricted	609	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	B1	1	71	27	435	1710	35	35.47	11.23	64.56	60.87	4.98	65.85
	Bx	1	0	Unrestricted	762	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	C1	1	69	30	324	1800	25	41.88	8.86	59.96	53.52	3.93	57.44
	C2	1	34	163	369	1800	58	8.37	4.39	29.72	12.18	2.22	14.40
	Cs	1	39	134	693	1800	100	0.63	0.12	0.69	1.71	0.00	1.71
	Cx	1	0	Unrestricted	491	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Calculated sat flow (Veh/hr)	Calculated capacity (Veh/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
18:00-19:00	A1	1	734	734	0		9999	3400	22		317	0.00	33	34
	Ax	1	609	609	0		Unrestricted	Unrestricted	0		Unrestricted	0.46	100	100
	B1	1	435	435	0		1710	616	71		27	0.00	35	36
	Bx	1	762	762	0		Unrestricted	Unrestricted	0		Unrestricted	0.91	100	100
	C1	1	324	324	0		1800	468	69		30	0.00	25	26
	C2	1	369	369	0		1800	1080	34		163	0.00	58	60
	Cs	1	693	693	0		1800	1800	39		134	0.00	100	100
	Cx	1	491	491	0		Unrestricted	Unrestricted	0		Unrestricted	0.82	100	100

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
18:00-19:00	A1	1	12.00	23.66	4.79	0.03	68.51	68.51	69.76	511.00	1.07	6.42	6.42
	Ax	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	B1	1	12.00	35.47	3.45	0.84	60.87	60.87	91.32	367.64	29.61	4.98	4.98
	Bx	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	C1	1	10.20	41.88	3.01	0.76	53.52	53.52	96.64	286.20	26.91	3.93	3.93
	C2	1	10.20	8.37	0.77	0.09	12.18	12.18	47.89	170.37	6.35	2.22	2.22
	Cs	1	12.00	0.63	0.00	0.12	1.71	1.71	0.00	0.00	0.00	0.00	0.00
	Cx	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (Veh)	Mean max queue (Veh)	Max queue storage (Veh)	Utilised storage (%)	Average storage excess queue (Veh)	Average limit excess queue (Veh)	Excess queue penalty (£ per hr)	Max end of green queue (Veh)	Max end of red queue (Veh)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))	Estimated blocking
18:00-19:00	A1	1	0.00	14.51	17.39	83.41	0.00	0.00	0.00	0.03	13.49	0.00	0.00	0.00	
	Ax	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			0.00	0.00	0.00	
	B1	1	0.00	11.23	17.39	64.56	0.00	0.00	0.00	0.96	8.69	0.00	0.00	0.00	
	Bx	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			27.00	0.00	27.00	
	C1	1	0.00	8.86	14.78	59.96	0.00	0.00	0.00	0.76	7.42	0.00	0.00	0.00	
	C2	1	0.00	4.39	14.78	29.72	0.00	0.00	0.00	0.09	3.57	0.00	0.00	0.00	
	Cs	1	0.00	0.12	17.39	0.69	0.00	0.00	0.00			0.00	0.00	0.00	
	Cx	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			28.00	0.00	28.00	

Traffic Stream Results: Journey times

Time Segment	Arm	Traffic Stream	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
18:00-19:00	A1	1	73.40	7.27	10.09	35.66
	Ax	1	60.90	2.03	30.00	12.00
	B1	1	43.50	5.74	7.58	47.47
	Bx	1	76.20	2.54	30.00	12.00
	C1	1	27.54	4.69	5.88	52.08
	C2	1	31.37	1.90	16.48	18.57
	Cs	1	69.30	2.43	28.51	12.63
	Cx	1	49.10	1.64	30.00	12.00

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation	Ped gap accepting penalty	Warmed up	Warmed up error	Mean Max Queue	Max End of Gree	Max End of Red	PCU Factor	Cost of traffic penaltie	Unweighted performan	Performance Index (£ per hr)

			penalty (£ per hr)	(£ per hr)			EoTS (Veh)	n Queue EoTS (Veh)	Queue EoTS (Veh)		s (£ per hr)	ce index (£ per hr)	
18:00-19:00	A1	1	0.00	0.00	✓	0.00	14.51	0.03	13.49	1.00	0.00	74.93	74.93
	Ax	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00	0.00
	B1	1	0.00	0.00	✓	0.00	11.24	0.96	8.70	1.00	0.00	65.85	65.85
	Bx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00	0.00
	C1	1	0.00	0.00	✓	0.00	8.87	0.77	7.43	1.00	0.00	57.44	57.44
	C2	1	0.00	0.00	✓	0.00	4.39	0.09	3.57	1.00	0.00	14.40	14.40
	Cs	1	0.00	0.00	✓	0.00	0.12			1.00	0.00	1.71	1.71
	Cx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00	0.00

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
18:00-19:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
18:00-19:00	(ALL)	(ALL)	0	0	0		11000	770	0		Unrestricted	0.00	7	7

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Uniform delay (Ped-min/min)	Random plus oversat delay (Ped-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)
18:00-19:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Average storage excess queue (Ped)	Average limit excess queue (Ped)	Excess queue penalty (£ per hr)
18:00-19:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Journey times

Time Segment	Crossing	Side	Distance travelled (Ped-km/hr)	Time spent (Ped-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
18:00-19:00	(ALL)	(ALL)	0.00	0.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
18:00-19:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-min/min)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
14	20/12/2018 09:51:07	20/12/2018 09:51:08	18:00	100	214.33	13.86	70.67	B1/1	0	0	B1/1	Cs/1	B1/1	✓

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
18:00-19:00	71	0	4417	551	11.29	196.79	17.54	214.33

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
18:00-19:00	0	0	42	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))	Effective green (s (per cycle))
18:00-19:00	4417	4417	0		71		27	593	598

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
18:00-19:00	11.72	11.29	12.02	1.84	196.79	196.79	31.68	1335.21	63.94	17.54	17.54

Network Results: Queues and blocking

Time Segment	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))
18:00-19:00	83.41	0.00	55.00	0.00	55.00

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
18:00-19:00	431.31	28.23	15.28

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	PCU Factor	Cost of traffic penalties (£ per hr)	Controller stream penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
18:00-19:00	0.00	0.00	✓	0.00	1.00	0.00	0.00	214.33	214.33

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

From	To 1	To 2	To 3
1	0.0	47.7	47.7
2	59.5	0.0	59.5
3	43.2	76.7	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (Veh/hr)	Normal journey time (s)	Calculated Total Flow (Veh/hr)	Avg journey time (s)
1	1	2	438	47.66	438	47.66
2	1	3	296	47.66	296	47.66
3	2	3	195	59.47	195	59.47
4	2	1	240	59.47	240	59.47
5	3	2	324	76.70	324	76.70
6	3	1	369	43.19	369	43.19

Final Prediction Table

Traffic Stream Results

				SIGNALS			FLOWS		PERFORMANCE				PER PCU			QUEUES		WEIGHTS		PENALTIES	P.I.
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Second phase	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (Veh)	Mean end of red queue (Veh)	Delay weighting multiplier (%)	Stop weighting multiplier (%)	Cost of traffic penalties (£ per hr)	P.I.
A1	1	Donore Road (W)	2	1	A		734	9999	33	0.00	22	317	35.66	23.66	69.76	14.51	13.49	100	100	0.00	74.93
Ax	1	Donore Road (W)					609	Unrestricted	100	0.00	0	Unrestricted	12.00	0.00	0.00	0.00		100	100	0.00	0.00
B1	1	Marlays Lane	2	1	C		435	1710	35	0.00	71	27	47.47	35.47	91.32	11.23	8.69	100	100	0.00	65.85
Bx	1	Marlays Lane					762	Unrestricted	100	27.00	0	Unrestricted	12.00	0.00	0.00	0.00		100	100	0.00	0.00
C1	1	Donore Road (E)	2	1	B		324	1800	25	0.00	69	30	52.08	41.88	96.64	8.86	7.42	100	100	0.00	57.44
C2	1	Donore Road (E)	2	1	A	B	369	1800	58	0.00	34	163	18.57	8.37	47.89	4.39	3.57	100	100	0.00	14.40
Cs	1	Donore Road (E)	2				693	1800	100	0.00	39	134	12.63	0.63	0.00	0.12		100	100	0.00	1.71
Cx	1	Donore Road (E)					491	Unrestricted	100	28.00	0	Unrestricted	12.00	0.00	0.00	0.00		100	100	0.00	0.00

Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE			PER PED		QUEUES	WEIGHTS	PENALTIES	P.I.
Pedestrian	Side	Name	Traffic node	Controller stream	Phase	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Degree of saturation (%)	Practical reserve capacity	Journey Time (s)	Mean Delay per Ped (s)	Mean max queue (Ped)	Delay weighting (%)	Cost of traffic penalties (£ per hr)	P.I.
(ALL)	(ALL)	(untitled)		1	D	0	11000	7	0	Unrestricted	0.00	0.00	0.00	100	0.00	0.00

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	431.31	28.24	15.28	12.02	1.84	196.79	17.54	0.00	214.33
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	431.31	28.23	15.28	12.02	1.84	196.79	17.54	0.00	214.33

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

A15 - 2038 - BASE - AM
D15 - 2038 - BASE - AM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-min/min)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
15	20/12/2018 09:51:10	20/12/2018 09:51:11	08:00	100	159.51	10.27	60.93	B1/1	0	0	B1/1	Cs/1	B1/1	✓

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2038 - BASE - AM		D15	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2038 - BASE - AM				08:00	

Network Options

Network timings

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

Signals options

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

Advanced

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

Traffic options

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

Advanced

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

Normal Traffic parameters

Dispersion type	Dispersion coefficient
Default	35

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Bus	1.00	70	15	0.47	30	85

Tram parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Tram	1.00	70	15	0.47	30	85

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order
Hill Climb (Fast)	15, 40, -1, 15, 40, 1, -1, 1	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05		✓	1

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
2		

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
A1			2
Ax			
B1			2
Bx			
C1			2
C2			2
Cs			2
Cx			

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
A1	1	Donore Road (W)			100.00	✓	Sum of lanes	9999	✓		Normal	
Ax	1	Donore Road (W)			100.00						Normal	
B1	1	Marlays Lane			100.00	✓	Sum of lanes	1800	✓	✓	Normal	
Bx	1	Marlays Lane			100.00						Normal	
C1	1	Donore Road (E)			85.00	✓	Sum of lanes	1800	✓	✓	Normal	
C2	1	Donore Road (E)			85.00	✓	Sum of lanes	1800	✓		Normal	
Cs	1	Donore Road (E)			100.00	✓	Sum of lanes	1800			Normal	
Cx	1	Donore Road (E)			100.00						Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Saturation flow (PCU/hr)
A1	1	1				9999
Ax	1	1				
B1	1	1				1800
Bx	1	1				
C1	1	1				1800
C2	1	1				1800
Cs	1	1				1800
Cx	1	1				

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
(ALL)	1	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
A1	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100
Ax	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100
B1	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
Bx	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100
C1	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
C2	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
Cs	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
Cx	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100

Normal - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	1	100	100

Flows

Arm	Traffic Stream	Total Flow (Veh/hr)	Normal Flow (Veh/hr)
A1	1	531	531
Ax	1	544	544
B1	1	452	452
Bx	1	409	409
C1	1	203	203
C2	1	302	302
Cs	1	505	505
Cx	1	535	535

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled	Second phase
A1	1	1	A		
B1	1	1	C		
C1	1	1	B		
C2	1	1	A	✓	B

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
(ALL)	1	12.00	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	1	1	B1/1	Ax/1	12.00	30.00	✓	Offside	45.00
Bx	1	1	A1/1	Bx/1	12.00	30.00	✓	Nearside	20.00
C1	1	1	Cs/1	C1/1	10.20	30.00	✓	Straight	Straight Movement
C2	1	1	Cs/1	C2/1	10.20	30.00	✓	Straight	Straight Movement
Cx	1	1	A1/1	Cx/1	12.00	30.00	✓	Straight	Straight Movement
Ax	1	2	C2/1	Ax/1	12.00	30.00	✓	Straight	Straight Movement
Bx	1	2	C1/1	Bx/1	12.00	30.00	✓	Offside	35.46
Cx	1	2	B1/1	Cx/1	12.00	30.00	✓	Nearside	20.00

Give Way Data

Arm	Traffic Stream	Opposed traffic	Use Step-wise Opposed Turn Model	Visibility restricted
(ALL)	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 (%)
B1	1	1	Cx/1	574	1800	100
		2	Ax/1	440	1800	100
C1	1	1	Bx/1	574	1800	100

Give Way Data - Movements - Conflicts

Arm	Traffic Stream	Movement	Destination traffic stream	Description	Controlling type	Controlling from traffic stream	Controlling to traffic stream	Percentage opposing (%)	Slope coefficient	Upstream signals visible	Conflict shift	Conflict duration
B1	1	1	Cx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.09		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0
		2	Ax/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.08		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.20		0	0
				T-junction opposing flow	TrafficStreamMovement	C2/1	Ax/1	100	0.13		0	0
				T-junction opposing flow	TrafficStreamMovement	C1/1	Bx/1	100	0.29		0	0
C1	1	1	Bx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.22		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
(ALL)	(untitled)				Farside	3.00	2.00	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	D	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(ALL)	11000

Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	100	100		0.00		

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
1	Library		✓	TrafficStream	Two-Way	A1/1	A1/1	Ax/1	Two-Way	B1/1	B1/1	Bx/1	Two-Way	C2/1	C1/1	Cx/1	✓

T-Junction Majors

T-Junction	Left Carriageway Width (m)	Right Carriageway Width (m)	Kerbed Central Reserve Width (m)	Width for C-B traffic (m)	Visibility for C-B traffic (m)
1	6.00	6.00	0.00	2.20	0.00

T-Junction Minors

T-Junction	B-C Lane Width (m)	B-A Lane Width (m)	B-C Visibility (m)	B-A Visibility (m)
1	2.20	2.20	0.00	0.00

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
1	574	0.09	0.22	440	0.08	0.20	0.13	0.29	574	0.22	0.22

				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0

Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1		✓	✓	Lane Balancing			✓			✓	1.25		

Normal Input Flows (Veh/hr)

From	To 1	To 2	To 3
1	0	206	325
2	242	0	210
3	302	203	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
1	1		A1/1	Ax/1	#0000FF
	2		B1/1	Bx/1	#FF0000
	3		Cs/1	Cx/1	#00FF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (Veh/hr)
1	1		1	2	A1/1, Bx/1	Normal	206
	2		1	3	A1/1, Cx/1	Normal	325
	3		2	3	B1/1, Cx/1	Normal	210
	4		2	1	B1/1, Ax/1	Normal	242
	5		3	2	Cs/1, C1/1, Bx/1	Normal	203
	6		3	1	Cs/1, C2/1, Ax/1	Normal	302

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (Veh)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	A1	1	17	442	531	9999	31	24.54	10.49	60.31	51.40	4.66	56.06
	Ax	1	0	Unrestricted	544	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	B1	1	61	48	452	1725	42	26.83	10.27	59.02	47.84	4.54	52.38
	Bx	1	0	Unrestricted	409	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	C1	1	54	68	203	1800	20	40.64	5.33	36.04	32.54	2.35	34.90
	C2	1	32	184	302	1800	51	11.20	4.18	28.30	13.34	2.06	15.40
	Cs	1	28	221	505	1800	100	0.39	0.05	0.31	0.78	0.00	0.78
	Cx	1	0	Unrestricted	535	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Calculated sat flow (Veh/hr)	Calculated capacity (Veh/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
08:00-09:00	A1	1	531	531	0		9999	3200	17		442	0.00	31	32
	Ax	1	544	544	0		Unrestricted	Unrestricted	0		Unrestricted	0.53	100	100
	B1	1	452	452	0		1725	742	61		48	0.00	42	43
	Bx	1	409	409	0		Unrestricted	Unrestricted	0		Unrestricted	1.04	100	100
	C1	1	203	203	0		1800	378	54		68	0.00	20	21
	C2	1	302	302	0		1800	954	32		184	0.00	51	53
	Cs	1	505	505	0		1800	1800	28		221	0.00	100	100
	Cx	1	535	535	0		Unrestricted	Unrestricted	0		Unrestricted	0.81	100	100

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	A1	1	12.00	24.54	3.60	0.02	51.40	51.40	69.93	370.73	0.59	4.66	4.66
	Ax	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	B1	1	12.00	26.83	2.90	0.47	47.84	47.84	80.06	345.05	16.82	4.54	4.54
	Bx	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	C1	1	10.20	40.64	1.98	0.31	32.54	32.54	92.39	176.60	10.96	2.35	2.35
	C2	1	10.20	11.20	0.87	0.07	13.34	13.34	54.52	159.39	5.25	2.06	2.06
	Cs	1	12.00	0.39	0.00	0.05	0.78	0.78	0.00	0.00	0.00	0.00	0.00
	Cx	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (Veh)	Mean max queu	Max queue storage (Veh)	Utilised storage (%)	Average storage excess	Average limit excess	Excess queue penalty (£	Max end of green	Max end of red queu	Wasted time starvation (s	Wasted time blocking back (s	Wasted time total (s (per	Estimated blocking

				e (Veh)			queue (Veh)	queue (Veh)	per hr)	queue (Veh)	e (Veh)	(per cycle))	(per cycle))	cycle))	
08:00-09:00	A1	1	0.00	10.49	17.39	60.31	0.00	0.00	0.00	0.02	10.05	0.00	0.00	0.00	
	Ax	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			0.00	0.00	0.00	
	B1	1	0.00	10.27	17.39	59.02	0.00	0.00	0.00	0.60	7.75	0.00	0.00	0.00	
	Bx	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			37.00	0.00	37.00	
	C1	1	0.00	5.33	14.78	36.04	0.00	0.00	0.00	0.31	4.76	0.00	0.00	0.00	
	C2	1	0.00	4.18	14.78	28.30	0.00	0.00	0.00	0.07	3.51	0.00	0.00	0.00	
	Cs	1	0.00	0.05	17.39	0.31	0.00	0.00	0.00			0.00	0.00	0.00	
	Cx	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			23.00	0.00	23.00	

Traffic Stream Results: Journey times

Time Segment	Arm	Traffic Stream	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	A1	1	53.10	5.39	9.85	36.54
	Ax	1	54.40	1.81	30.00	12.00
	B1	1	45.20	4.88	9.27	38.83
	Bx	1	40.90	1.36	30.00	12.00
	C1	1	17.26	2.87	6.02	50.84
	C2	1	25.67	1.80	14.30	21.40
	Cs	1	50.50	1.74	29.06	12.39
	Cx	1	53.50	1.78	30.00	12.00

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	Mean Max Queue EoTS (Veh)	Max End of Green Queue EoTS (Veh)	Max End of Red Queue EoTS (Veh)	PCU Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	A1	1	0.00	0.00	✓	0.00	10.49	0.02	10.05	1.00	0.00	56.06	56.06
	Ax	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00	0.00
	B1	1	0.00	0.00	✓	0.00	10.27	0.60	7.76	1.00	0.00	52.38	52.38
	Bx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00	0.00
	C1	1	0.00	0.00	✓	0.00	5.33	0.31	4.76	1.00	0.00	34.90	34.90
	C2	1	0.00	0.00	✓	0.00	4.18	0.07	3.51	1.00	0.00	15.40	15.40
	Cs	1	0.00	0.00	✓	0.00	0.05			1.00	0.00	0.78	0.78
	Cx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00	0.00

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
08:00-09:00	(ALL)	(ALL)	0	0	0		11000	770	0		Unrestricted	0.00	7	7

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Uniform delay (Ped-min/min)	Random plus oversat delay (Ped-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)
08:00-09:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Average storage excess queue (Ped)	Average limit excess queue (Ped)	Excess queue penalty (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Journey times

Time Segment	Crossing	Side	Distance travelled (Ped-km/hr)	Time spent (Ped-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	(ALL)	(ALL)	0.00	0.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-min/min)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
15	20/12/2018 09:51:10	20/12/2018 09:51:11	08:00	100	159.51	10.27	60.93	B1/1	0	0	B1/1	Cs/1	B1/1	✓

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	61	0	3481	544	10.63	145.90	13.61	159.51

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	0	0	42	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))	Effective green (s (per cycle))
08:00-09:00	3481	3481	0		61		48	586	591

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	11.74	10.63	9.35	0.92	145.90	145.90	31.18	1051.77	33.62	13.61	13.61

Network Results: Queues and blocking

Time Segment	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))
08:00-09:00	60.31	0.00	60.00	0.00	60.00

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
08:00-09:00	340.53	21.63	15.75

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	PCU Factor	Cost of traffic penalties (£ per hr)	Controller stream penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	0.00	0.00	✓	0.00	1.00	0.00	0.00	159.51	159.51

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

From	To 1	To 2	To 3
1	0.0	48.5	48.5
2	50.8	0.0	50.8
3	45.8	75.2	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (Veh/hr)	Normal journey time (s)	Calculated Total Flow (Veh/hr)	Avg journey time (s)
1	1	2	206	48.54	206	48.54
2	1	3	325	48.54	325	48.54
3	2	3	210	50.83	210	50.83
4	2	1	242	50.83	242	50.83
5	3	2	203	75.23	203	75.23
6	3	1	302	45.79	302	45.79

Final Prediction Table

Traffic Stream Results

				SIGNALS			FLOWS		PERFORMANCE				PER PCU			QUEUES		WEIGHTS		PENALTIES	P.I.
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Second phase	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (Veh)	Max end of red queue (Veh)	Delay weighting multiplier (%)	Stop weighting multiplier (%)	Cost of traffic penalties (£ per hr)	P.I.
A1	1	Donore Road (W)	2	1	A		531	9999	31	0.00	17	442	36.54	24.54	69.93	10.49	10.05	100	100	0.00	56.06
Ax	1	Donore Road (W)					544	Unrestricted	100	0.00	0	Unrestricted	12.00	0.00	0.00	0.00		100	100	0.00	0.00
B1	1	Malays Lane	2	1	C		452	1725	42	0.00	61	48	38.83	26.83	80.06	10.27	7.75	100	100	0.00	52.38
Bx	1	Malays Lane					409	Unrestricted	100	37.00	0	Unrestricted	12.00	0.00	0.00	0.00		100	100	0.00	0.00
C1	1	Donore Road (E)	2	1	B		203	1800	20	0.00	54	68	50.84	40.64	92.39	5.33	4.76	100	100	0.00	34.90
C2	1	Donore Road (E)	2	1	A	B	302	1800	51	0.00	32	184	21.40	11.20	54.52	4.18	3.51	100	100	0.00	15.40
Cs	1	Donor	2				505	1800	100	0.00	28	221	12.39	0.39	0.00	0.05		100	100	0.00	0.78

		e Road (E)																		
Cx	1	Donore Road (E)				535	Unrestricted	100	23.00	0	Unrestricted	12.00	0.00	0.00	0.00		100	100	0.00	0.00

Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE			PER PED		QUEUES	WEIGHTS	PENALTIES	P.I.
Pedestrian	Side	Name	Traffic node	Controller stream	Phase	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Degree of saturation (%)	Practical reserve capacity	Journey Time (s)	Mean Delay per Ped (s)	Mean max queue (Ped)	Delay weighting (%)	Cost of traffic penalties (£ per hr)	P.I.
(ALL)	(ALL)	(untitled)		1	D	0	11000	7	0	Unrestricted	0.00	0.00	0.00	100	0.00	0.00

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	340.53	21.63	15.75	9.35	0.92	145.90	13.61	0.00	159.51
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	340.53	21.63	15.75	9.35	0.92	145.90	13.61	0.00	159.51

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

A16 - 2038 - BASE - PM
D16 - 2038 - BASE - PM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-min/min)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst over	Network within capacity
16	20/12/2018 09:51:14	20/12/2018 09:51:15	18:00	100	191.86	12.38	69.64	B1/1	0	0	B1/1	Cs/1	B1/1 all PRC	✓

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2038 - BASE - PM		D16	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2038 - BASE - PM				18:00	

Network Options

Network timings

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

Signals options

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

Advanced

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

Traffic options

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

Advanced

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

Normal Traffic parameters

Dispersion type	Dispersion coefficient
Default	35

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Bus	1.00	70	15	0.47	30	85

Tram parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Tram	1.00	70	15	0.47	30	85

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order
Hill Climb (Fast)	15, 40, -1, 15, 40, 1, -1, 1	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05		✓	1

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
2		

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
A1			2
Ax			
B1			2
Bx			
C1			2
C2			2
Cs			2
Cx			

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
A1	1	Donore Road (W)			100.00	✓	Sum of lanes	9999	✓		Normal	
Ax	1	Donore Road (W)			100.00						Normal	
B1	1	Marlays Lane			100.00	✓	Sum of lanes	1800	✓	✓	Normal	
Bx	1	Marlays Lane			100.00						Normal	
C1	1	Donore Road (E)			85.00	✓	Sum of lanes	1800	✓	✓	Normal	
C2	1	Donore Road (E)			85.00	✓	Sum of lanes	1800	✓		Normal	
Cs	1	Donore Road (E)			100.00	✓	Sum of lanes	1800			Normal	
Cx	1	Donore Road (E)			100.00						Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Saturation flow (PCU/hr)
A1	1	1				9999
Ax	1	1				
B1	1	1				1800
Bx	1	1				
C1	1	1				1800
C2	1	1				1800
Cs	1	1				1800
Cx	1	1				

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
(ALL)	1	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
A1	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100
Ax	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100
B1	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
Bx	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100
C1	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
C2	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
Cs	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100

Cx	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100

Normal - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	1	100	100

Flows

Arm	Traffic Stream	Total Flow (Veh/hr)	Normal Flow (Veh/hr)
A1	1	729	729
Ax	1	624	624
B1	1	391	391
Bx	1	689	689
C1	1	283	283
C2	1	404	404
Cs	1	687	687
Cx	1	494	494

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled	Second phase
A1	1	1	A		
B1	1	1	C		
C1	1	1	B		
C2	1	1	A	✓	B

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
(ALL)	1	12.00	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	1	1	B1/1	Ax/1	12.00	30.00	✓	Offside	45.00
Bx	1	1	A1/1	Bx/1	12.00	30.00	✓	Nearside	20.00
C1	1	1	Cs/1	C1/1	10.20	30.00	✓	Straight	Straight Movement
C2	1	1	Cs/1	C2/1	10.20	30.00	✓	Straight	Straight Movement
Cx	1	1	A1/1	Cx/1	12.00	30.00	✓	Straight	Straight Movement
Ax	1	2	C2/1	Ax/1	12.00	30.00	✓	Straight	Straight Movement
Bx	1	2	C1/1	Bx/1	12.00	30.00	✓	Offside	35.46
Cx	1	2	B1/1	Cx/1	12.00	30.00	✓	Nearside	20.00

Give Way Data

Arm	Traffic Stream	Opposed traffic	Use Step-wise Opposed Turn Model	Visibility restricted
(ALL)	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 (%)
B1	1	1	Cx/1	574	1800	100
		2	Ax/1	440	1800	100
C1	1	1	Bx/1	574	1800	100

Give Way Data - Movements - Conflicts

Arm	Traffic Stream	Movement	Destination traffic stream	Description	Controlling type	Controlling from traffic stream	Controlling to traffic stream	Percentage opposing (%)	Slope coefficient	Upstream signals visible	Conflict shift	Conflict duration
B1	1	1	Cx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.09		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0
		2	Ax/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.08		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.20		0	0
				T-junction opposing flow	TrafficStreamMovement	C2/1	Ax/1	100	0.13		0	0
				T-junction opposing flow	TrafficStreamMovement	C1/1	Bx/1	100	0.29		0	0
C1	1	1	Bx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.22		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
(ALL)	(untitled)				Farside	3.00	2.00	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	D	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(ALL)	11000

Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	100	100		0.00		

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
1	Library		✓	TrafficStream	Two-Way	A1/1	A1/1	Ax/1	Two-Way	B1/1	B1/1	Bx/1	Two-Way	C2/1	C1/1	Cx/1	✓

T-Junction Majors

T-Junction	Left Carriageway Width (m)	Right Carriageway Width (m)	Kerbed Central Reserve Width (m)	Width for C-B traffic (m)	Visibility for C-B traffic (m)
1	6.00	6.00	0.00	2.20	0.00

T-Junction Minors

T-Junction	B-C Lane Width (m)	B-A Lane Width (m)	B-C Visibility (m)	B-A Visibility (m)
1	2.20	2.20	0.00	0.00

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
1	574	0.09	0.22	440	0.08	0.20	0.13	0.29	574	0.22	0.22

Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1		✓	✓	Lane Balancing			✓			✓	1.25		

Normal Input Flows (Veh/hr)

From	To 1	To 2	To 3
1	0	406	323
2	220	0	171
3	404	283	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
1	1		A1/1	Ax/1	#0000FF
	2		B1/1	Bx/1	#FF0000
	3		Cs/1	Cx/1	#00FF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (Veh/hr)
1	1		1	2	A1/1, Bx/1	Normal	406
	2		1	3	A1/1, Cx/1	Normal	323
	3		2	3	B1/1, Cx/1	Normal	171
	4		2	1	B1/1, Ax/1	Normal	220
	5		3	2	Cs/1, C1/1, Bx/1	Normal	283
	6		3	1	Cs/1, C2/1, Ax/1	Normal	404

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (Veh)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
18:00-19:00	A1	1	20	357	729	9999	36	21.53	13.59	78.15	61.90	6.03	67.93
	Ax	1	0	Unrestricted	624	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	B1	1	70	29	391	1701	32	37.47	10.23	58.85	57.78	4.55	62.33
	Bx	1	0	Unrestricted	689	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	C1	1	60	49	283	1800	25	38.31	7.30	49.36	42.76	3.24	46.01
	C2	1	36	153	404	1800	61	7.31	4.48	30.27	11.65	2.28	13.93
	Cs	1	38	136	687	1800	100	0.62	0.12	0.68	1.67	0.00	1.67
	Cx	1	0	Unrestricted	494	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Calculated sat flow (Veh/hr)	Calculated capacity (Veh/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
18:00-19:00	A1	1	729	729	0		9999	3700	20		357	0.00	36	37
	Ax	1	624	624	0		Unrestricted	Unrestricted	0		Unrestricted	0.44	100	100
	B1	1	391	391	0		1701	561	70		29	0.00	32	33

	Bx	1	689	689	0		Unrestricted	Unrestricted	0		Unrestricted	0.89	100	100
	C1	1	283	283	0		1800	468	60		49	0.00	25	26
	C2	1	404	404	0		1800	1134	36		153	0.00	61	63
	Cs	1	687	687	0		1800	1800	38		136	0.00	100	100
	Cx	1	494	494	0		Unrestricted	Unrestricted	0		Unrestricted	0.82	100	100

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
18:00-19:00	A1	1	12.00	21.53	4.34	0.02	61.90	61.90	65.94	479.81	0.87	6.03	6.03
	Ax	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	B1	1	12.00	37.47	3.28	0.78	57.78	57.78	92.72	334.80	27.75	4.55	4.55
	Bx	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	C1	1	10.20	38.31	2.55	0.46	42.76	42.76	91.45	242.57	16.22	3.24	3.24
	C2	1	10.20	7.31	0.72	0.10	11.65	11.65	44.99	174.69	7.06	2.28	2.28
	Cs	1	12.00	0.62	0.00	0.12	1.67	1.67	0.00	0.00	0.00	0.00	0.00
	Cx	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (Veh)	Mean max queue (Veh)	Max queue storage (Veh)	Utilised storage (%)	Average storage excess queue (Veh)	Average limit excess queue (Veh)	Excess queue penalty (£ per hr)	Max end of green queue (Veh)	Max end of red queue (Veh)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))	Estimated blocking
18:00-19:00	A1	1	0.00	13.59	17.39	78.15	0.00	0.00	0.00	0.02	12.78	0.00	0.00	0.00	
	Ax	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			0.00	0.00	0.00	
	B1	1	0.00	10.23	17.39	58.85	0.00	0.00	0.00	0.89	8.17	0.00	0.00	0.00	
	Bx	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			24.00	0.00	24.00	
	C1	1	0.00	7.30	14.78	49.36	0.00	0.00	0.00	0.46	6.27	0.00	0.00	0.00	
	C2	1	0.00	4.48	14.78	30.27	0.00	0.00	0.00	0.10	3.58	0.00	0.00	0.00	
	Cs	1	0.00	0.12	17.39	0.68	0.00	0.00	0.00			0.00	0.00	0.00	
	Cx	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			28.00	0.00	28.00	

Traffic Stream Results: Journey times

Time Segment	Arm	Traffic Stream	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
18:00-19:00	A1	1	72.90	6.79	10.74	33.53
	Ax	1	62.40	2.08	30.00	12.00
	B1	1	39.10	5.37	7.28	49.47
	Bx	1	68.90	2.30	30.00	12.00
	C1	1	24.06	3.81	6.31	48.51
	C2	1	34.34	1.96	17.48	17.51
	Cs	1	68.70	2.41	28.53	12.62
	Cx	1	49.40	1.65	30.00	12.00

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	Mean Max Queue EoTS (Veh)	Max End of Green Queue EoTS (Veh)	Max End of Red Queue EoTS (Veh)	PCU Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
18:00-19:00	A1	1	0.00	0.00	✓	0.00	13.59	0.02	12.78	1.00	0.00	67.93	67.93
	Ax	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00	0.00
	B1	1	0.00	0.00	✓	0.00	10.24	0.90	8.18	1.00	0.00	62.33	62.33
	Bx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00	0.00
	C1	1	0.00	0.00	✓	0.00	7.30	0.46	6.28	1.00	0.00	46.01	46.01
	C2	1	0.00	0.00	✓	0.00	4.48	0.10	3.58	1.00	0.00	13.93	13.93
	Cs	1	0.00	0.00	✓	0.00	0.12			1.00	0.00	1.67	1.67
	Cx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00	0.00

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
18:00-19:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
18:00-19:00	(ALL)	(ALL)	0	0	0		11000	770	0		Unrestricted	0.00	7	7

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Uniform delay (Ped-min/min)	Random plus oversat delay (Ped-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)
18:00-19:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Average storage excess queue (Ped)	Average limit excess queue (Ped)	Excess queue penalty (£ per hr)

18:00-19:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Journey times

Time Segment	Crossing	Side	Distance travelled (Ped-km/hr)	Time spent (Ped-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
18:00-19:00	(ALL)	(ALL)	0.00	0.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
18:00-19:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-min/min)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
16	20/12/2018 09:51:14	20/12/2018 09:51:15	18:00	100	191.86	12.38	69.64	B1/1	0	0	B1/1	Cs/1	B1/1	✓

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
18:00-19:00	70	0	4301	554	10.36	175.77	16.10	191.86

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
18:00-19:00	0	0	42	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))	Effective green (s (per cycle))
18:00-19:00	4301	4301	0		70		29	596	601

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
18:00-19:00	11.71	10.36	10.90	1.48	175.77	175.77	29.85	1231.86	51.91	16.10	16.10

Network Results: Queues and blocking

Time Segment	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))
18:00-19:00	78.15	0.00	52.00	0.00	52.00

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
18:00-19:00	419.80	26.37	15.92

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	PCU Factor	Cost of traffic penalties (£ per hr)	Controller stream penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
18:00-19:00	0.00	0.00	✓	0.00	1.00	0.00	0.00	191.86	191.86

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

From \ To	1	2	3
1	0.0	45.5	45.5
2	61.5	0.0	61.5
3	42.1	73.1	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (Veh/hr)	Normal journey time (s)	Calculated Total Flow (Veh/hr)	Avg journey time (s)
1	1	2	406	45.53	406	45.53
2	1	3	323	45.53	323	45.53
3	2	3	171	61.47	171	61.47
4	2	1	220	61.47	220	61.47
5	3	2	283	73.13	283	73.13
6	3	1	404	42.13	404	42.13

Final Prediction Table

Traffic Stream Results

				SIGNALS			FLOWS		PERFORMANCE				PER PCU			QUEUES		WEIGHTS		PENALTIES	P.I.
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Second phase	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cy	Wasted time total (s (pe	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Ve	Mean stops per Ve	Mean max queue (V	Max end of red queu	Delay weighting multiplier (%)	Stop weighting multiplier (%)	Cost of traffic penalties (£ per hr)	

									cle))	r cyc le))				h (s)	h (%)	eh)	e (V eh)				
A 1	1	Do nor e Ro ad (W)	2	1	A		729	9999	36	0.0 0	20	357	33.53	21 .5 3	65 .9 4	13. 59	12. 78	100	100	0.00	67 .9 3
A x	1	Do nor e Ro ad (W)					624	Unres tricte d	10 0	0.0 0	0	Unres tricte d	12.00	0. 00	0. 00	0.0 0		100	100	0.00	0. 00
B 1	1	Mar lays Lan e	2	1	C		391	1701	32	0.0 0	70	29	49.47	37 .4 7	92 .7 2	10. 23	8.1 7	100	100	0.00	62 .3 3
B x	1	Mar lays Lan e					689	Unres tricte d	10 0	24. 00	0	Unres tricte d	12.00	0. 00	0. 00	0.0 0		100	100	0.00	0. 00
C 1	1	Do nor e Ro ad (E)	2	1	B		283	1800	25	0.0 0	60	49	48.51	38 .3 1	91 .4 5	7.3 0	6.2 7	100	100	0.00	46 .0 1
C 2	1	Do nor e Ro ad (E)	2	1	A	B	404	1800	61	0.0 0	36	153	17.51	7. 31	44 .9 9	4.4 8	3.5 8	100	100	0.00	13 .9 3
C s	1	Do nor e Ro ad (E)	2				687	1800	10 0	0.0 0	38	136	12.62	0. 62	0. 00	0.1 2		100	100	0.00	1. 67
C x	1	Do nor e Ro ad (E)					494	Unres tricte d	10 0	28. 00	0	Unres tricte d	12.00	0. 00	0. 00	0.0 0		100	100	0.00	0. 00

Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE			PER PED		QUE UES	WEIG HTS	PENAL TIES	P.I .
Pedest rian	Sid e	Nam e	Traf fic nod e	Contr oller strea m	Pha se	Calcul ated Flow Enteri ng (Ped/h r)	Calcul ated sat flow (Ped/h r)	Act ual gree n (s (per cycl e))	Degre e of satura tion (%)	Practic al reserve capacit y	Journey Time (s)	Me an Del ay per Pe d (s)	Mean max queu e (Ped)	Delay weigh ting (%)	Cost of traffic penalti es (£ per hr)	P.I .
(ALL)	(AL L)	(untitl ed)		1	D	0	11000	7	0	Unrestri cted	0.00	0.0 0	0.00	100	0.00	0. 00

Network Results

	Distance travelled	Time spent	Mean journey	Uniform delay	Random plus oversat	Weighted cost of	Weighted cost of	Excess queue	Performance Index (£ per hr)
Normal traffic	419.80	26.37	15.92	10.90	1.48	175.77	16.10	0.00	191.86
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	419.80	26.37	15.92	10.90	1.48	175.77	16.10	0.00	191.86

	(PCU-km/hr)	(PCU-hr/hr)	speed (kph)	(Veh-min/min)	delay (Veh-min/min)	delay (£ per hr)	stops (£ per hr)	penalty (£ per hr)	

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

A17 - 2038 - BASE + DEV - AM
D17 - 2038 - BASE + 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)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-min/min)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
17	20/12/2018 09:51:18	20/12/2018 09:51:19	08:00	100	187.28	12.08	65.31	B1/1	0	0	B1/1	Cs/1	B1/1	✓

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2038 - BASE + DEV - AM		D17	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2038 - BASE + DEV - AM				08:00	

Network Options

Network timings

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

Signals options

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

Advanced

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

Traffic options

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

Advanced

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

Normal Traffic parameters

Dispersion type	Dispersion coefficient
Default	35

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Bus	1.00	70	15	0.47	30	85

Tram parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Tram	1.00	70	15	0.47	30	85

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order
Hill Climb (Fast)	15, 40, -1, 15, 40, 1, -1, 1	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05		✓	1

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
2		

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
A1			2
Ax			
B1			2
Bx			
C1			2
C2			2
Cs			2
Cx			

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
A1	1	Donore Road (W)			100.00	✓	Sum of lanes	9999	✓		Normal	
Ax	1	Donore Road (W)			100.00						Normal	
B1	1	Marlays Lane			100.00	✓	Sum of lanes	1800	✓	✓	Normal	
Bx	1	Marlays Lane			100.00						Normal	
C1	1	Donore Road (E)			85.00	✓	Sum of lanes	1800	✓	✓	Normal	
C2	1	Donore Road (E)			85.00	✓	Sum of lanes	1800	✓		Normal	
Cs	1	Donore Road (E)			100.00	✓	Sum of lanes	1800			Normal	
Cx	1	Donore Road (E)			100.00						Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Saturation flow (PCU/hr)
A1	1	1				9999
Ax	1	1				
B1	1	1				1800
Bx	1	1				
C1	1	1				1800
C2	1	1				1800
Cs	1	1				1800
Cx	1	1				

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
(ALL)	1	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
A1	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100
Ax	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100
B1	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
Bx	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100
C1	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
C2	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
Cs	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
Cx	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100

Normal - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	1	100	100

Flows

Arm	Traffic Stream	Total Flow (Veh/hr)	Normal Flow (Veh/hr)
A1	1	550	550
Ax	1	595	595
B1	1	555	555
Bx	1	447	447
C1	1	222	222
C2	1	302	302
Cs	1	524	524
Cx	1	587	587

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled	Second phase
A1	1	1	A		
B1	1	1	C		
C1	1	1	B		
C2	1	1	A	✓	B

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
(ALL)	1	12.00	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	1	1	B1/1	Ax/1	12.00	30.00	✓	Offside	45.00
Bx	1	1	A1/1	Bx/1	12.00	30.00	✓	Nearside	20.00
C1	1	1	Cs/1	C1/1	10.20	30.00	✓	Straight	Straight Movement
C2	1	1	Cs/1	C2/1	10.20	30.00	✓	Straight	Straight Movement
Cx	1	1	A1/1	Cx/1	12.00	30.00	✓	Straight	Straight Movement
Ax	1	2	C2/1	Ax/1	12.00	30.00	✓	Straight	Straight Movement
Bx	1	2	C1/1	Bx/1	12.00	30.00	✓	Offside	35.46
Cx	1	2	B1/1	Cx/1	12.00	30.00	✓	Nearside	20.00

Give Way Data

Arm	Traffic Stream	Opposed traffic	Use Step-wise Opposed Turn Model	Visibility restricted
(ALL)	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 (%)
B1	1	1	Cx/1	574	1800	100
		2	Ax/1	440	1800	100
C1	1	1	Bx/1	574	1800	100

Give Way Data - Movements - Conflicts

Arm	Traffic Stream	Movement	Destination traffic stream	Description	Controlling type	Controlling from traffic stream	Controlling to traffic stream	Percentage opposing (%)	Slope coefficient	Upstream signals visible	Conflict shift	Conflict duration
B1	1	1	Cx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.09		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0
		2	Ax/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.08		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.20		0	0

				T-junction opposing flow	TrafficStreamMovement	C2/1	Ax/1	100	0.13		0	0
				T-junction opposing flow	TrafficStreamMovement	C1/1	Bx/1	100	0.29		0	0
C1	1	1	Bx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.22		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
(ALL)	(untitled)				Farside	3.00	2.00	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	D	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(ALL)	11000

Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	100	100		0.00		

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
1	Library		✓	TrafficStream	Two-Way	A1/1	A1/1	Ax/1	Two-Way	B1/1	B1/1	Bx/1	Two-Way	C2/1	C1/1	Cx/1	✓

T-Junction Majors

T-Junction	Left Carriageway Width (m)	Right Carriageway Width (m)	Kerbed Central Reserve Width (m)	Width for C-B traffic (m)	Visibility for C-B traffic (m)
1	6.00	6.00	0.00	2.20	0.00

T-Junction Minors

T-Junction	B-C Lane Width (m)	B-A Lane Width (m)	B-C Visibility (m)	B-A Visibility (m)
1	2.20	2.20	0.00	0.00

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
1	574	0.09	0.22	440	0.08	0.20	0.13	0.29	574	0.22	0.22

Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1		✓	✓	Lane Balancing			✓			✓	1.25		

Normal Input Flows (Veh/hr)

From	To 1	To 2	To 3
1	0	225	325
2	293	0	262
3	302	222	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
1	1		A1/1	Ax/1	#0000FF
	2		B1/1	Bx/1	#FF0000
	3		Cs/1	Cx/1	#00FF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (Veh/hr)
1	1		1	2	A1/1, Bx/1	Normal	225
	2		1	3	A1/1, Cx/1	Normal	325
	3		2	3	B1/1, Cx/1	Normal	262
	4		2	1	B1/1, Ax/1	Normal	293
	5		3	2	Cs/1, C1/1, Bx/1	Normal	222
	6		3	1	Cs/1, C2/1, Ax/1	Normal	302

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (Veh)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	A1	1	22	309	550	9999	24	29.99	12.10	69.58	65.05	5.38	70.43
	Ax	1	0	Unrestricted	595	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	B1	1	65	38	555	1734	48	24.10	12.33	70.88	52.76	5.42	58.17
	Bx	1	0	Unrestricted	447	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	C1	1	56	61	222	1800	21	40.44	5.78	39.10	35.41	2.57	37.99
	C2	1	36	152	302	1800	45	14.68	4.80	32.45	17.48	2.36	19.84
	Cs	1	29	209	524	1800	100	0.41	0.06	0.34	0.85	0.00	0.85
	Cx	1	0	Unrestricted	587	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Calculated sat flow (Veh/hr)	Calculated capacity (Veh/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
08:00-09:00	A1	1	550	550	0		9999	2500	22		309	0.00	24	25
	Ax	1	595	595	0		Unrestricted	Unrestricted	0		Unrestricted	0.52	100	100
	B1	1	555	555	0		1734	850	65		38	0.00	48	49
	Bx	1	447	447	0		Unrestricted	Unrestricted	0		Unrestricted	1.09	100	100
	C1	1	222	222	0		1800	396	56		61	0.00	21	22
	C2	1	302	302	0		1800	846	36		152	0.00	45	47
	Cs	1	524	524	0		1800	1800	29		209	0.00	100	100
	Cx	1	587	587	0		Unrestricted	Unrestricted	0		Unrestricted	0.80	100	100

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	A1	1	12.00	29.99	4.55	0.03	65.05	65.05	77.99	427.81	1.12	5.38	5.38
	Ax	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	B1	1	12.00	24.10	3.11	0.61	52.76	52.76	77.86	410.39	21.73	5.42	5.42
	Bx	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	C1	1	10.20	40.44	2.14	0.35	35.41	35.41	92.46	192.69	12.56	2.57	2.57
	C2	1	10.20	14.68	1.13	0.10	17.48	17.48	62.29	181.04	7.08	2.36	2.36
	Cs	1	12.00	0.41	0.00	0.06	0.85	0.85	0.00	0.00	0.00	0.00	0.00
	Cx	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (Veh)	Mean max queue (Veh)	Max queue storage (Veh)	Utilised storage (%)	Average storage excess queue (Veh)	Average limit excess queue (Veh)	Excess queue penalty (£ per hr)	Max end of green queue (Veh)	Max end of red queue (Veh)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))	Estimated blocking
08:00-09:00	A1	1	0.00	12.10	17.39	69.58	0.00	0.00	0.00	0.03	11.49	0.00	0.00	0.00	
	Ax	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			0.00	0.00	0.00	
	B1	1	0.00	12.33	17.39	70.88	0.00	0.00	0.00	0.76	8.63	0.00	0.00	0.00	
	Bx	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			42.00	0.00	42.00	
	C1	1	0.00	5.78	14.78	39.10	0.00	0.00	0.00	0.35	5.16	0.00	0.00	0.00	
	C2	1	0.00	4.80	14.78	32.45	0.00	0.00	0.00	0.10	4.04	0.00	0.00	0.00	
	Cs	1	0.00	0.06	17.39	0.34	0.00	0.00	0.00			0.00	0.00	0.00	
	Cx	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			23.00	0.00	23.00	

Traffic Stream Results: Journey times

Time Segment	Arm	Traffic Stream	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	A1	1	55.00	6.41	8.57	41.99
	Ax	1	59.50	1.98	30.00	12.00
	B1	1	55.50	5.57	9.97	36.10
	Bx	1	44.70	1.49	30.00	12.00
	C1	1	18.87	3.12	6.04	50.64
	C2	1	25.67	2.09	12.30	24.88
	Cs	1	52.40	1.81	29.01	12.41
	Cx	1	58.70	1.96	30.00	12.00

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	Mean Max Queue EoTS (Veh)	Max End of Green Queue EoTS (Veh)	Max End of Red Queue EoTS (Veh)	PCU Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	A1	1	0.00	0.00	✓	0.00	12.10	0.03	11.49	1.00	0.00	70.43	70.43
	Ax	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00	0.00
	B1	1	0.00	0.00	✓	0.00	12.33	0.77	8.63	1.00	0.00	58.17	58.17
	Bx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00	0.00
	C1	1	0.00	0.00	✓	0.00	5.78	0.36	5.17	1.00	0.00	37.99	37.99
	C2	1	0.00	0.00	✓	0.00	4.80	0.10	4.04	1.00	0.00	19.84	19.84
	Cs	1	0.00	0.00	✓	0.00	0.06			1.00	0.00	0.85	0.85

	Cx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00	0.00

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
08:00-09:00	(ALL)	(ALL)	0	0	0		11000	770	0		Unrestricted	0.00	7	7

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Uniform delay (Ped-min/min)	Random plus oversat delay (Ped-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)
08:00-09:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Average storage excess queue (Ped)	Average limit excess queue (Ped)	Excess queue penalty (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Journey times

Time Segment	Crossing	Side	Distance travelled (Ped-km/hr)	Time spent (Ped-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	(ALL)	(ALL)	0.00	0.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00	0.00

Network Results

Run Summary

Analysis	Run start time	Run finish time	Modelling start	Network Cycle	Performance	Total network	Highest	Item with high	Number of oversatur	Percentage of oversatur	Item with worst	Item with worst	Item with wor	Network withi
set used			time (HH:mm)	Time (s)	Index (£ per hr)	delay (Veh-min/min)	DOS (%)	est DOS	ated items	ated items (%)	signalised PRC	unsignalised PRC	st overall PRC	n capacity
17	20/12/2018 09:51:18	20/12/2018 09:51:19	08:00	100	187.28	12.08	65.31	B1/1	0	0	B1/1	Cs/1	B1/1	✓

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	65	0	3782	538	11.50	171.55	15.73	187.28

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	0	0	42	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))	Effective green (s (per cycle))
08:00-09:00	3782	3782	0		65		38	580	585

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	11.75	11.50	10.93	1.15	171.55	171.55	33.17	1211.93	42.49	15.73	15.73

Network Results: Queues and blocking

Time Segment	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))
08:00-09:00	70.88	0.00	65.00	0.00	65.00

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
08:00-09:00	370.34	24.43	15.16

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	PCU Factor	Cost of traffic penalties (£ per hr)	Controller stream penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	0.00	0.00	✓	0.00	1.00	0.00	0.00	187.28	187.28

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

From	To 1	To 2	To 3
1	0.0	54.0	54.0
2	48.1	0.0	48.1
3	49.3	75.1	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (Veh/hr)	Normal journey time (s)	Calculated Total Flow (Veh/hr)	Avg journey time (s)
1	1	2	225	53.99	225	53.99
2	1	3	325	53.99	325	53.99
3	2	3	262	48.10	262	48.10
4	2	1	293	48.10	293	48.10
5	3	2	222	75.05	222	75.05
6	3	1	302	49.29	302	49.29

Final Prediction Table

Traffic Stream Results

				SIGNALS			FLOWS		PERFORMANCE				PER PCU			QUEUES		WEIGHTS		PENALTIES	P.I.
Arm	TrafficStream	Name	Traffic node	Controller stream	Phase	Second phase	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (Veh)	Mean end of red queue (Veh)	Delay weighting multiplier (%)	Stop weighting multiplier (%)	Cost of traffic penalties (£ per hr)	P.I.
A1	1	Donore Road (W)	2	1	A		550	9999	24	0.00	22	309	41.99	29.99	77.99	12.10	11.49	100	100	0.00	70.43
Ax	1	Donore Road (W)					595	Unrestricted	100	0.00	0	Unrestricted	12.00	0.00	0.00	0.00		100	100	0.00	0.00
B1	1	Marlays Lane	2	1	C		555	1734	48	0.00	65	38	36.10	24.10	77.86	12.33	8.63	100	100	0.00	58.17
Bx	1	Marlays Lane					447	Unrestricted	100	42.00	0	Unrestricted	12.00	0.00	0.00	0.00		100	100	0.00	0.00
C1	1	Donore Ro	2	1	B		222	1800	21	0.00	56	61	50.64	40.44	92.46	5.78	5.16	100	100	0.00	37.99
		ad (E)																			
C2	1	Donore Road (E)	2	1	A	B	302	1800	45	0.00	36	152	24.88	14.68	62.29	4.80	4.04	100	100	0.00	19.84
Cs	1	Donore Road (E)	2				524	1800	100	0.00	29	209	12.41	0.41	0.00	0.06		100	100	0.00	0.85
Cx	1	Donore Road (E)					587	Unrestricted	100	23.00	0	Unrestricted	12.00	0.00	0.00	0.00		100	100	0.00	0.00

Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE			PER PED		QUEUES	WEIGHTS	PENALTIES	P.I.
Pedestrian	Side	Name	Traffic node	Controller stream	Phase	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Degree of saturation (%)	Practical reserve capacity	Journey Time (s)	Mean Delay per Ped (s)	Mean max queue (Ped)	Delay weighting (%)	Cost of traffic penalties (£ per hr)	P.I.
(ALL)	(ALL)	(untitled)		1	D	0	11000	7	0	Unrestricted	0.00	0.00	0.00	100	0.00	0.00

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	370.34	24.43	15.16	10.93	1.15	171.55	15.73	0.00	187.28
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	370.34	24.43	15.16	10.93	1.15	171.55	15.73	0.00	187.28

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

A18 - 2038 - BASE + DEV - PM
D18 - 2038 - BASE + 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)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-min/min)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
18	20/12/2018 09:51:22	20/12/2018 09:51:23	18:00	100	225.31	14.56	70.25	B1/1	0	0	B1/1	Cs/1	B1/1	✓

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2038 - BASE + DEV - PM		D18	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2038 - BASE + DEV - PM				18:00	

Network Options

Network timings

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

Signals options

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

Advanced

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

Traffic options

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

Advanced

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

Normal Traffic parameters

Dispersion type	Dispersion coefficient
Default	35

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Bus	1.00	70	15	0.47	30	85

Tram parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Tram	1.00	70	15	0.47	30	85

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order
Hill Climb (Fast)	15, 40, -1, 15, 40, 1, -1, 1	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05		✓	1

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
2		

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
A1			2
Ax			
B1			2
Bx			

C1			2
C2			2
Cs			2
Cx			

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
A1	1	Donore Road (W)			100.00	✓	Sum of lanes	9999	✓		Normal	
Ax	1	Donore Road (W)			100.00						Normal	
B1	1	Marlays Lane			100.00	✓	Sum of lanes	1800	✓	✓	Normal	
Bx	1	Marlays Lane			100.00						Normal	
C1	1	Donore Road (E)			85.00	✓	Sum of lanes	1800	✓	✓	Normal	
C2	1	Donore Road (E)			85.00	✓	Sum of lanes	1800	✓		Normal	
Cs	1	Donore Road (E)			100.00	✓	Sum of lanes	1800			Normal	
Cx	1	Donore Road (E)			100.00						Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Saturation flow (PCU/hr)
A1	1	1				9999
Ax	1	1				
B1	1	1				1800
Bx	1	1				
C1	1	1				1800
C2	1	1				1800
Cs	1	1				1800
Cx	1	1				

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
(ALL)	1	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
A1	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100
Ax	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100
B1	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
Bx	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100
C1	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
C2	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
Cs	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
Cx	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100

Normal - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	1	100	100

Flows

Arm	Traffic Stream	Total Flow (Veh/hr)	Normal Flow (Veh/hr)
A1	1	775	775
Ax	1	651	651
B1	1	445	445
Bx	1	780	780
C1	1	328	328
C2	1	404	404
Cs	1	732	732
Cx	1	521	521

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled	Second phase
A1	1	1	A		
B1	1	1	C		
C1	1	1	B		
C2	1	1	A	✓	B

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
(ALL)	1	12.00	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	1	1	B1/1	Ax/1	12.00	30.00	✓	Offside	45.00
Bx	1	1	A1/1	Bx/1	12.00	30.00	✓	Nearside	20.00
C1	1	1	Cs/1	C1/1	10.20	30.00	✓	Straight	Straight Movement
C2	1	1	Cs/1	C2/1	10.20	30.00	✓	Straight	Straight Movement
Cx	1	1	A1/1	Cx/1	12.00	30.00	✓	Straight	Straight Movement
Ax	1	2	C2/1	Ax/1	12.00	30.00	✓	Straight	Straight Movement
Bx	1	2	C1/1	Bx/1	12.00	30.00	✓	Offside	35.46
Cx	1	2	B1/1	Cx/1	12.00	30.00	✓	Nearside	20.00

Give Way Data

Arm	Traffic Stream	Opposed traffic	Use Step-wise Opposed Turn Model	Visibility restricted
(ALL)	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 (%)
B1	1	1	Cx/1	574	1800	100
		2	Ax/1	440	1800	100
C1	1	1	Bx/1	574	1800	100

Give Way Data - Movements - Conflicts

Arm	Traffic Stream	Movement	Destination traffic stream	Description	Controlling type	Controlling from traffic stream	Controlling to traffic stream	Percentage opposing (%)	Slope coefficient	Upstream signals visible	Conflict shift	Conflict duration
B1	1	1	Cx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.09		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0
		2	Ax/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.08		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.20		0	0
				T-junction opposing flow	TrafficStreamMovement	C2/1	Ax/1	100	0.13		0	0
				T-junction opposing flow	TrafficStreamMovement	C1/1	Bx/1	100	0.29		0	0
C1	1	1	Bx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.22		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
(ALL)	(untitled)				Farside	3.00	2.00	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	D	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(ALL)	11000

Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	100	100		0.00		

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
1	Library		✓	TrafficStream	Two-Way	A1/1	A1/1	Ax/1	Two-Way	B1/1	B1/1	Bx/1	Two-Way	C2/1	C1/1	Cx/1	✓

T-Junction Majors

T-Junction	Left Carriageway Width (m)	Right Carriageway Width (m)	Kerbed Central Reserve Width (m)	Width for C-B traffic (m)	Visibility for C-B traffic (m)
1	6.00	6.00	0.00	2.20	0.00

T-Junction Minors

T-Junction	B-C Lane Width (m)	B-A Lane Width (m)	B-C Visibility (m)	B-A Visibility (m)
1	2.20	2.20	0.00	0.00

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
1	574	0.09	0.22	440	0.08	0.20	0.13	0.29	574	0.22	0.22

Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1		✓	✓	Lane Balancing			✓			✓	1.25		

Normal Input Flows (Veh/hr)

From	To 1	To 2	To 3
1	0	452	323
2	247	0	198
3	404	328	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
1	1		A1/1	Ax/1	#0000FF
	2		B1/1	Bx/1	#FF0000
	3		Cs/1	Cx/1	#00FF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (Veh/hr)
1	1		1	2	A1/1, Bx/1	Normal	452
	2		1	3	A1/1, Cx/1	Normal	323
	3		2	3	B1/1, Cx/1	Normal	198
	4		2	1	B1/1, Ax/1	Normal	247
	5		3	2	Cs/1, C1/1, Bx/1	Normal	328
	6		3	1	Cs/1, C2/1, Ax/1	Normal	404

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (Veh)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
18:00-19:00	A1	1	23	283	775	9999	32	24.51	15.54	89.33	74.93	6.90	81.83
	Ax	1	0	Unrestricted	651	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	B1	1	70	28	445	1712	36	34.50	11.45	65.82	60.56	5.04	65.59
	Bx	1	0	Unrestricted	780	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	C1	1	70	28	328	1800	25	42.31	9.00	60.91	54.74	4.00	58.73
	C2	1	38	137	404	1800	57	9.17	5.17	34.95	14.62	2.56	17.18
	Cs	1	41	121	732	1800	100	0.68	0.14	0.80	1.98	0.00	1.98
	Cx	1	0	Unrestricted	521	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Calculated sat flow (Veh/hr)	Calculated capacity (Veh/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
18:00-19:00	A1	1	775	775	0		9999	3300	23		283	0.00	32	33
	Ax	1	651	651	0		Unrestricted	Unrestricted	0		Unrestricted	0.45	100	100
	B1	1	445	445	0		1712	633	70		28	0.00	36	37
	Bx	1	780	780	0		Unrestricted	Unrestricted	0		Unrestricted	0.91	100	100
	C1	1	328	328	0		1800	468	70		28	0.00	25	26
	C2	1	404	404	0		1800	1062	38		137	0.00	57	59
	Cs	1	732	732	0		1800	1800	41		121	0.00	100	100
	Cx	1	521	521	0		Unrestricted	Unrestricted	0		Unrestricted	0.82	100	100

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
18:00-19:00	A1	1	12.00	24.51	5.24	0.04	74.93	74.93	70.97	548.74	1.30	6.90	6.90
	Ax	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	B1	1	12.00	34.50	3.45	0.82	60.56	60.56	90.27	372.79	28.91	5.04	5.04
	Bx	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	C1	1	10.20	42.31	3.05	0.80	54.74	54.74	97.15	290.36	28.31	4.00	4.00
	C2	1	10.20	9.17	0.91	0.12	14.62	14.62	50.60	196.06	8.35	2.56	2.56
	Cs	1	12.00	0.68	0.00	0.14	1.98	1.98	0.00	0.00	0.00	0.00	0.00
	Cx	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (Veh)	Mean max queue (Veh)	Max queue storage (Veh)	Utilised storage (%)	Average storage excess queue (Veh)	Average limit excess queue (Veh)	Excess queue penalty (£ per hr)	Max end of green queue (Veh)	Max end of red queue (Veh)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))	Estimated blocking
18:00-19:00	A1	1	0.00	15.54	17.39	89.33	0.00	0.00	0.00	0.04	14.46	0.00	0.00	0.00	
	Ax	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			0.00	0.00	0.00	
	B1	1	0.00	11.45	17.39	65.82	0.00	0.00	0.00	0.94	8.73	0.00	0.00	0.00	
	Bx	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			28.00	0.00	28.00	
	C1	1	0.00	9.00	14.78	60.91	0.00	0.00	0.00	0.80	7.55	0.00	0.00	0.00	
	C2	1	0.00	5.17	14.78	34.95	0.00	0.00	0.00	0.12	4.04	0.00	0.00	0.00	
	Cs	1	0.00	0.14	17.39	0.80	0.00	0.00	0.00			0.00	0.00	0.00	
	Cx	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			28.00	0.00	28.00	

Traffic Stream Results: Journey times

Time Segment	Arm	Traffic Stream	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
18:00-19:00	A1	1	77.50	7.86	9.86	36.51

	Ax	1	65.10	2.17	30.00	12.00
	B1	1	44.50	5.75	7.74	46.50
	Bx	1	78.00	2.60	30.00	12.00
	C1	1	27.88	4.78	5.83	52.51
	C2	1	34.34	2.17	15.79	19.37
	Cs	1	73.20	2.58	28.38	12.68
	Cx	1	52.10	1.74	30.00	12.00

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	Mean Max Queue EoTS (Veh)	Max End of Green Queue EoTS (Veh)	Max End of Red Queue EoTS (Veh)	PCU Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
18:00-19:00	A1	1	0.00	0.00	✓	0.00	15.54	0.04	14.46	1.00	0.00	81.83	81.83
	Ax	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00	0.00
	B1	1	0.00	0.00	✓	0.00	11.45	0.95	8.73	1.00	0.00	65.59	65.59
	Bx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00	0.00
	C1	1	0.00	0.00	✓	0.00	9.01	0.81	7.55	1.00	0.00	58.73	58.73
	C2	1	0.00	0.00	✓	0.00	5.17	0.12	4.04	1.00	0.00	17.18	17.18
	Cs	1	0.00	0.00	✓	0.00	0.14			1.00	0.00	1.98	1.98
	Cx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00	0.00

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
18:00-19:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
18:00-19:00	(ALL)	(ALL)	0	0	0		11000	770	0		Unrestricted	0.00	7	7

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Uniform delay (Ped-min/min)	Random plus oversat delay (Ped-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)
18:00-19:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Average storage excess queue (Ped)	Average limit excess queue (Ped)	Excess queue penalty (£ per hr)
18:00-19:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Journey times

Time Segment	Crossing	Side	Distance travelled (Ped-km/hr)	Time spent (Ped-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
18:00-19:00	(ALL)	(ALL)	0.00	0.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
18:00-19:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-min/min)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
18	20/12/2018 09:51:22	20/12/2018 09:51:23	18:00	100	225.31	14.56	70.25	B1/1	0	0	B1/1	Cs/1	B1/1	✓

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
18:00-19:00	70	0	4636	550	11.31	206.82	18.49	225.31

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
18:00-19:00	0	0	42	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))	Effective green (s (per cycle))
18:00-19:00	4636	4636	0		70		28	592	597

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
18:00-19:00	11.72	11.31	12.65	1.91	206.82	206.82	31.81	1407.95	66.86	18.49	18.49

Network Results: Queues and blocking

Time Segment	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))
18:00-19:00	89.33	0.00	56.00	0.00	56.00

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
18:00-19:00	452.62	29.65	15.26

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	PCU Factor	Cost of traffic penalties (£ per hr)	Controller stream penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
18:00-19:00	0.00	0.00	✓	0.00	1.00	0.00	0.00	225.31	225.31

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

From	To 1	To 2	To 3
1	0.0	48.5	48.5
2	58.5	0.0	58.5
3	44.1	77.2	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (Veh/hr)	Normal journey time (s)	Calculated Total Flow (Veh/hr)	Avg journey time (s)
1	1	2	452	48.51	452	48.51
2	1	3	323	48.51	323	48.51
3	2	3	198	58.50	198	58.50
4	2	1	247	58.50	247	58.50
5	3	2	328	77.19	328	77.19
6	3	1	404	44.06	404	44.06

Final Prediction Table

Traffic Stream Results

	SIGNALS	FLOWS	PERFORMANCE	PER PCU	QUEUES	WEIGHTS	PENALTIES	P.I.

Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Second phase	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (Veh)	Max end of red queue (Veh)	Delay weighting multiplier (%)	Stop weighting multiplier (%)	Cost of traffic penalties (£ per hr)	P.I.
A1	1	Donore Road (W)	2	1	A		775	9999	32	0.00	23	283	36.51	24.51	70.97	15.54	14.46	100	100	0.00	81.83
Ax	1	Donore Road (W)					651	Unrestricted	100	0.00	0	Unrestricted	12.00	0.00	0.00	0.00		100	100	0.00	0.00
B1	1	Malays Lane	2	1	C		445	1712	36	0.00	70	28	46.50	34.50	90.27	11.45	8.73	100	100	0.00	65.59
Bx	1	Malays Lane					780	Unrestricted	100	28.00	0	Unrestricted	12.00	0.00	0.00	0.00		100	100	0.00	0.00
C1	1	Donore Road (E)	2	1	B		328	1800	25	0.00	70	28	52.51	42.31	97.15	9.00	7.55	100	100	0.00	58.73
C2	1	Donore Road (E)	2	1	A	B	404	1800	57	0.00	38	137	19.37	9.17	50.60	5.17	4.04	100	100	0.00	17.18
Cs	1	Donore Road (E)	2				732	1800	100	0.00	41	121	12.68	0.68	0.00	0.14		100	100	0.00	1.98
Cx	1	Donore Road (E)					521	Unrestricted	100	28.00	0	Unrestricted	12.00	0.00	0.00	0.00		100	100	0.00	0.00

Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE			PER PED		QUEUES	WEIGHTS	PENALTIES	P.I.
Pedestrian	Side	Name	Traffic node	Controller stream	Phase	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Degree of saturation (%)	Practical reserve capacity	Journey Time (s)	Mean Delay per Ped (s)	Mean max queue (Ped)	Delay weighting (%)	Cost of traffic penalties (£ per hr)	P.I.

(ALL)	(ALL)	(untitled)		1	D	0	11000	7	0	Unrestricted	0.00	0.00	0.00	100	0.00	0.00

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	452.62	29.65	15.26	12.65	1.91	206.82	18.49	0.00	225.31
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	452.62	29.65	15.26	12.65	1.91	206.82	18.49	0.00	225.31

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

A19 - 2038 - BASE + DEV + COM(PHASES 1 AND 2) - AM
D19 - 2038 - BASE + DEV + COM(PHASES 1 AND 2) - AM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-min/min)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
19	20/12/2018 09:51:26	20/12/2018 09:51:27	08:00	100	199.99	12.91	66.50	B1/1	0	0	B1/1	Cs/1	B1/1	✓

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2038 - BASE + DEV + COM(PHASES 1 AND 2) - AM		D19	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2038 - BASE + DEV + COM(PHASES 1 AND 2) - AM				08:00	

Network Options

Network timings

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

Signals options

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

Advanced

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

Traffic options

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

Advanced

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

Normal Traffic parameters

Dispersion type	Dispersion coefficient
Default	35

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Bus	1.00	70	15	0.47	30	85

Tram parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Tram	1.00	70	15	0.47	30	85

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order
Hill Climb (Fast)	15, 40, -1, 15, 40, 1, -1, 1	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05		✓	1

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
2		

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
A1			2
Ax			
B1			2
Bx			
C1			2
C2			2
Cs			2
Cx			

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
A1	1	Donore Road (W)			100.00	✓	Sum of lanes	9999	✓		Normal	
Ax	1	Donore Road (W)			100.00						Normal	
B1	1	Marlays Lane			100.00	✓	Sum of lanes	1800	✓	✓	Normal	
Bx	1	Marlays Lane			100.00						Normal	
C1	1	Donore Road (E)			85.00	✓	Sum of lanes	1800	✓	✓	Normal	
C2	1	Donore Road (E)			85.00	✓	Sum of lanes	1800	✓		Normal	
Cs	1	Donore Road (E)			100.00	✓	Sum of lanes	1800			Normal	
Cx	1	Donore Road (E)			100.00						Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Saturation flow (PCU/hr)
A1	1	1				9999
Ax	1	1				
B1	1	1				1800
Bx	1	1				
C1	1	1				1800
C2	1	1				1800
Cs	1	1				1800
Cx	1	1				

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
(ALL)	1	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
A1	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100
Ax	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100
B1	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
Bx	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100
C1	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
C2	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
Cs	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
Cx	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100

Normal - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	1	100	100

Flows

Arm	Traffic Stream	Total Flow (Veh/hr)	Normal Flow (Veh/hr)
A1	1	559	559
Ax	1	618	618
B1	1	601	601
Bx	1	465	465
C1	1	231	231

C2	1	302	302
Cs	1	533	533
Cx	1	610	610

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled	Second phase
A1	1	1	A		
B1	1	1	C		
C1	1	1	B		
C2	1	1	A	✓	B

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
(ALL)	1	12.00	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	1	1	B1/1	Ax/1	12.00	30.00	✓	Offside	45.00
Bx	1	1	A1/1	Bx/1	12.00	30.00	✓	Nearside	20.00
C1	1	1	Cs/1	C1/1	10.20	30.00	✓	Straight	Straight Movement
C2	1	1	Cs/1	C2/1	10.20	30.00	✓	Straight	Straight Movement
Cx	1	1	A1/1	Cx/1	12.00	30.00	✓	Straight	Straight Movement
Ax	1	2	C2/1	Ax/1	12.00	30.00	✓	Straight	Straight Movement
Bx	1	2	C1/1	Bx/1	12.00	30.00	✓	Offside	35.46
Cx	1	2	B1/1	Cx/1	12.00	30.00	✓	Nearside	20.00

Give Way Data

Arm	Traffic Stream	Opposed traffic	Use Step-wise Opposed Turn Model	Visibility restricted
(ALL)	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 (%)
B1	1	1	Cx/1	574	1800	100
		2	Ax/1	440	1800	100
C1	1	1	Bx/1	574	1800	100

Give Way Data - Movements - Conflicts

Arm	Traffic Stream	Movement	Destination traffic stream	Description	Controlling type	Controlling from traffic stream	Controlling to traffic stream	Percentage opposing (%)	Slope coefficient	Upstream signals visible	Conflict shift	Conflict duration
B1	1	1	Cx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.09		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0
		2	Ax/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.08		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.20		0	0
				T-junction opposing flow	TrafficStreamMovement	C2/1	Ax/1	100	0.13		0	0
				T-junction opposing flow	TrafficStreamMovement	C1/1	Bx/1	100	0.29		0	0
C1	1	1	Bx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.22		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
(ALL)	(untitled)				Farside	3.00	2.00	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	D	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(ALL)	11000

Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	100	100		0.00		

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

1	Library		✓	TrafficStream	Two-Way	A1/1	A1/1	Ax/1	Two-Way	B1/1	B1/1	Bx/1	Two-Way	C2/1	C1/1	Cx/1	✓

T-Junction Majors

T-Junction	Left Carriageway Width (m)	Right Carriageway Width (m)	Kerbed Central Reserve Width (m)	Width for C-B traffic (m)	Visibility for C-B traffic (m)
1	6.00	6.00	0.00	2.20	0.00

T-Junction Minors

T-Junction	B-C Lane Width (m)	B-A Lane Width (m)	B-C Visibility (m)	B-A Visibility (m)
1	2.20	2.20	0.00	0.00

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
1	574	0.09	0.22	440	0.08	0.20	0.13	0.29	574	0.22	0.22

Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1		✓	✓	Lane Balancing			✓			✓	1.25		

Normal Input Flows (Veh/hr)

From \ To	1	2	3
1	0	234	325
2	316	0	285
3	302	231	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
1	1		A1/1	Ax/1	#0000FF
	2		B1/1	Bx/1	#FF0000
	3		Cs/1	Cx/1	#00FF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (Veh/hr)
1	1		1	2	A1/1, Bx/1	Normal	234
	2		1	3	A1/1, Cx/1	Normal	325
	3		2	3	B1/1, Cx/1	Normal	285
	4		2	1	B1/1, Ax/1	Normal	316
	5		3	2	Cs/1, C1/1, Bx/1	Normal	231
	6		3	1	Cs/1, C2/1, Ax/1	Normal	302

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (Veh)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	A1	1	25	254	559	9999	21	32.52	12.78	73.46	71.70	5.68	77.39
	Ax	1	0	Unrestricted	618	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	B1	1	66	35	601	1738	51	22.53	13.01	74.80	53.40	5.73	59.14
	Bx	1	0	Unrestricted	465	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	C1	1	58	54	231	1800	21	41.20	6.11	41.36	37.54	2.72	40.25
	C2	1	38	136	302	1800	42	16.64	5.15	34.84	19.82	2.50	22.33
	Cs	1	30	204	533	1800	100	0.42	0.06	0.36	0.88	0.00	0.88
	Cx	1	0	Unrestricted	610	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Calculated sat flow (Veh/hr)	Calculated capacity (Veh/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
08:00-09:00	A1	1	559	559	0		9999	2200	25		254	0.00	21	22
	Ax	1	618	618	0		Unrestricted	Unrestricted	0		Unrestricted	0.51	100	100
	B1	1	601	601	0		1738	904	66		35	0.00	51	52
	Bx	1	465	465	0		Unrestricted	Unrestricted	0		Unrestricted	1.11	100	100
	C1	1	231	231	0		1800	396	58		54	0.00	21	22
	C2	1	302	302	0		1800	792	38		136	0.00	42	44
	Cs	1	533	533	0		1800	1800	30		204	0.00	100	100
	Cx	1	610	610	0		Unrestricted	Unrestricted	0		Unrestricted	0.78	100	100

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time	Mean Delay per	Uniform delay (Veh-	Random plus oversat delay	Unweighted cost of delay (£ per hr)	Weighted cost of delay	Mean stops per	Uniform stops	Random stops	Unweighted cost of stops (£ per hr)	Weighted cost of stops

			per Veh (s)	Veh (s)	min/min)	(Veh-min/min)		(£ per hr)	Veh (%)	(Stops per hr)	(Stops per hr)		(£ per hr)
08:00-09:00	A1	1	12.00	32.52	5.01	0.04	71.70	71.70	81.10	451.77	1.56	5.68	5.68
	Ax	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	B1	1	12.00	22.53	3.11	0.65	53.40	53.40	76.10	434.06	23.32	5.73	5.73
	Bx	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	C1	1	10.20	41.20	2.24	0.40	37.54	37.54	93.84	202.47	14.30	2.72	2.72
	C2	1	10.20	16.64	1.28	0.12	19.82	19.82	66.15	191.38	8.38	2.50	2.50
	Cs	1	12.00	0.42	0.00	0.06	0.88	0.88	0.00	0.00	0.00	0.00	0.00
	Cx	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (Veh)	Mean max queue (Veh)	Max queue storage (Veh)	Utilised storage (%)	Average storage excess queue (Veh)	Average limit excess queue (Veh)	Excess queue penalty (£ per hr)	Max end of green queue (Veh)	Max end of red queue (Veh)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))	Estimated blocking
08:00-09:00	A1	1	0.00	12.78	17.39	73.46	0.00	0.00	0.00	0.04	12.15	0.00	0.00	0.00	
	Ax	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			0.00	0.00	0.00	
	B1	1	0.00	13.01	17.39	74.80	0.00	0.00	0.00	0.82	8.83	0.00	0.00	0.00	
	Bx	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			45.00	0.00	45.00	
	C1	1	0.00	6.11	14.78	41.36	0.00	0.00	0.00	0.40	5.41	0.00	0.00	0.00	
	C2	1	0.00	5.15	14.78	34.84	0.00	0.00	0.00	0.12	4.31	0.00	0.00	0.00	
	Cs	1	0.00	0.06	17.39	0.36	0.00	0.00	0.00			0.00	0.00	0.00	
	Cx	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			23.00	0.00	23.00	

Traffic Stream Results: Journey times

Time Segment	Arm	Traffic Stream	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	A1	1	55.90	6.91	8.09	44.52
	Ax	1	61.80	2.06	30.00	12.00
	B1	1	60.10	5.76	10.43	34.53
	Bx	1	46.50	1.55	30.00	12.00
	C1	1	19.64	3.30	5.95	51.40
	C2	1	25.67	2.25	11.40	26.84
	Cs	1	53.30	1.84	28.98	12.42
	Cx	1	61.00	2.03	30.00	12.00

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	Mean Max Queue EoTS (Veh)	Max End of Green Queue	Max End of Red Queue EoTS (Veh)	PCU Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)

								EoTS (Veh)					
08:00-09:00	A1	1	0.00	0.00	✓	0.00	12.78	0.04	12.15	1.00	0.00	77.39	77.39
	Ax	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00	0.00
	B1	1	0.00	0.00	✓	0.00	13.01	0.82	8.84	1.00	0.00	59.14	59.14
	Bx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00	0.00
	C1	1	0.00	0.00	✓	0.00	6.12	0.41	5.41	1.00	0.00	40.25	40.25
	C2	1	0.00	0.00	✓	0.00	5.15	0.12	4.31	1.00	0.00	22.33	22.33
	Cs	1	0.00	0.00	✓	0.00	0.06			1.00	0.00	0.88	0.88
	Cx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00	0.00

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
08:00-09:00	(ALL)	(ALL)	0	0	0		11000	770	0		Unrestricted	0.00	7	7

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Uniform delay (Ped-min/min)	Random plus oversat delay (Ped-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)
08:00-09:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Average storage excess queue (Ped)	Average limit excess queue (Ped)	Excess queue penalty (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Journey times

Time Segment	Crossing	Side	Distance travelled (Ped-km/hr)	Time spent (Ped-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	(ALL)	(ALL)	0.00	0.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Mean Max Queue	Ped Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)

					EoTS (Ped)				
08:00-09:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-min/min)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
19	20/12/2018 09:51:26	20/12/2018 09:51:27	08:00	100	199.99	12.91	66.50	B1/1	0	0	B1/1	Cs/1	B1/1	✓

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	66	0	3919	535	11.86	183.35	16.64	199.99

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	0	0	42	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))	Effective green (s (per cycle))
08:00-09:00	3919	3919	0		66		35	577	582

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	11.76	11.86	11.63	1.28	183.35	183.35	33.87	1279.67	47.57	16.64	16.64

Network Results: Queues and blocking

Time Segment	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))
08:00-09:00	74.80	0.00	68.00	0.00	68.00

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
08:00-09:00	383.91	25.71	14.93

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	PCU Factor	Cost of traffic penalties (£ per hr)	Controller stream penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	0.00	0.00	✓	0.00	1.00	0.00	0.00	199.99	199.99

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

From \ To	1	2	3
1	0.0	56.5	56.5
2	46.5	0.0	46.5
3	51.3	75.8	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (Veh/hr)	Normal journey time (s)	Calculated Total Flow (Veh/hr)	Avg journey time (s)
1	1	2	234	56.52	234	56.52
2	1	3	325	56.52	325	56.52
3	2	3	285	46.53	285	46.53
4	2	1	316	46.53	316	46.53
5	3	2	231	75.82	231	75.82
6	3	1	302	51.26	302	51.26

Final Prediction Table

Traffic Stream Results

				SIGNALS			FLOWS		PERFORMANCE				PER PCU			QUEUES		WEIGHTS		PENALTIES	P.I.
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Second phase	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (Veh)	Max end of red queue (Veh)	Delay weighting multiplier (%)	Stop weighting multiplier (%)	Cost of traffic penalties (£ per hr)	P.I.
A1	1	Done Road (W)	2	1	A		559	9999	21	0.00	25	254	44.52	32.52	81.10	12.78	12.15	100	100	0.00	77.39
Ax	1	Done Road (W)					618	Unrestricted	100	0.00	0	Unrestricted	12.00	0.00	0.00	0.00		100	100	0.00	0.00

B1	1	Marlays Lane	2	1	C		601	1738	51	0.00	66	35	34.53	22.53	76.10	13.01	8.83	100	100	0.00	59.14
Bx	1	Marlays Lane					465	Unrestricted	100	45.00	0	Unrestricted	12.00	0.00	0.00	0.00		100	100	0.00	0.00
C1	1	Donore Road (E)	2	1	B		231	1800	21	0.00	58	54	51.40	41.20	93.84	6.11	5.41	100	100	0.00	40.25
C2	1	Donore Road (E)	2	1	A	B	302	1800	42	0.00	38	136	26.84	16.64	66.15	5.15	4.31	100	100	0.00	22.33
Cs	1	Donore Road (E)	2				533	1800	100	0.00	30	204	12.42	0.42	0.00	0.06		100	100	0.00	0.88
Cx	1	Donore Road (E)					610	Unrestricted	100	23.00	0	Unrestricted	12.00	0.00	0.00	0.00		100	100	0.00	0.00

Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE			PER PED		QUEUES	WEIGHTS	PENALTIES	P.I.
Pedestrian	Side	Name	Traffic node	Controller stream	Phase	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Degree of saturation (%)	Practical reserve capacity	Journey Time (s)	Mean Delay per Ped (s)	Mean max queue (Ped)	Delay weighting (%)	Cost of traffic penalties (£ per hr)	P.I.
(ALL)	(ALL)	(untitled)		1	D	0	11000	7	0	Unrestricted	0.00	0.00	0.00	100	0.00	0.00

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	383.91	25.71	14.93	11.63	1.28	183.35	16.64	0.00	199.99
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	383.91	25.71	14.93	11.63	1.28	183.35	16.64	0.00	199.99

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

A20 - 2038 - BASE + DEV + COM(PHASES 1 AND 2) - PM
D20 - 2038 - BASE + DEV + COM(PHASES 1 AND 2) - PM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-min/min)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
20	20/12/2018 09:51:30	20/12/2018 09:51:31	18:00	100	240.64	15.57	71.99	B1/1	0	0	B1/1	Cs/1	B1/1	✓

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2038 - BASE + DEV + COM(PHASES 1 AND 2) - PM		D20	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2038 - BASE + DEV + COM(PHASES 1 AND 2) - PM				18:00	

Network Options

Network timings

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

Signals options

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

Advanced

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

Traffic options

Traffic model	Vehicle flow scaling factor (%)	Pedestrian flow scaling factor (%)	Cruise times or speeds

Platoon Dispersion (PDM)	100	100	Cruise Speeds

Advanced

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

Normal Traffic parameters

Dispersion type	Dispersion coefficient
Default	35

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Bus	1.00	70	15	0.47	30	85

Tram parameters

Name	PCU Factor	Dispersion coefficient1	Dispersion coefficient2	Acceleration (ms^[-2])	Travel time coefficient1	Travel time coefficient2
Tram	1.00	70	15	0.47	30	85

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order
Hill Climb (Fast)	15, 40, -1, 15, 40, 1, -1, 1	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05		✓	1

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
2		

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
A1			2
Ax			
B1			2
Bx			
C1			2
C2			2
Cs			2
Cx			

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
A1	1	Donore Road (W)			100.00	✓	Sum of lanes	9999	✓		Normal	
Ax	1	Donore Road (W)			100.00						Normal	
B1	1	Marlays Lane			100.00	✓	Sum of lanes	1800	✓	✓	Normal	
Bx	1	Marlays Lane			100.00						Normal	
C1	1	Donore Road (E)			85.00	✓	Sum of lanes	1800	✓	✓	Normal	
C2	1	Donore Road (E)			85.00	✓	Sum of lanes	1800	✓		Normal	
Cs	1	Donore Road (E)			100.00	✓	Sum of lanes	1800			Normal	
Cx	1	Donore Road (E)			100.00						Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Saturation flow (PCU/hr)
A1	1	1				9999
Ax	1	1				
B1	1	1				1800
Bx	1	1				
C1	1	1				1800
C2	1	1				1800
Cs	1	1				1800
Cx	1	1				

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
(ALL)	1	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
A1	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100
Ax	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100
B1	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
Bx	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100
C1	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
C2	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
Cs	1	0.00	Automatic	Not-Included	Automatic	0.50	✓	100
Cx	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100

Normal - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	1	100	100

Flows

Arm	Traffic Stream	Total Flow (Veh/hr)	Normal Flow (Veh/hr)
A1	1	796	796
Ax	1	663	663
B1	1	469	469
Bx	1	821	821
C1	1	348	348
C2	1	404	404
Cs	1	752	752
Cx	1	533	533

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled	Second phase
A1	1	1	A		
B1	1	1	C		
C1	1	1	B		
C2	1	1	A	✓	B

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
(ALL)	1	12.00	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	1	1	B1/1	Ax/1	12.00	30.00	✓	Offside	45.00
Bx	1	1	A1/1	Bx/1	12.00	30.00	✓	Nearside	20.00
C1	1	1	Cs/1	C1/1	10.20	30.00	✓	Straight	Straight Movement
C2	1	1	Cs/1	C2/1	10.20	30.00	✓	Straight	Straight Movement
Cx	1	1	A1/1	Cx/1	12.00	30.00	✓	Straight	Straight Movement
Ax	1	2	C2/1	Ax/1	12.00	30.00	✓	Straight	Straight Movement
Bx	1	2	C1/1	Bx/1	12.00	30.00	✓	Offside	35.46
Cx	1	2	B1/1	Cx/1	12.00	30.00	✓	Nearside	20.00

Give Way Data

Arm	Traffic Stream	Opposed traffic	Use Step-wise Opposed Turn Model	Visibility restricted
(ALL)	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 (%)
B1	1	1	Cx/1	574	1800	100
		2	Ax/1	440	1800	100
C1	1	1	Bx/1	574	1800	100

Give Way Data - Movements - Conflicts

Arm	Traffic Stream	Movement	Destination traffic stream	Description	Controlling type	Controlling from traffic stream	Controlling to traffic stream	Percentage opposing (%)	Slope coefficient	Upstream signals visible	Conflict shift	Conflict duration
B1	1	1	Cx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.09		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0
		2	Ax/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.08		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.20		0	0
				T-junction opposing flow	TrafficStreamMovement	C2/1	Ax/1	100	0.13		0	0
				T-junction opposing flow	TrafficStreamMovement	C1/1	Bx/1	100	0.29		0	0
C1	1	1	Bx/1	T-junction opposing flow	TrafficStreamMovement	A1/1	Bx/1	100	0.22		0	0
				T-junction opposing flow	TrafficStreamMovement	A1/1	Cx/1	100	0.22		0	0

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
(ALL)	(untitled)				Farside	3.00	2.00	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	D	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(ALL)	11000

Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	100	100		0.00		

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
1	Library		✓	TrafficStream	Two-Way	A1/1	A1/1	Ax/1	Two-Way	B1/1	B1/1	Bx/1	Two-Way	C2/1	C1/1	Cx/1	✓

T-Junction Majors

T-Junction	Left Carriageway Width (m)	Right Carriageway Width (m)	Kerbed Central Reserve Width (m)	Width for C-B traffic (m)	Visibility for C-B traffic (m)
1	6.00	6.00	0.00	2.20	0.00

T-Junction Minors

T-Junction	B-C Lane Width (m)	B-A Lane Width (m)	B-C Visibility (m)	B-A Visibility (m)
1	2.20	2.20	0.00	0.00

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
1	574	0.09	0.22	440	0.08	0.20	0.13	0.29	574	0.22	0.22

Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1		✓	✓	Lane Balancing			✓			✓	1.25		

Normal Input Flows (Veh/hr)

From	To 1	To 2	To 3
1	0	473	323
2	259	0	210
3	404	348	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
1	1		A1/1	Ax/1	#0000FF
	2		B1/1	Bx/1	#FF0000
	3		Cs/1	Cx/1	#00FF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (Veh/hr)
1	1		1	2	A1/1, Bx/1	Normal	473
	2		1	3	A1/1, Cx/1	Normal	323
	3		2	3	B1/1, Cx/1	Normal	210
	4		2	1	B1/1, Ax/1	Normal	259
	5		3	2	Cs/1, C1/1, Bx/1	Normal	348
	6		3	1	Cs/1, C2/1, Ax/1	Normal	404

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (Veh)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
18:00-19:00	A1	1	26	250	796	9999	30	26.07	16.41	94.34	81.84	7.29	89.13
	Ax	1	0	Unrestricted	663	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	B1	1	72	25	469	1714	37	34.51	12.11	69.65	63.84	5.35	69.19

	Bx	1	0	Unrestricted	821	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	C1	1	72	26	348	1800	26	42.16	9.58	64.82	57.88	4.25	62.13
	C2	1	39	133	404	1800	56	9.68	5.28	35.75	15.43	2.64	18.07
	Cs	1	42	115	752	1800	100	0.72	0.15	0.86	2.13	0.00	2.13
	Cx	1	0	Unrestricted	533	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Calculated sat flow (Veh/hr)	Calculated capacity (Veh/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
18:00-19:00	A1	1	796	796	0		9999	3100	26		250	0.00	30	31
	Ax	1	663	663	0		Unrestricted	Unrestricted	0		Unrestricted	0.45	100	100
	B1	1	469	469	0		1714	651	72		25	0.00	37	38
	Bx	1	821	821	0		Unrestricted	Unrestricted	0		Unrestricted	0.92	100	100
	C1	1	348	348	0		1800	486	72		26	0.00	26	27
	C2	1	404	404	0		1800	1044	39		133	0.00	56	58
	Cs	1	752	752	0		1800	1800	42		115	0.00	100	100
	Cx	1	533	533	0		Unrestricted	Unrestricted	0		Unrestricted	0.82	100	100

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
18:00-19:00	A1	1	12.00	26.07	5.72	0.04	81.84	81.84	73.02	579.63	1.60	7.29	7.29
	Ax	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	B1	1	12.00	34.51	3.59	0.91	63.84	63.84	90.96	394.44	32.17	5.35	5.35
	Bx	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	C1	1	10.20	42.16	3.19	0.88	57.88	57.88	97.43	307.99	31.05	4.25	4.25
	C2	1	10.20	9.68	0.96	0.12	15.43	15.43	52.13	201.86	8.73	2.64	2.64
	Cs	1	12.00	0.72	0.00	0.15	2.13	2.13	0.00	0.00	0.00	0.00	0.00
	Cx	1	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (Veh)	Mean max queue (Veh)	Max queue storage (Veh)	Utilised storage (%)	Average storage excess queue (Veh)	Average limit excess queue (Veh)	Excess queue penalty (£ per hr)	Max end of green queue (Veh)	Max end of red queue (Veh)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))	Estimated blocking
18:00-19:00	A1	1	0.00	16.41	17.39	94.34	0.00	0.00	0.00	0.04	15.30	0.00	0.00	0.00	
	Ax	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			0.00	0.00	0.00	
	B1	1	0.00	12.11	17.39	69.65	0.00	0.00	0.00	1.04	9.12	0.00	0.00	0.00	
	Bx	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			29.00	0.00	29.00	
	C1	1	0.00	9.58	14.78	64.82	0.00	0.00	0.00	0.88	7.94	0.00	0.00	0.00	
	C2	1	0.00	5.28	14.78	35.75	0.00	0.00	0.00	0.12	4.16	0.00	0.00	0.00	
	Cs	1	0.00	0.15	17.39	0.86	0.00	0.00	0.00			0.00	0.00	0.00	
	Cx	1	0.00	0.00	17.39	0.00	0.00	0.00	0.00			28.00	0.00	28.00	

Traffic Stream Results: Journey times

Time Segment	Arm	Traffic Stream	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
18:00-19:00	A1	1	79.60	8.42	9.46	38.07
	Ax	1	66.30	2.21	30.00	12.00
	B1	1	46.90	6.06	7.74	46.51
	Bx	1	82.10	2.74	30.00	12.00
	C1	1	29.58	5.06	5.84	52.36
	C2	1	34.34	2.23	15.39	19.88
	Cs	1	75.20	2.66	28.31	12.72
	Cx	1	53.30	1.78	30.00	12.00

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	Mean Max Queue EoTS (Veh)	Max End of Green Queue EoTS (Veh)	Max End of Red Queue EoTS (Veh)	PCU Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
18:00-19:00	A1	1	0.00	0.00	✓	0.00	16.41	0.04	15.30	1.00	0.00	89.13	89.13
	Ax	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00	0.00
	B1	1	0.00	0.00	✓	0.00	12.12	1.05	9.12	1.00	0.00	69.19	69.19
	Bx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00	0.00
	C1	1	0.00	0.00	✓	0.00	9.59	0.89	7.95	1.00	0.00	62.13	62.13
	C2	1	0.00	0.00	✓	0.00	5.28	0.12	4.16	1.00	0.00	18.07	18.07
	Cs	1	0.00	0.00	✓	0.00	0.15			1.00	0.00	2.13	2.13
	Cx	1	0.00	0.00	✓	0.00	0.00			1.00	0.00	0.00	0.00

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
18:00-19:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s (per cycle))	Effective green (s (per cycle))
18:00-19:00	(ALL)	(ALL)	0	0	0		11000	770	0		Unrestricted	0.00	7	7

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Uniform delay (Ped-min/min)	Random plus oversat delay (Ped-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)
18:00-19:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Average storage excess queue (Ped)	Average limit excess queue (Ped)	Excess queue penalty (£ per hr)
18:00-19:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00	0.00	0.00

Pedestrian Crossings: Journey times

Time Segment	Crossing	Side	Distance travelled (Ped-km/hr)	Time spent (Ped-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
18:00-19:00	(ALL)	(ALL)	0.00	0.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
18:00-19:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (Veh-min/min)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
20	20/12/2018 09:51:30	20/12/2018 09:51:31	18:00	100	240.64	15.57	71.99	B1/1	0	0	B1/1	Cs/1	B1/1	✓

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (Veh/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
18:00-19:00	72	0	4786	549	11.71	221.12	19.53	240.64

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
18:00-19:00	0	0	42	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated flow entering (Veh/hr)	Calculated flow out (Veh/hr)	Flow discrepancy (Veh/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))	Effective green (s (per cycle))
18:00-19:00	4786	4786	0		72		25	591	596

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
18:00-19:00	11.72	11.71	13.46	2.11	221.12	221.12	32.54	1483.91	73.55	19.53	19.53

Network Results: Queues and blocking

Time Segment	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))
18:00-19:00	94.34	0.00	57.00	0.00	57.00

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
18:00-19:00	467.32	31.15	15.00

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Warmed up error	PCU Factor	Cost of traffic penalties (£ per hr)	Controller stream penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
18:00-19:00	0.00	0.00	✓	0.00	1.00	0.00	0.00	240.64	240.64

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

		To		
		1	2	3
From	1	0.0	50.1	50.1
	2	58.5	0.0	58.5
	3	44.6	77.1	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (Veh/hr)	Normal journey time (s)	Calculated Total Flow (Veh/hr)	Avg journey time (s)
1	1	2	473	50.07	473	50.07
2	1	3	323	50.07	323	50.07
3	2	3	210	58.51	210	58.51

4	2	1	259	58.51	259	58.51
5	3	2	348	77.08	348	77.08
6	3	1	404	44.60	404	44.60

Final Prediction Table

Traffic Stream Results

				SIGNALS			FLOWS		PERFORMANCE				PER PCU			QUEUES		WEIGHTS		PENALTIES	P.I.
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Second phase	Calculated flow entering (Veh/hr)	Calculated sat flow (Veh/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (Veh)	Max end of red queue (Veh)	Delay weighting multiplier (%)	Stop weighting multiplier (%)	Cost of traffic penalties (£ per hr)	P.I.
A1	1	Donore Road (W)	2	1	A		796	9999	30	0.00	26	250	38.07	26.07	73.02	16.41	15.30	100	100	0.00	89.13
Ax	1	Donore Road (W)					663	Unrestricted	100	0.00	0	Unrestricted	12.00	0.00	0.00	0.00		100	100	0.00	0.00
B1	1	Marlays Lane	2	1	C		469	1714	37	0.00	72	25	46.51	34.51	90.96	12.11	9.12	100	100	0.00	69.19
Bx	1	Marlays Lane					821	Unrestricted	100	29.00	0	Unrestricted	12.00	0.00	0.00	0.00		100	100	0.00	0.00
C1	1	Donore Road (E)	2	1	B		348	1800	26	0.00	72	26	52.36	42.16	97.43	9.58	7.94	100	100	0.00	62.13
C2	1	Donore Road (E)	2	1	A	B	404	1800	56	0.00	39	133	19.88	9.68	52.13	5.28	4.16	100	100	0.00	18.07
Cs	1	Donore Road (E)	2				752	1800	100	0.00	42	115	12.72	0.72	0.00	0.15		100	100	0.00	2.13
Cx	1	Donore Ro					533	Unrestricted	100	28.00	0	Unrestricted	12.00	0.00	0.00	0.00		100	100	0.00	0.00
		ad (E)																			

Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE			PER PED		QUEUES	WEIGHTS	PENALTIES	P.I.
Pedestrian	Side	Name	Traffic node	Controller stream	Phase	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Degree of saturation (%)	Practical reserve capacity	Journey Time (s)	Mean Delay per Ped (s)	Mean max queue (Ped)	Delay weighting (%)	Cost of traffic penalties (£ per hr)	P.I.
(ALL)	(ALL)	(untitled)		1	D	0	11000	7	0	Unrestricted	0.00	0.00	0.00	100	0.00	0.00

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (Veh-min/min)	Random plus oversat delay (Veh-min/min)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	467.32	31.15	15.00	13.46	2.11	221.12	19.53	0.00	240.64
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	467.32	31.15	15.00	13.46	2.11	221.12	19.53	0.00	240.64

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

UK and Ireland Office Locations