

Coed Darcy - M4 Junction 43 Improvements

Updated Phasing Strategy

St. Modwen Developments Ltd

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1. Introduction

Atkins have been instructed to undertake updated modelling of M4 Junction 43 (M4 J43), using TRANSYT, in order to review the previously agreed mitigation phasing strategy at the junction for the Coed Darcy Urban Village development, and to inform on-going discussions between St. Modwen's and the South Wales Trunk Road Agent (SWTRA) regarding additional capacity provided as a result of the proposed revisions to the phasing of the improvement works.

The impact of the proposed Coed Darcy development on the local highway network capacity has been considered in a separate transport technical report, which is being submitted to Neath Port Talbot County Borough Council (NPTCBC). The assessment of development traffic on the local highway network is a standalone assessment and does not directly impact on the assessment of M4 J43 presented in this report. The local highway network assessment complements the M4 J43 assessment and considers the findings from the J43 assessment on the local highway network.

The Transport Assessment (TA) for Coed Darcy was produced by Arup in 2005 (hereafter referred to as the 2005 TA) in support of the outline planning application for Coed Darcy. A mitigation phasing strategy was proposed and agreed as part of the 2005 TA.

The phasing of the mitigation strategy was reviewed in 2013 and 2014 by Atkins, and updated modelling work was undertaken and presented in the Integrated Traffic Modelling (ITM) report, and subsequent ITM Addendum and ITM Addendum II reports. The latest revised mitigation strategy, as presented in ITM Addendum II, was agreed with SWTRA and NPTCBC.

This report updates the assessments undertaken as part of the ITM Addendum II report, using up to date traffic survey data, and updated growth and development build out assumptions, and reviews the proposed mitigation phasing strategy for M4 J43 accordingly.

The remainder of this report is structured as follows:

- Chapter 2 provides a summary of the previously reports produced and the agreed mitigation phasing strategy;
- Chapter 3 presents the updated traffic count data and compares this against previously forecast traffic flows;
- Chapter 4 summarises the modelling results for Phase IA, with revised traffic assumptions;
- Chapter 5 considers an additional mitigation phase, Phase IB; and
- Chapter 6 proposes a revised mitigation phasing strategy and outlines the design and delivery programme for the Phase IA / IB works.

2. Background

This section of the report provides a summary of the previous reports undertaken for M4 J43 and summarises the currently agreed mitigation strategy.

2.1. Previous Reports

2.1.1. M4 J43 ITM Report (2013)

M4 J43 ITM Report, dated May 2013, reference **5104234/48/DG/005**, summarised the traffic modelling undertaken as part of the detailed design process to consider the highway implications for the first phase of the overall Coed Darcy site. The purpose of the report was to provide information to satisfy the Reserved Matters application in relation to commencing development on the Coed Darcy site. The report examined the proposed improvements to M4 J43. The analysis was undertaken using traffic surveys undertaken in 2010.

2.1.2. M4 J43 ITM Report Addendum (2013)

M4 J43 ITM Report Addendum I, dated December 2013, reference **5104234/48/DG/007**, was issued after recognising that the publication of M4 J43 ITM Report was practical but did not come to an agreement on the Phase I highway improvements scheme for Coed Darcy. This Addendum considers a revision to the first phase of the proposed highway improvements to incorporate the requirements of the Northern Access Road (NAR), and the Section 278 agreement, whereby signal control is provided at the junction of the B4290 and the main access road into the Coed Darcy site

Addendum I of M4 J43 ITM sets out a series of revised phased highway schemes which could replace the highway improvement measures originally proposed as part of the planning application for Coed Darcy in 2005. The analysis continued to be based on surveys undertaken in 2010.

The phasing strategy proposed in the ITM Report Addendum I superseded the strategy proposed in the original ITM report.

2.1.3. M4 J43 ITM Addendum II (2014)

M4 J43 ITM Report Addendum II, dated September 2014, reference **ITM – Addendum II – V1.0**, further refined the proposed phasing strategy set out in the ITM Addendum report. Addendum II identified a revision of the proposed phasing strategy from Addendum I to release a further 300 residential units in addition to the 500 units associated with Phase I.

2.2. Current Agreed Phasing Strategy

The current agreed mitigation phasing strategy with dates agreed in 2014, as agreed with SWTRA and set out in ITM Addendum II, is summarised below and in Table 2-1 and Figures 2-1 to 2-3.

- Phase I – The current NAR network, with capacity to support the development of up to 500 residential units;
- Phase IA – capacity to support development of up to 800 residential units (by 2017);
- Phase II – capacity to support development of up to 2,000 residential units and other land uses (by 2020). Southern Access Road (SAR) and highway link between NAR and SAR constructed; and
- Phase III – capacity to support development of up to 4,000 residential units and the other remaining land uses by 2025.

Given that the current agreed phasing strategy was identified in 2014, based on surveys undertaken in 2010, and that the build out of Coed Darcy has not yet reach the development quantum assumed to be reached by 2015, the phasing strategy can now be reviewed to update it based on updated traffic surveys and updated development assumptions.

Table 2-1 – M4 J43 ITM Addendum II (September 2014) Proposed M4 J43 Phasing Strategy

Current Agreed Mitigation Phasing

Phase	Trigger Point
Existing NAR (Interim Phase 1)	0 – 100
Phase I Signalisation of NE and SE junctions in line with agreed S.278 NAR scheme.	101 – 500 S.278 scheme approved and a construction contract to commence work in place. Assumes SAR not yet implemented.
Phase IA See Figure 2-1	501 – 800 Assumes SAR not yet implemented.
Phase II See Figure 2-2	801 – 2000 Includes implementation of SAR
Phase III See Figure 2-3	2001 – 4000 Includes implementation of SAR

Figure 2-1 - Phase IA Junction Site Mitigation Overview

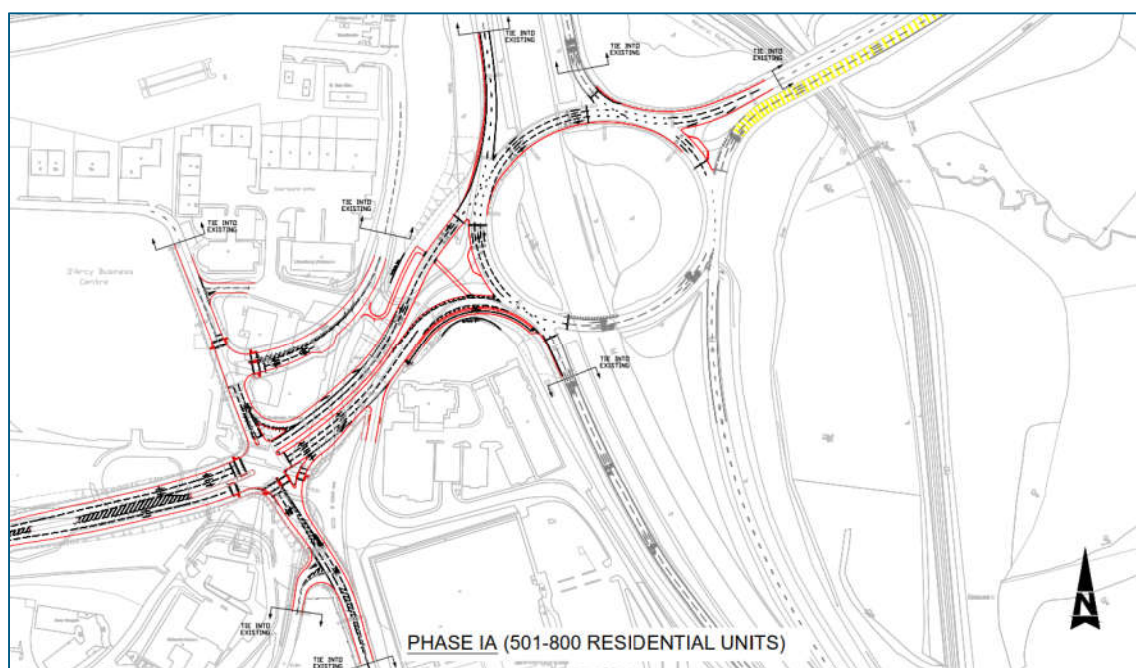


Figure 2-2 - Phase II Junction Site Mitigation Overview

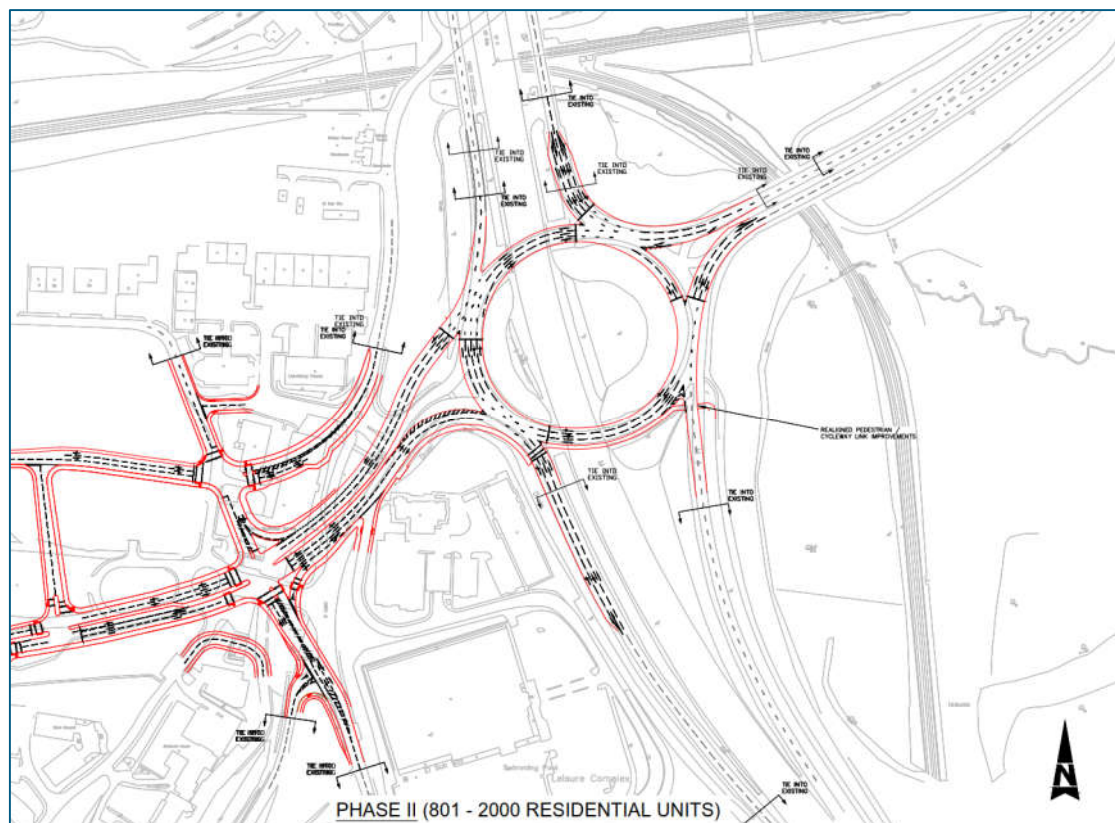
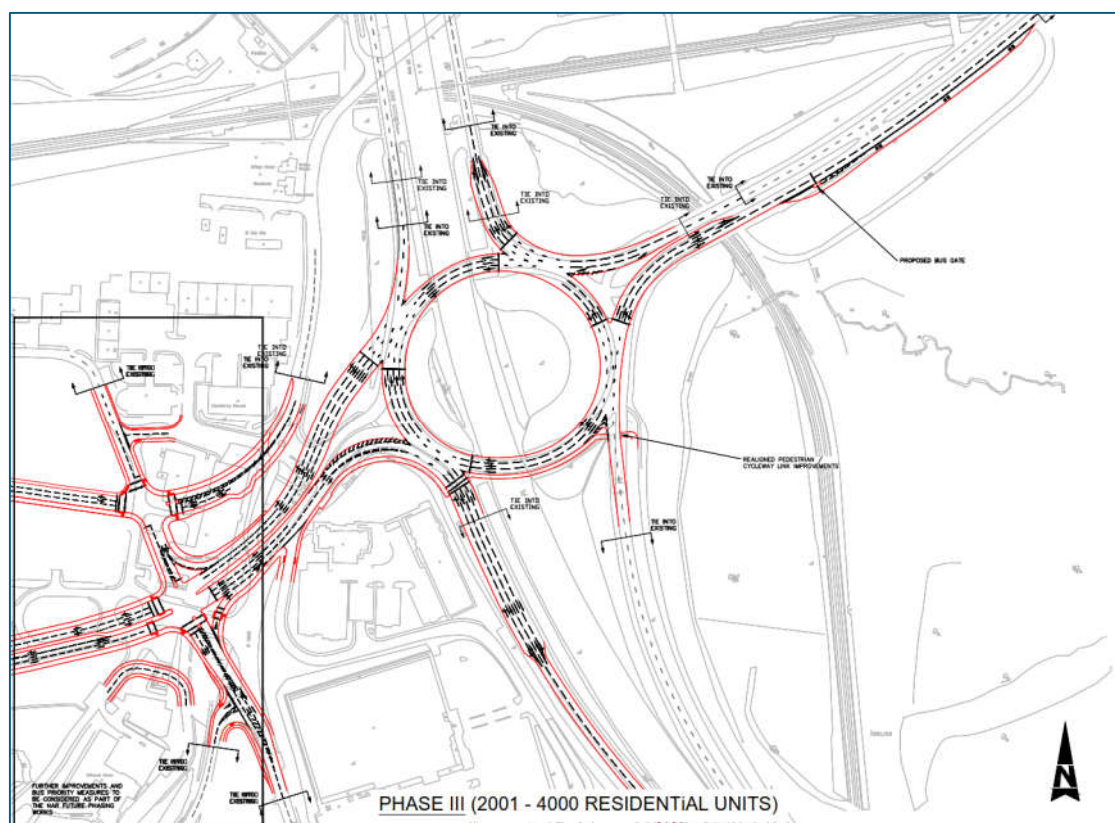


Figure 2-3 - Phase III Junction Site Mitigation Overview



3. Updated Traffic Surveys

3.1. M4 J43 Traffic Survey December 2018

Manual Classified Counts were undertaken at the M4 J43 on Tuesday 4th December 2018. Junction analysis was carried out using peak hour demand flows as these, by definition, represent the time in the day when traffic demand is greatest. The traffic survey hours were 07:00-10:00 and 16:00-19:00. The total traffic flows through the study area are summed over every 15-minute period, before then being expressed as total traffic flows in the network over hourly periods.

As with the assessments undertaken as reported in the ITM Report, and Addendum Reports I and II, the weekday peak hours are defined as:

- AM Peak = 08:00-09:00; and
- PM Peak = 16:00-17:00.

The Manual Classified Counts undertaken at M4 J43 in December 2018 had the following junction arm layout:

- Arm A – M4 North;
- Arm B – A465 East;
- Arm C – M4 South; and
- Arm D – B4290.

Table 3-1 and Table 3-2 outline the AM and PM peak hour turning flows in PCUs at M4 J43 from the December 2018 surveys.

Table 3-1 - M4 J43 AM Peak Hour Turning Flows (PCUs)

AM Peak	A	B	C	D	Total
A	1	814	4	152	971
B	1139	18	1036	216	2409
C	0	815	2	162	979
D	177	300	319	5	801
Total	1317	1947	1361	535	5160

Table 3-1 shows that the two predominant movements in the AM peak are from A465 East to M4. The largest movement is from A465 East to M4 North (1139 PCUs), and from A465 East to M4 South (1036 PCUs).

Table 3-2 - M4 J43 PM Peak Hour Turning Flows (PCUs)

PM Peak	A	B	C	D	Total
A	3	992	2	121	1118
B	881	20	708	208	1817
C	0	1180	1	342	1523
D	153	309	178	2	642
Total	1037	2501	889	673	5100

Table 3-2 shows that the predominant movements in the PM peak are from the M4 to the A465 East. The largest movement is from the M4 South to A465 East (1180 PCUs), and from M4 North to A465 East (992 PCUs). The

A465 East to M4 is also a noticeable movement during the PM peak with 881 PCUs travelling from A465 East to M4 North, and 708 PCUs travelling from A465 East to M4 South.

3.2. Comparison of December 2018 traffic survey with previous forecasts

Analysis of the 2018 data at M4 J43 demonstrates that the existing background traffic flows are mostly below forecasts made in both the 2005 TA (based on surveys undertaken in 2004) and subsequent Integrated Traffic Modelling (ITM) undertaken in 2014 (based on surveys undertaken in 2010) to update the phasing strategy for the Northern Access Road (NAR) and M4 J43.

Table 3-3 shows a summary of the 2018 flows at M4 J43, which include 300 dwellings occupied at Coed Darcy, and previous background traffic forecasts which assume no development at Coed Darcy.

Table 3-3 - Comparison of previous background traffic growth forecasts and 2018 surveys at M4 J43

Year	Presented in	Survey base	AM Peak (total flow at J43)	PM Peak (total flow at J43)	Coed Darcy assumptions
2018 Actual Flow	This TN	2018	5160	5100	300 dwellings occupied
2017 Forecast Flow	2014 ITM Notes	2010	5086	5734	No development
2025 Forecast Flow	2014 ITM Notes	2010	5404	6113	No development
2008 Forecast Flow	2005 TA	2004	5285	5006	No development
2010 Forecast Flow	2005 TA	2004	5396	5112	No development
2025 Forecast Flow	2005 TA	2004	6148	5832	No development

Table 3-3 demonstrates that, in the AM peak in the 2018 actual flow is lower than all previous forecast background flows except for the 2017 forecast from the 2014 ITM assessments, albeit with the 2018 flows including trips generated by the 300 dwellings already occupied. The 2018 PM peak flows were lower than all previous forecasts without development at Coed Darcy, with the exception of the 2008 forecast made in the 2005 TA, and considerably lower than the most recent previous forecasts made as part of the 2014 ITM assessments.

In summary, the traffic data collected in December 2018 shows that current flows at M4 J43, which includes trips generated by the 300 dwellings already occupied, are mostly lower than previous forecast background traffic flows in the AM peak, and significantly lower in the PM peak. It is therefore considered appropriate to revisit and update the agreed mitigation strategy at M4 J43 as was set out in ITM Addendum II in 2014.

4. Updated Modelling of Phase IA

4.1. Introduction

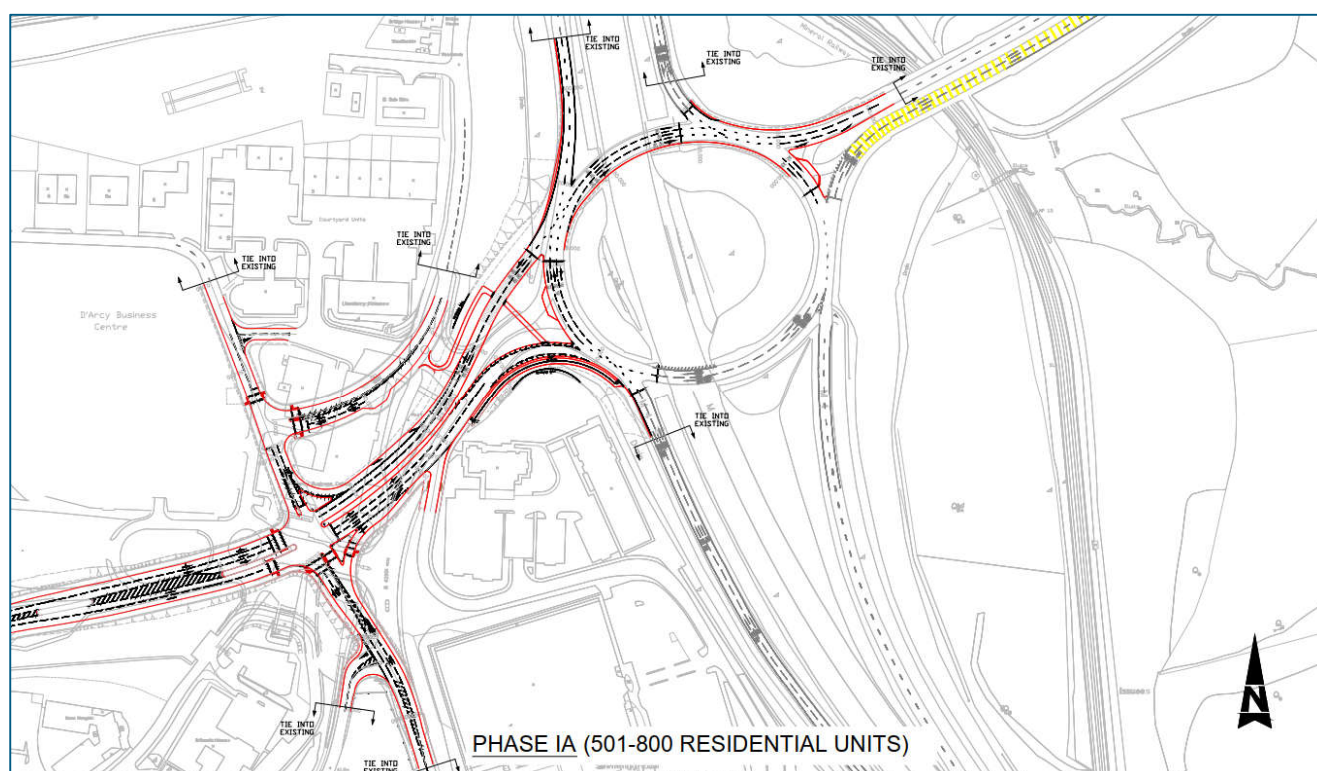
As discussed in Chapter 2, Phase IA was identified in the 2014 ITM Addendum II report as being required for >500 dwellings at Coed Darcy, with Phase II being implemented for >800 dwellings, along with the SAR and highway link. The updated assessment of Phase IA uses up to date traffic surveys and assumptions to reevaluate the capacity of the junction to accommodate trips generated by an increasing number of dwellings.

4.2. Approach and Assumptions

4.2.1. Junction Layout

Phase IA is shown in Figure 4-1, and provides a modest widening of the A465 eastbound exit from the junction to provide three lanes for a short distance on exit from the roundabout. Otherwise Phase IA is as per the existing layout. This layout is part of the mitigation strategy agreed with SWTRA, having previously reached technical approval for the layout.

Figure 4-1 - M4 J43 Phase IA



4.2.2. Scenarios Tested

The updated analysis has considered a number of scenarios regarding the number of dwellings at Coed Darcy, these being totals of 800, 1,100 and 1,250 dwellings, including the 300 dwellings already constructed and occupied.

The current estimated build out schedule for Coed Darcy is set out below in Table 4-1. As part of the mitigation for Coed Darcy, the Southern Access Road (SAR) will also be delivered and this will change the pattern of traffic movements with circa 15% accessing Coed Darcy from the south via the SAR, as per the trip distributions set out in paragraph 2.3.3 the 2005 TA. Previous assessments assumed Phase I and IA would occur before the SAR was implemented. However, the SAR is programmed for opening in 2022, and that falls within the current Phase IA timescales, therefore it is assumed the SAR is open in the Phase IA assessments.

The assessments in this report were undertaken prior to the publication of the Neath Port Talbot Council Joint Housing Land Availability Study (JHLAS) in August 2019. The build out assumptions shown in Table 4-1 and

used for this assessment are compared to the JHLAS site schedule for Coed Darcy, and are shown to be consistent with JHLAS.

Table 4-1 - Coed Darcy Build Out Assumptions

Total Number of Dwellings Assumed	Year	SAR open?	Comparative JHLAS allowance	Comment
800	2022	Yes	2021-22: 691 2022-23: 961	Assumptions are in line with JHLAS
1,100	2024	Yes	2022-23: 961 2023-24: 1191	Assumptions are in line with JHLAS
1,250	2025	Yes	2023-24: 1,200 2024-25: 1,400**	JHLAS likely to reach 1,250 in 2024, but impact on analysis not likely to be material

**Note: value for 2024/25 assumed based in 250 per annum, as not stated in JHLAS

4.2.3. Background Traffic Growth

Background traffic growth has been applied to the movements between the M4 and A465 (and vice versa). This is consistent with the 2005 TA which assumed no growth in background traffic on the B4290.

Background traffic growth has been derived for 2022, 2024, and 2025 from Temprow, and the growth factors summarised in Table 4-2.

Table 4-2 – Temprow Growth Factors

Base Year	Future Year	AM Peak			PM Peak		
		Production	Attraction	Combined	Production	Attraction	Combined
2018	2022	1.0267	1.0323	1.02950	1.0302	1.0267	1.02850
2018	2024	1.0371	1.0456	1.04135	1.0429	1.0376	1.04025
2018	2025	1.0423	1.0523	1.0473	1.0492	1.0430	1.04610

4.2.4. Trip Generation and Distribution

Trip generation and distribution of vehicle movements remains consistent with those set out in previous ITM assessments and the 2005 TA. Based on this, the assigned vehicle trips travelling through M4 J43 for the various scenarios set out above can be calculated.

The AM peak and PM peak OD matrices for the forecast trips generated by Coed Darcy are presented in Appendix A. Note that as 300 dwellings have already been constructed and are occupied, the base traffic already accounts for the trips generated by the 300 dwellings. The OD matrices represent the difference between the scenario total (e.g. 1250 dwellings) and the 300 already occupied, rather than the absolute trip generation for the scenario total.

The total (forecast base plus development trips) AM and PM peak OD matrices for each of the assessment scenarios set out in Table 4-1 are included in Appendix B.

4.2.5. Modelling

Previous modelling of M4 J43 undertaken as part of the ITM assessments used Transyt 14, but Transyt 14 has been updated. The current analysis of the junction has been updated to Transyt 15. All modelling assumptions and parameters are consistent with the previous assessments.

4.3. Assessment Results Summary

Table 4-3 and Table 4-4 provides a summary of the Phase IA results for the scenarios assessed. The results provide Degree of Saturation (DoS) and Mean Max Queue (MMQ) results, consistent with the results reported in the previous ITM assessments for M4 J43. For signalised roundabouts it is considered that approach links are at capacity when the DoS reaches 95% and gyratory links are at capacity when the DoS reaches 90%. Any links where capacity thresholds of 95% DoS (approach links) and 90% DoS (gyratory links) are exceeded, or the forecast MMQ exceeds available queue storage, are highlighted accordingly. The full Transyt output files are provided in Appendix C.

Table 4-3 - Phase IA AM Peak Results

Link Description	Storage Capacity (PCU)	AM Peak					
		2022 Base + 800 dwellings		2024 Base + 1100 dwellings		2025 Base + 1250 dwellings	
		DOS (%)	MMQ (PCU)	DOS (%)	MMQ (PCU)	DOS (%)	MMQ (PCU)
M4 SB Offslip - Lane 1	-	63	8	64	9	64	9
M4 SB Offslip - Lane 2	-	62	9	64	9	64	9
M4 SB Offslip Gyratory - Lane 1	13	66	8	68	9	70	9
M4 SB Offslip Gyratory - Lane 2	13	32	2	34	2	35	2
M4 SB Offslip Gyratory - Lane 3	14	60	9	63	9	64	9
A465 - Lane 1	-	92	26	96	30	96	32
A465 - Lane 2	-	92	27	96	31	96	33
A465 Gyratory - Lane 1	7	84	5	84	6	87	7
A465 Gyratory - Lane 2	9	38	4	38	4	39	4
M4 NB Offslip - Lane 1	-	84	12	86	12	86	12
M4 NB Offslip - Lane 2	-	84	12	85	12	86	13
M4 NB Offslip Gyratory - Lane 1	20	77	13	79	14	80	15
M4 NB Offslip Gyratory - Lane 2	21	55	8	55	9	56	9
B4290 - Lane 1	-	73	9	85	12	89	13
B4290 - Lane 2	-	73	10	84	13	89	14
B4290 Gyratory - Lane 1	9	72	9	71	9	72	9
B4290 Gyratory - Lane 2	10	54	9	53	9	53	8
B4290 Gyratory - Lane 3	11	42	9	41	9	42	9

The results summarised in Table 4-3 show that the DoS on all approach lanes is below 95% except on the A465 approach with 1100 and 1250 dwellings, when the approach is forecast to be marginally over capacity, with a DoS of 96%. Although this is above the 95% capacity threshold for approach links, the increase in queues from the test with 800 dwellings, where the DoS is below 95%, is c. 4 vehicles per lane. The DoS on all gyratory lanes is below 90%, and MMQ on all gyratory lanes are forecast to be within available storage capacity.

Table 4-3 shows that the M4 J43 Phase IA scheme operates within capacity during the AM peak period for the 800 dwelling scenario, and marginally over capacity with 1100 dwellings and 1250 dwellings. However, the impact on queuing on A465 is negligible and it can be considered that 1250 dwellings can be accommodated.

Table 4-4 - Phase IA PM Peak Results

Link Description	Storage Capacity (PCU)	PM Peak					
		2022 Base + D (800)		2024 Base + D (1100)		2025 Base + D (1250)	
		DOS (%)	MMQ (PCU)	DOS (%)	MMQ (PCU)	DOS (%)	MMQ (PCU)
M4 SB Offslip - Lane 1	-	80	12	83	13	85	14
M4 SB Offslip - Lane 2	-	80	13	83	14	85	15
M4 SB Offslip Gyratory - Lane 1	13	65	10	66	10	66	10
M4 SB Offslip Gyratory - Lane 2	13	46	6	47	7	48	7
M4 SB Offslip Gyratory - Lane 3	14	55	9	56	9	57	9
A465 - Lane 1	-	84	18	86	19	87	19
A465 - Lane 2	-	84	18	86	20	87	20
A465 Gyratory - Lane 1	7	30	4	32	4	33	4
A465 Gyratory - Lane 2	9	27	4	33	5	35	5
M4 NB Offslip - Lane 1	-	87	17	89	18	90	18
M4 NB Offslip - Lane 2	-	87	17	89	19	90	19
M4 NB Offslip Gyratory - Lane 1	20	71	9	79	12	83	14
M4 NB Offslip Gyratory - Lane 2	21	77	7	78	7	78	8
B4290 - Lane 1	-	80	8	85	9	87	10
B4290 - Lane 2	-	80	9	85	10	87	11
B4290 Gyratory - Lane 1	9	40	4	41	4	41	4
B4290 Gyratory - Lane 2	10	53	8	53	8	53	8
B4290 Gyratory - Lane 3	11	55	8	57	8	57	8

The results summarised in Table 4-4 show that the DoS on all approach lanes is forecast to be below the capacity thresholds of 95% (approach links) and 90% (gyratory links), and the MMQ on all gyratory lanes are within the available storage capacity, in the PM peak. Table 4-4 shows that M4 J43 Phase IA scheme operates within capacity during the PM peak period for all tested scenarios (800 dwellings, 1100 dwellings, and 1250 dwellings), with a maximum DoS of 87% on the A465 approach, with a MMQ of c.20 PCUs in both lanes.

4.4. Conclusion

In conclusion, the updated assessment of Phase IA shows that, as a result of background traffic flows not reaching the levels forecast in previous assessments, M4 J43 Phase IA scheme has the capacity to accommodate additional dwellings at Coed Darcy, over and above the 800 dwellings agreed in the current mitigation strategy. The tests undertaken have shown that M4 J43 is forecast to operate satisfactorily with 1250 dwellings at Coed Darcy, in both the AM peak and PM peak.

5. Consideration of Phase IB

5.1. Introduction

Testing of Phase IA identified that Phase IA could accommodate trips generated by up to 1,250 dwellings at Coed Darcy. Whilst this is a significant improvement compared to the existing phasing strategy, St. Modwen want to consider whether any elements of the agreed Phase II mitigation could be added to Phase IA to further extend the strategy before more significant highway works are required.

A further interim phase has been considered to identify whether any of the elements of the agreed Phase II mitigation (see Figure 2-2) could be added to Phase IA to increase the duration before further works are needed at M4 J43.

5.2. Approach and Assumptions

A review of the Phase II highway works was undertaken to identify which elements could be implemented relatively easily and have sufficient design life that further roadworks would not be required for a number of years, thereby reducing disruption to road users. These elements of Phase II were then tested as Phase IB. The Phase II elements are considered in turn in Table 5-3.

All other assumptions as set out in Chapter 4 are the same for Chapter 5, the only differences being the scenarios tested with Phase IB, these being 1,250, (for comparison with Phase IA), 1,500 and 1,750 dwellings at Coed Darcy, and the associated opening years. The updated scenario assumptions and background traffic growth factors are presented in Table 5-1 and Table 5-2.

The AM peak and PM peak OD matrices for the forecast trips generated by Coed Darcy for these revised scenarios are presented in Appendix A. The total (forecast base + development trips) AM and PM peak OD matrices for each of the assessment scenarios set out in Table 5-1 are included in Appendix B.

Table 5-1 - Coed Darcy Build Out Assumptions

Total Number of dwellings	Year	SAR open?
1,250	2025	Yes
1,500	2026	Yes
1,750	2027	Yes

Table 5-2 – Tempro Growth Factors

Base Year	Future Year	AM Peak			PM Peak		
		Production	Attraction	Combined	Production	Attraction	Combined
2018	2025	1.0423	1.0523	1.0473	1.0492	1.0430	1.0461
2018	2026	1.0475	1.0589	1.0532	1.0555	1.0485	1.0520
2018	2027	1.0519	1.0648	1.0584	1.0613	1.0533	1.0573

Table 5-3 - Consideration of Phase II scheme elements for inclusion in Phase IB

Element	Comment	Consider as part of Phase IB?	Additional comments
	Works to M4 SB off slip require substantial earthworks and realignment of the A465 exit.	No	A465 discussed below
	Works to provided widening on the A465 approach require realignment of the roundabout on the inside, requiring new structure. Widened exit to A465 requires substantial earthworks and realignment of M4 off slip (see above)	No	N/A
	Widening of gyratory carriageway over southern bridge can be accommodated on existing bridge structure.	Yes (see below, ref 1B-1)	Phase IA tests showed these links were approaching capacity with 1,100 dwellings on account of high flows from A465 to M4 NB.
	Works to M4 NB off slip require substantial earthworks and realignment of the A465 exit.	No	N/A
	Widening the exit to B4290 can be accommodated with moderate off line works	Yes (see below, ref 1B-2)	Two lane exit will maximise the benefits of widening the gyratory carriageway over the southern bridge
	Widening the northbound gyratory carriageway to 4 lanes can be accommodated with off line works, no structural works or substantial earth works required. Similarly, widening the B4290 approach to 3 lanes could be accommodated.	Yes (see below, Ref 1B-3)	Widening the gyratory carriageway only

5.3. Phase IB Proposed Layout

Taking into account the assessment in Table 5-3, for the purpose of this assessment Phase IB has been assumed to include the following in addition to the Phase IA layout:

- Ref 1B-1 - Widening of the gyratory carriageway on the southern bridge from 2 lanes to 3 lanes;
- Ref 1B-2 - Widening of the exit to B4290 & Coed Darcy from a single lane to 2 lanes; and
- Ref 1B-3 - Widening the northbound gyratory carriageway from 3 lanes to 4 lanes to provide two lanes each for M4 NB traffic and A465 traffic.

5.4. Phase IB Assessment Results Summary

Table 5-4 and Table 5-5 provide a summary of the Phase IB results for the scenarios assessed, the results provide Degree of Saturation (DoS) and Mean Max Queue (MMQ) results, consistent with the results reported in the ITM assessments. Any links where capacity thresholds of 95% DoS (approach links) and 90% DoS (gyratory links) are exceeded, or the forecast MMQ exceeds available queue storage, are highlighted accordingly. The full Transyt output files are provided in Appendix D.

Table 5-4 - Phase IB AM Peak Results

Link Description	Storage Capacity (PCU)	AM Peak					
		2025 Base + 1250 dwellings		2026 Base + 1500 dwellings		2027 Base + 1750 dwellings	
		DOS (%)	MMQ (PCU)	DOS (%)	MMQ (PCU)	DOS (%)	MMQ (PCU)
M4 SB Offslip - Lane 1	-	64	9	65	9	66	9
M4 SB Offslip - Lane 2	-	64	9	65	9	66	10
M4 SB Offslip Gyratory - Lane 1	13	70	9	71	9	73	10
M4 SB Offslip Gyratory - Lane 2	13	35	3	36	3	38	3
M4 SB Offslip Gyratory - Lane 3	14	64	10	66	10	69	11
A465 - Lane 1	-	96	32	99	39	102	50
A465 - Lane 2	-	96	33	99	41	102	52
A465 Gyratory - Lane 1	7	87	5	86	6	85	6
A465 Gyratory - Lane 2	9	39	4	38	4	38	4
M4 NB Offslip - Lane 1	-	86	12	87	12	88	13
M4 NB Offslip - Lane 2	-	86	13	87	13	88	13
M4 NB Offslip Gyratory - Lane 1	20	21	2	22	3	23	3
M4 NB Offslip Gyratory - Lane 2	21	61	11	62	11	62	11
M4 NB Offslip Gyratory - Lane 3	21	48	8	48	8	47	8
B4290 - Lane 1	-	80	12	87	14	93	17
B4290 - Lane 2	-	81	12	87	14	93	18
B4290 Gyratory - Lane 1	9	53	6	53	6	52	6
B4290 Gyratory - Lane 2	9	53	6	53	6	53	6

The results summarised in Table 5-4 show that the DoS on the A465 the approach lanes to M4 J43 exceeds 95% in all three scenarios tested. However, the DoS on the gyratory links are below 90% in all scenarios and MMQ on all gyratory lanes are forecast to be within available storage capacity.

Table 5-4 shows that the M4 J43 Phase IB is forecast to operate over capacity when tested with 1750 dwellings in the AM peak, with a maximum DoS of 102% on both A465 approach lanes, resulting in a MMQ of over 50 PCUs in both lanes. Phase IB is also forecast to operate over capacity for 1250 dwellings and 1500 dwellings.

The results for 1250 dwellings provide similar results on the A465 as in Phase IA, suggesting the A465 approach is the critical part of the junction in terms of constraining capacity for future growth. With 1500 dwelling the DoS increases to 99% with a small increase in queuing to c. 40 PCUs per lane.

Table 5-5 - Phase IB PM Peak Results

Link Description	Storage Capacity (PCU)	PM Peak					
		2025 Base + 1250 dwellings		2026 Base + 1500 dwellings		2027 Base + 1750 dwellings	
		DOS (%)	MMQ (PCU)	DOS (%)	MMQ (PCU)	DOS (%)	MMQ (PCU)
M4 SB Offslip - Lane 1	-	82	13	84	14	87	15
M4 SB Offslip - Lane 2	-	82	14	84	15	87	15
M4 SB Offslip Gyratory - Lane 1	13	68	10	68	9	68	9
M4 SB Offslip Gyratory - Lane 2	13	49	8	50	8	52	8
M4 SB Offslip Gyratory - Lane 3	14	59	9	60	10	62	10
A465 - Lane 1	-	85	18	86	19	88	20
A465 - Lane 2	-	85	19	86	20	88	21
A465 Gyratory - Lane 1	7	34	4	36	4	37	4
A465 Gyratory - Lane 2	9	37	5	42	6	46	6
M4 NB Offslip - Lane 1	-	84	16	85	17	86	18
M4 NB Offslip - Lane 2	-	84	17	85	18	86	18
M4 NB Offslip Gyratory - Lane 1	20	42	4	46	5	49	6
M4 NB Offslip Gyratory - Lane 2	21	73	10	77	11	80	12
M4 NB Offslip Gyratory - Lane 3	21	53	4	53	4	54	4
B4290 - Lane 1	-	81	9	85	10	89	11
B4290 - Lane 2	-	81	10	85	11	89	12
B4290 Gyratory - Lane 1	9	35	7	35	7	35	7
B4290 Gyratory - Lane 2	9	35	7	35	7	35	7

The results summarised in Table 5-5 show that the DoS on all approach lanes is forecast to be below 95%. The DoS on the gyratory links is below 90% and MMQ on all gyratory lanes is forecast to be within the available storage capacity.

Table 5-5 shows that the M4 J43 Phase IB is forecast to operate within capacity in the PM peak period for all tested scenarios (1250 dwellings, 1500 dwellings, and 1750 dwellings), with a maximum DoS of 89% on the B4290 approach, and MMQ of c.20 PCUs per lane on the A465 approach.

5.5. Conclusion

In conclusion, the Phase IB tests show M4 J43 is forecast to operate over capacity with 1500 and 1750 dwellings, on account of the A465 approach being over capacity in the AM peak. Although the A465 approach is forecast to be over capacity with 1500 dwellings, the resulting increase in MMQ between 800 dwellings with Phase IA and 1500 dwellings with Phase IB is relatively small, increasing by c.14 PCUs per lane.

The test shows that the A465 approach is the main constraint to capacity at the junction in the AM peak. However, as the number of dwellings increases and the opening year is further into the future, it is increasingly likely that the background growth forecast will not be realised, and the impact on A465 will reduce. Therefore, it is anticipated that by 2026 the 1500 dwelling scenario would operate satisfactorily with reduced queues on the A465 approach.

To address concerns raised by SWTRA / WG regarding the forecast junction performance with Phase IB and 1500 dwellings, it is proposed that the assessment results would be reviewed on completion of 1300 dwellings

to confirm if the anticipated traffic growth has materialised or been exceeded. This would allow the scheduling of Phase II mitigation to be implemented appropriately to minimise development impact and congestion.

6. Summary & Conclusions

6.1. Summary

The updated assessment of the M4 J43 Phase IA mitigation scheme has shown that the levels of background traffic growth at M4 J43, as forecast in previous assessments of the proposed mitigation strategy, have not been realised. The Phase IA mitigation has therefore been reconsidered with updated assessments to identify new thresholds for development at Coed Darcy.

The revised assessments of Phase IA show that it could accommodate up to 1250 dwellings before reaching capacity, with the main constraint to capacity being the A465 approach. This is an increase of 450 dwellings compared to the existing mitigation strategy and would allow for an additional 950 dwellings to be constructed over and above the current provision of 300 dwellings.

Further tests were then undertaken of an additional phase, Phase IB, which included potentially easily deliverable elements from Phase II of the full mitigation strategy, to implement along with Phase IA to maximise the design life and to reduce the need to repeatedly undertake construction work at the junction. The Phase IB package included elements to the south and west of the roundabout, but not the A465 approach on account of the complexity and cost of delivering that element.

The assessment of Phase IB together with Phase IA showed that it could potentially accommodate a total of 1500 dwellings and still operate satisfactorily, albeit the A465 approach would be slightly over capacity in the AM peak.

6.2. Recommendations

The recommendations from the revised assessments are:

- Seek agreement from SWTRA that a combined Phase IA and IB could accommodate up to 1500 dwellings. Implementing Phase IB at the same time as Phase IA would release an additional 1200 dwellings compared to the existing situation; and
- To address concerns raised by SWTRA / WG regarding the forecast junction performance with Phase IB and 1500 dwellings, it is proposed that the assessment results would be reviewed on completion of 1300 dwellings to allow the scheduling of Phase II mitigation to be implemented appropriately to minimise development impact and congestion.

The proposed updated phasing strategy is provided in Table 6-1.

Table 6-1 - M4 J43 Current and Proposed Phasing Strategy

Phase	Current Agreed Phasing	Proposed New Phasing
	Trigger Point	Trigger Point
Phase I Signalisation of NE and SE junctions in line with agreed S.278 NAR scheme.	101 – 500 S.278 scheme approved and a construction contract to commence work in place. Assumes SAR not yet implemented.	Current Phase
Phase IA Figure 2-1	501 – 800 Assumes SAR not yet implemented	Up to 1250 Includes implementation of SAR
Phase IB with Phase IA	-	Up to 1500 Includes implementation of SAR
Phase II	801 – 2000 Includes implementation of SAR	1501 – 2000 Includes implementation of SAR
Phase III	2001 – 4000 Includes implementation of SAR	As per Agreed Phasing

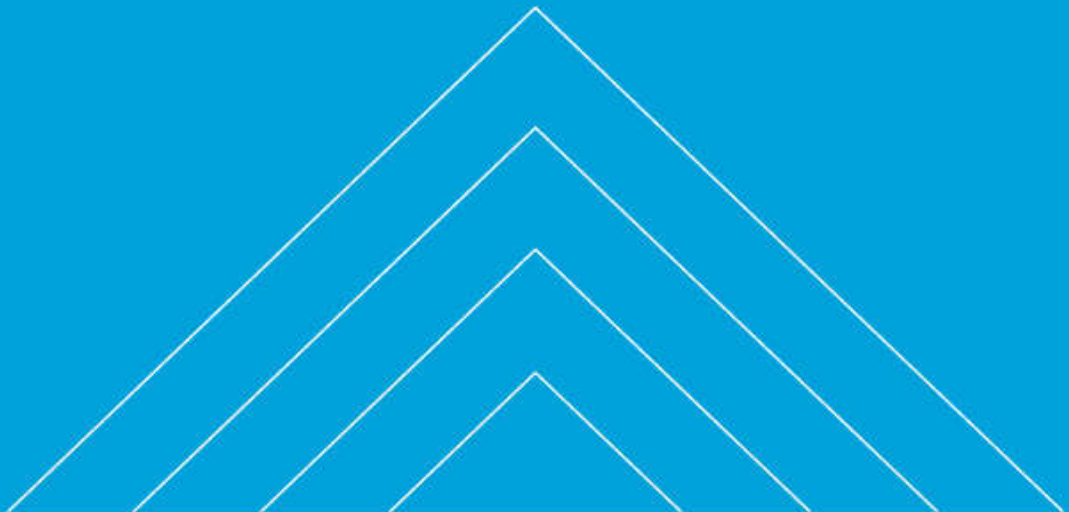
6.3. Indicative Programme

The proposed programme for taking Phase IA / IB forward is as follows. This assumes that the findings of this report are agreed in March 2020. All dates are at this stage indicative.

- Commence Design – April 2020;
- Technical approval of Phase IA / IB – September 2020;
- Revised S278 agreement for the Phase IA / IB works – September to November 2020;
- Procurement of the Phase IA / IB works – October 2020 to March 2021; and
- Construction stage for Phase IA / IB – April 2021 to March 2022.

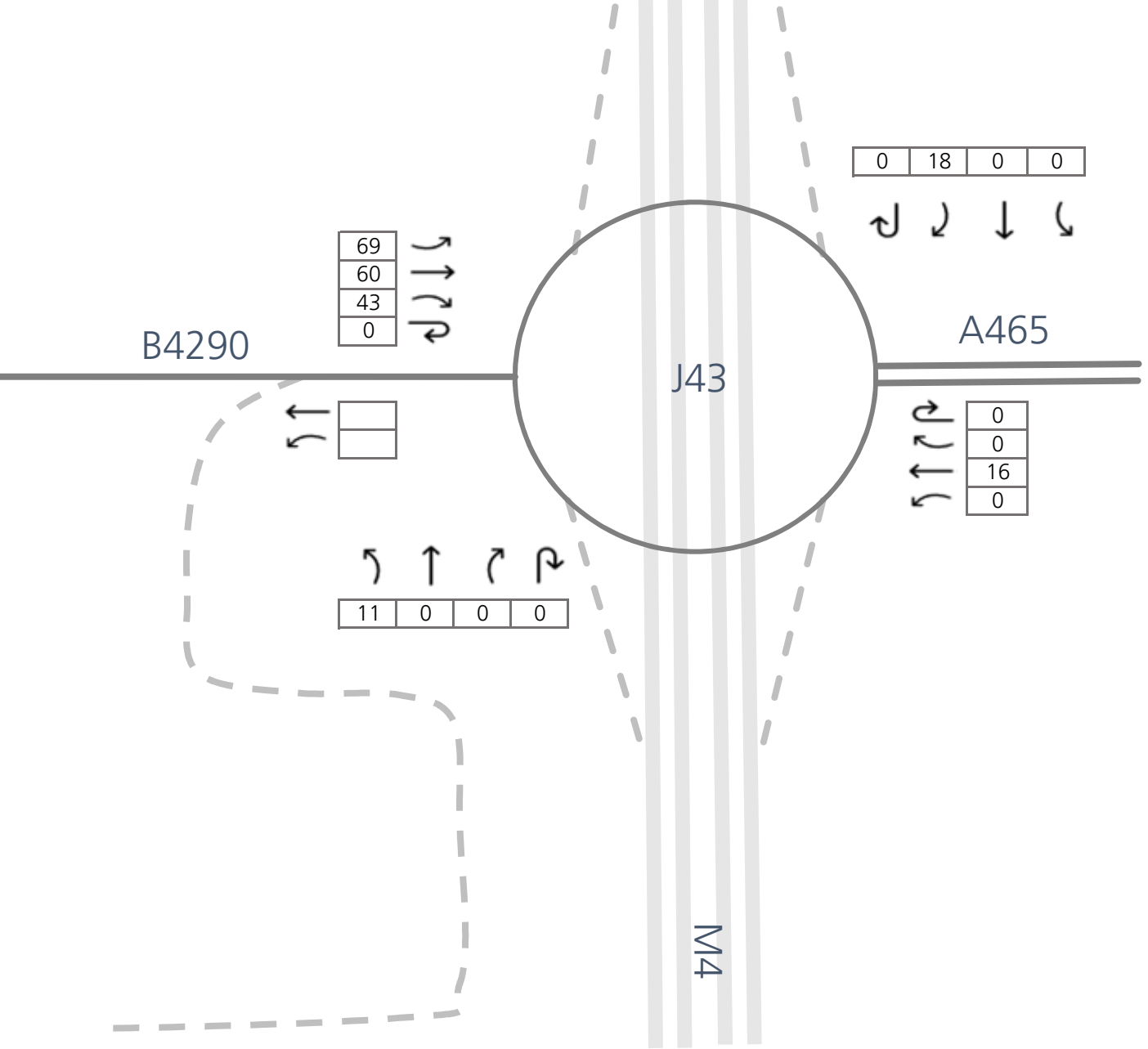
As summarised in Table 4-1, the currently proposed build out rates at Coed Darcy in the NPTCBC Joint Housing Land Availability Study (JHLAS) suggest that 1500 dwellings would be realised in 2025/26. On that basis 1300 dwellings would be realised in 2024/25 and the scheduling for Phase II would be reviewed at that point.

Appendices

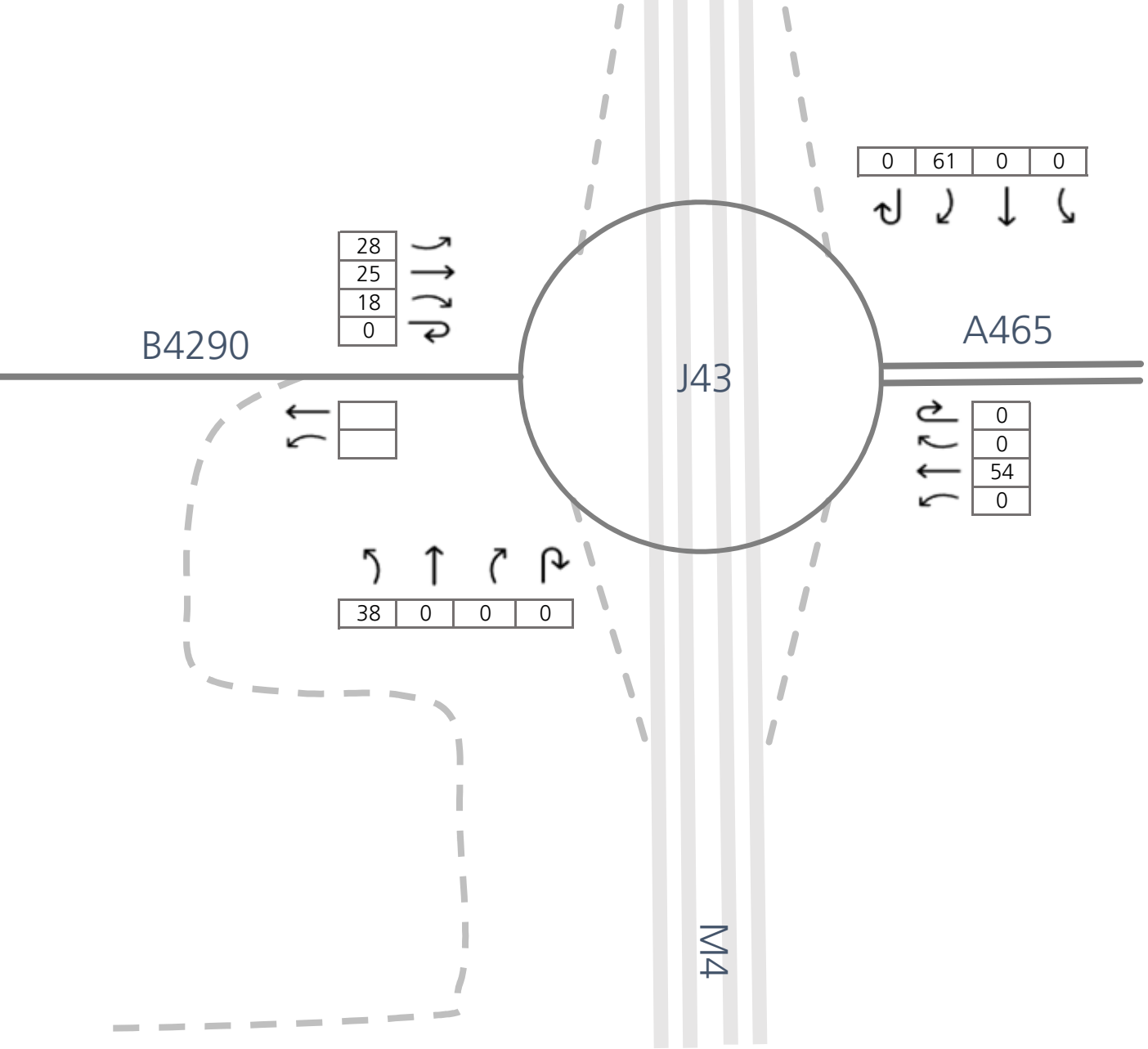


Appendix A. Trip Generation at M4 J43

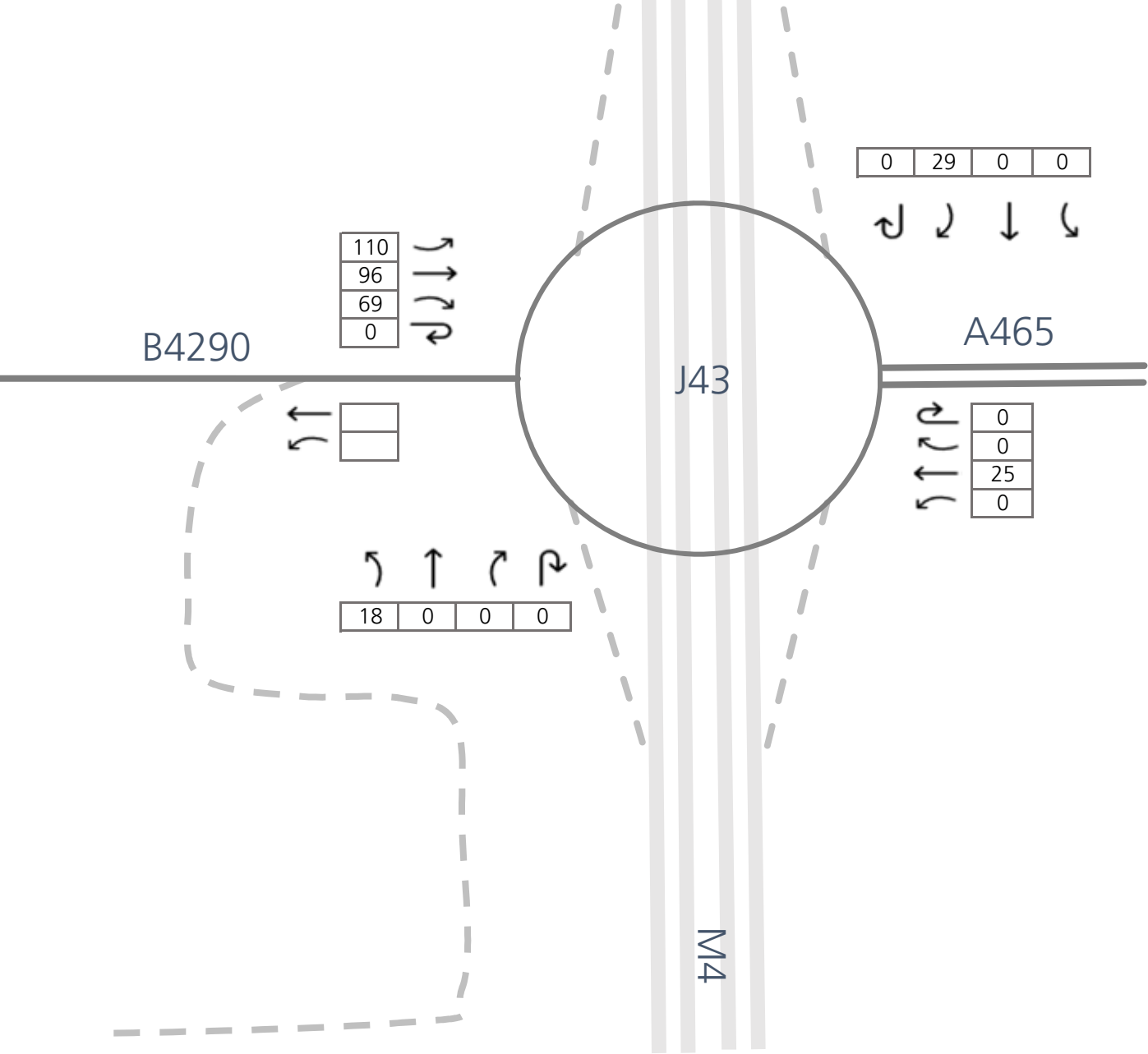
Additional Trip Generation for a total
of 800 dwellings, AM Peak



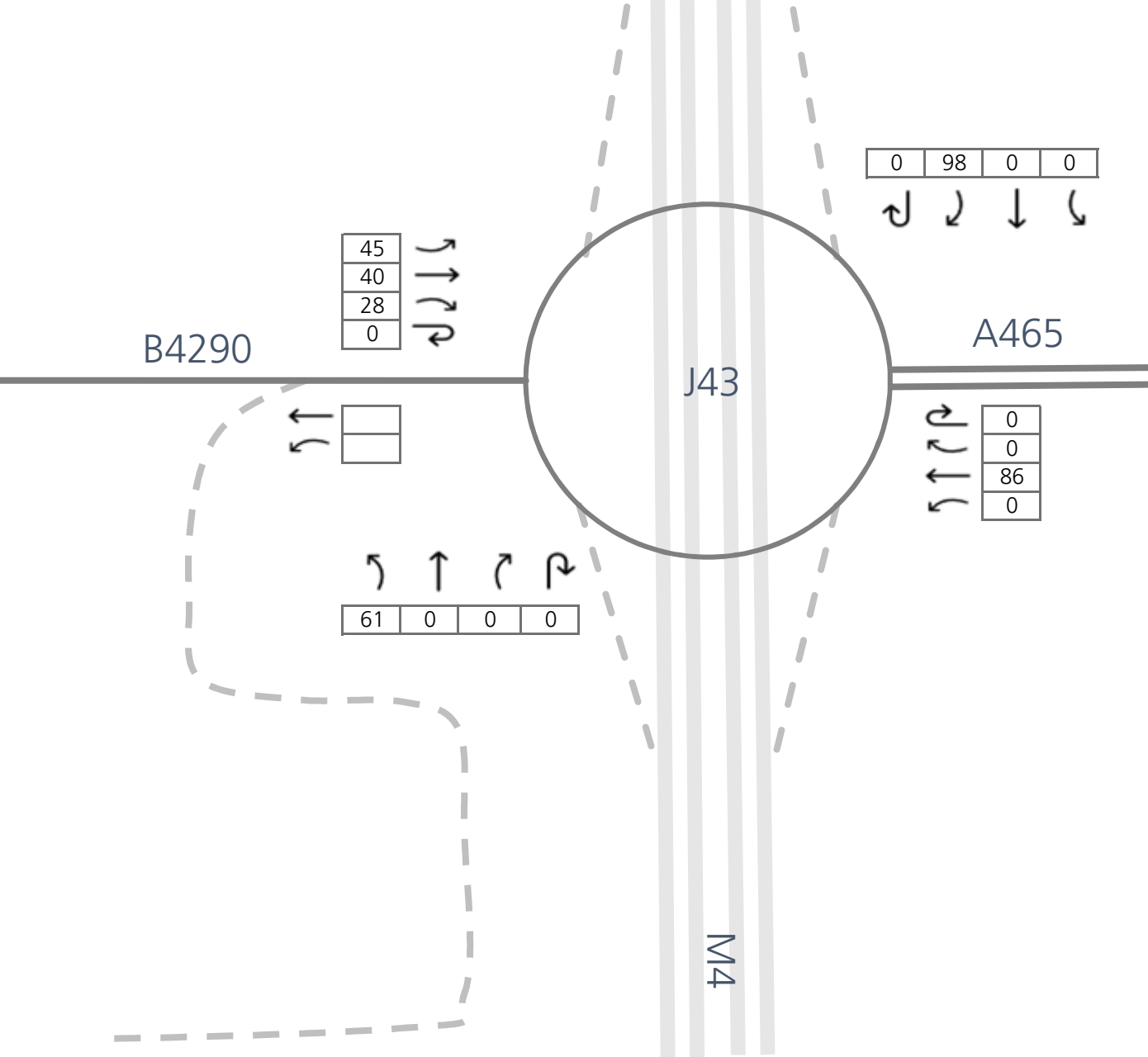
Additional Trip Generation for a total of 800 dwellings, PM Peak



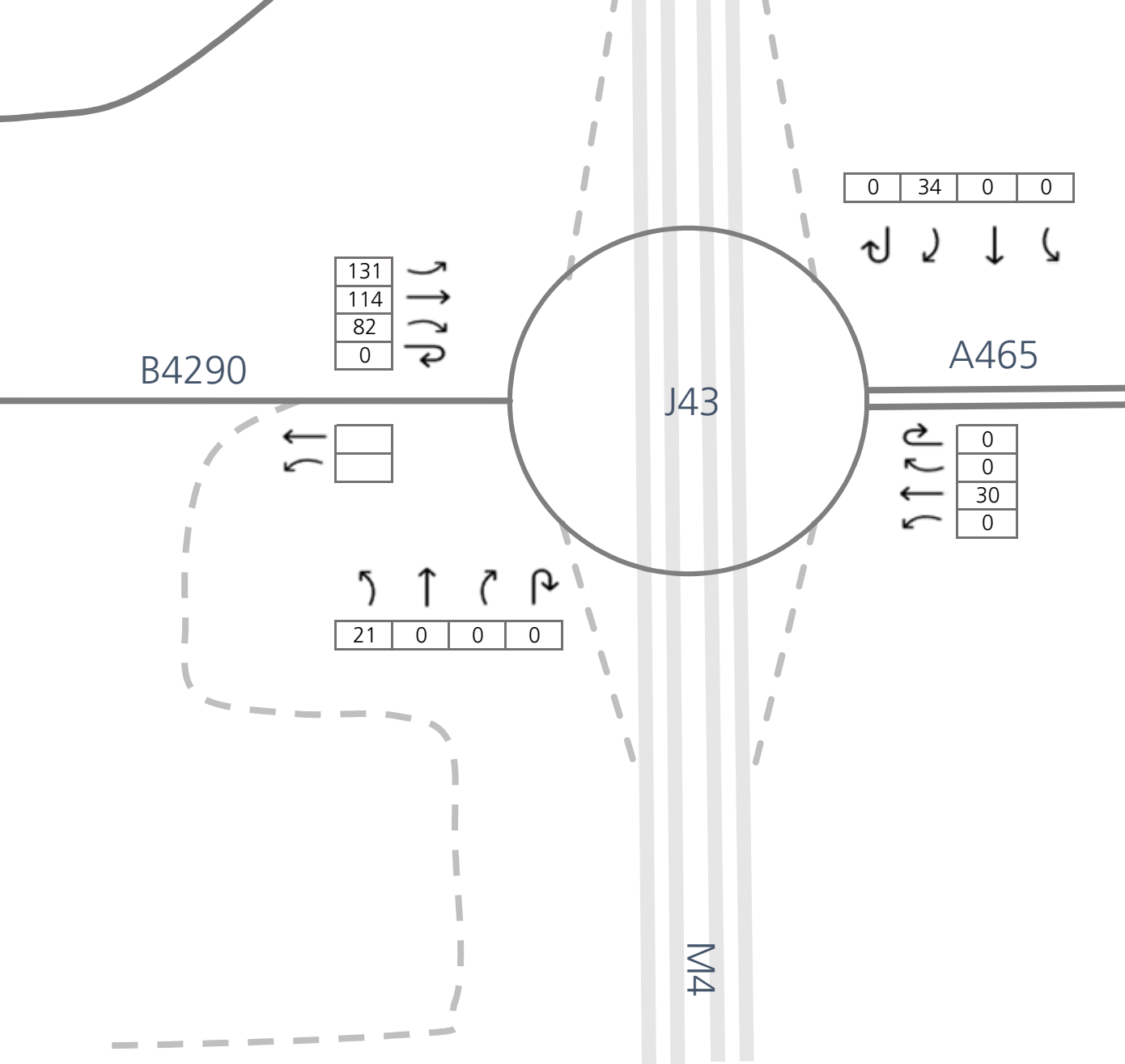
Additional Trip Generation for a total
of 1100 dwellings, AM Peak



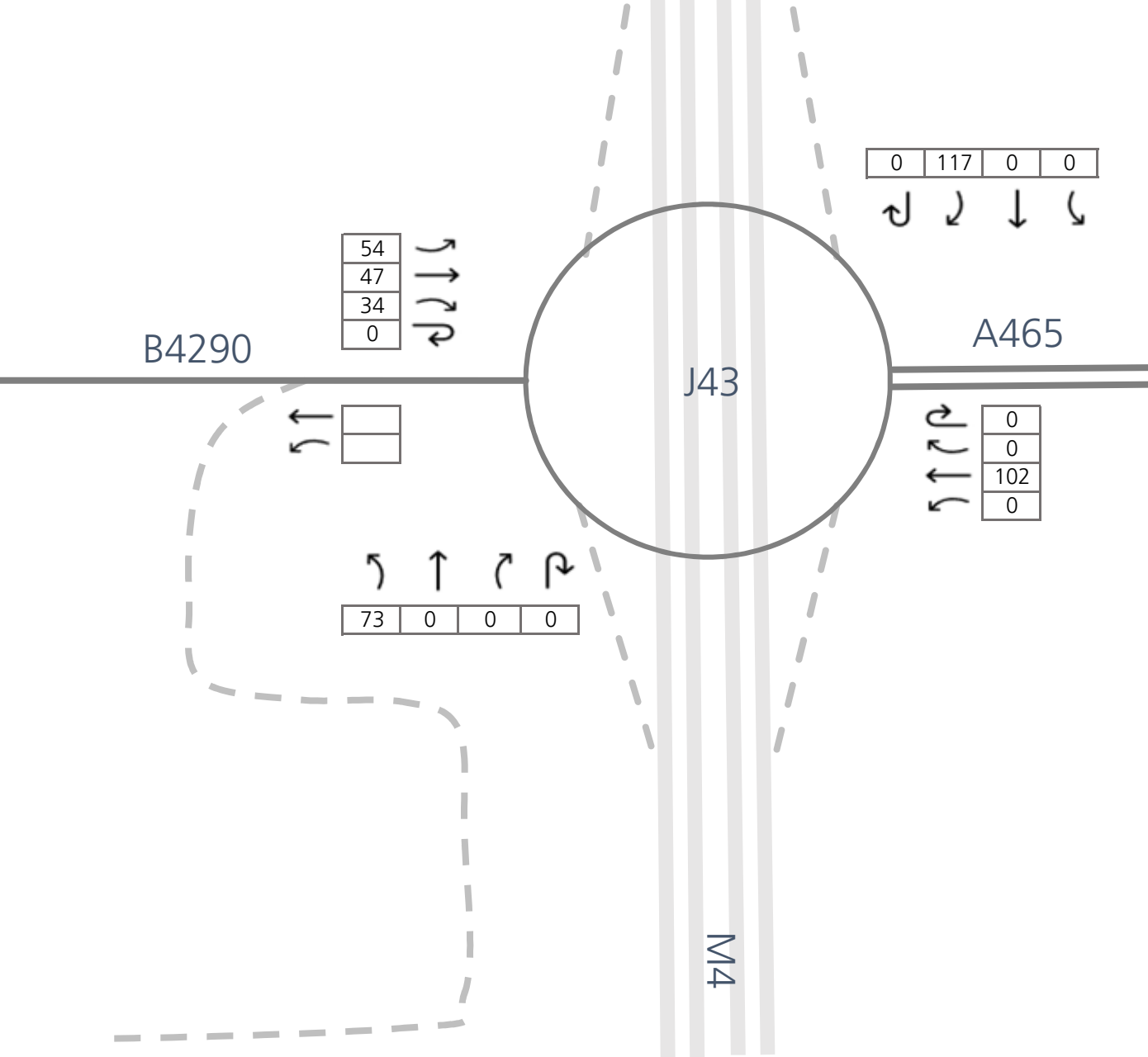
Additional Trip Generation for a
total of 1100 dwellings, PM Peak



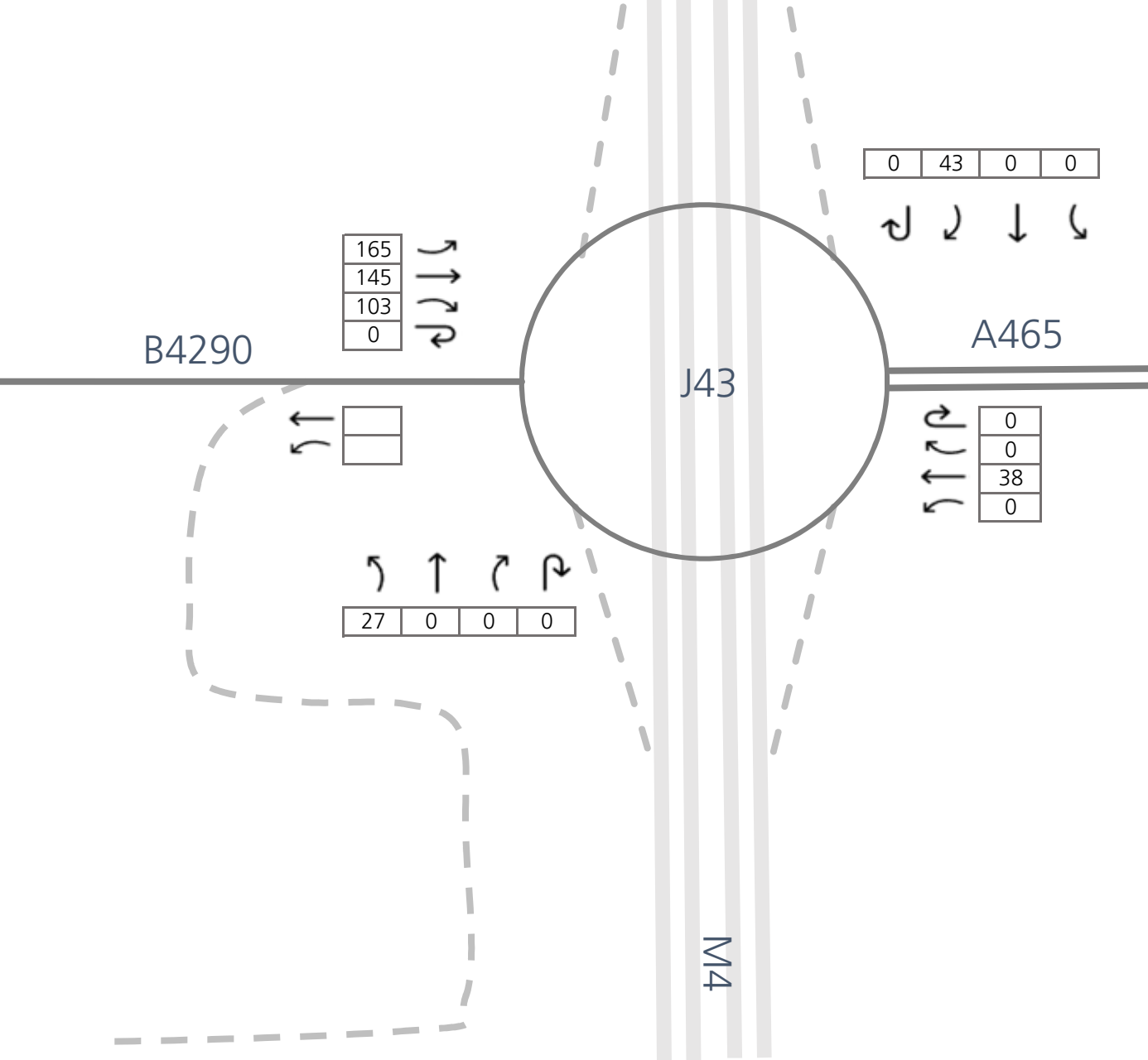
Additional Trip Generation for a total
of 1250 dwellings, AM Peak



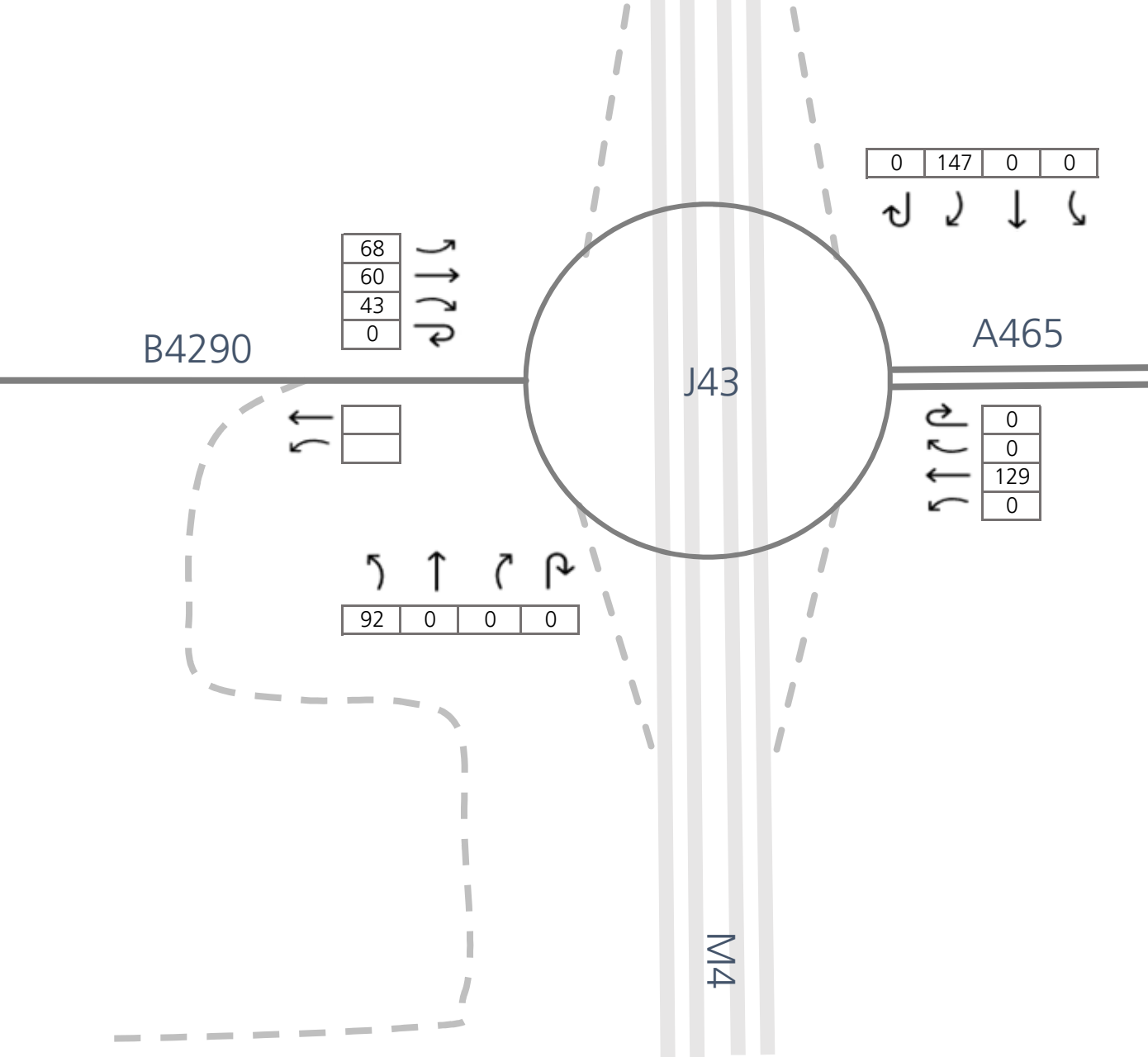
Additional Trip Generation for a total
of 1250 dwellings, PM Peak



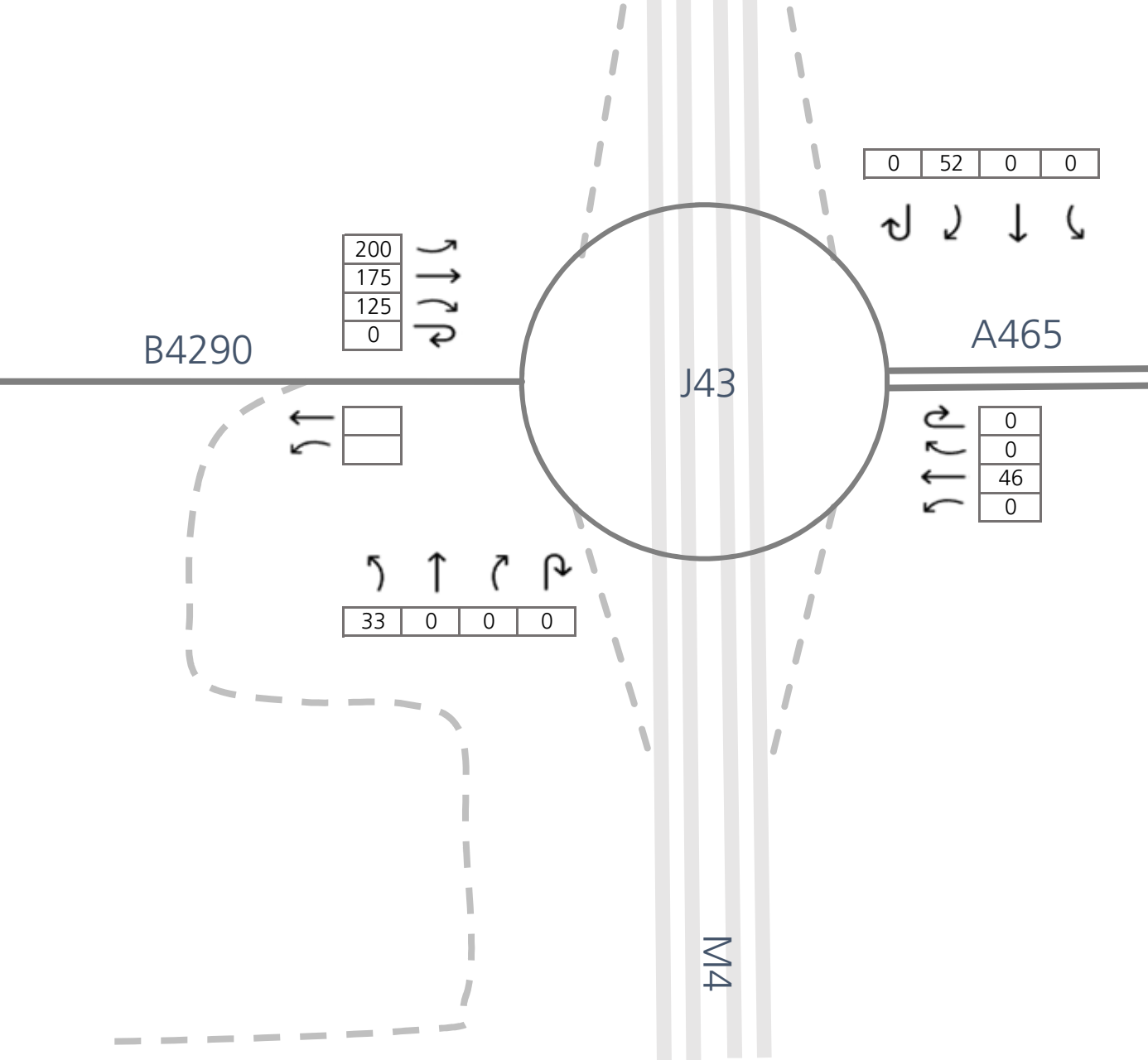
Additional Trip Generation for a total
of 1500 dwellings, AM Peak



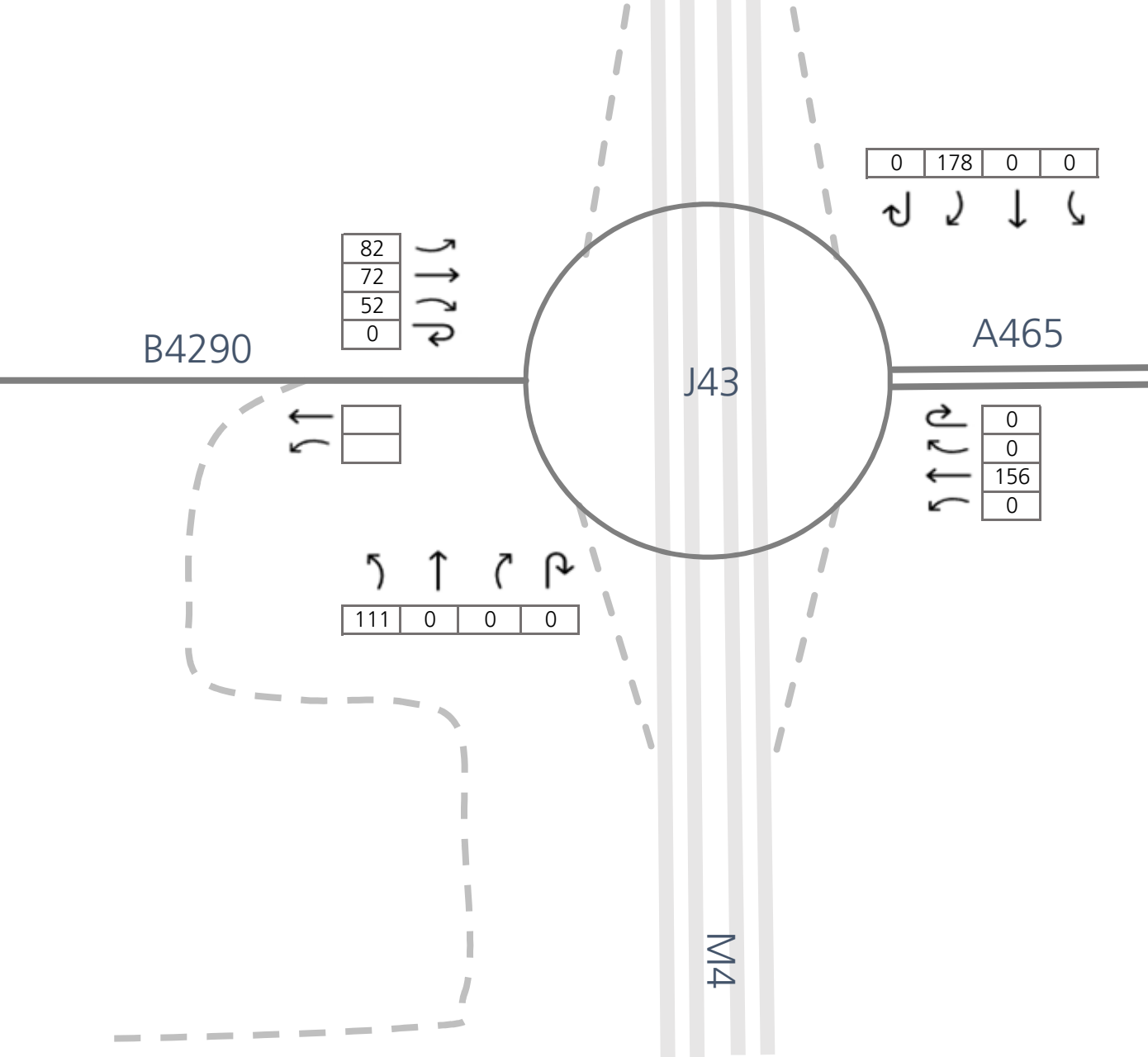
Additional Trip Generation for a total
of 1500 dwellings, PM Peak



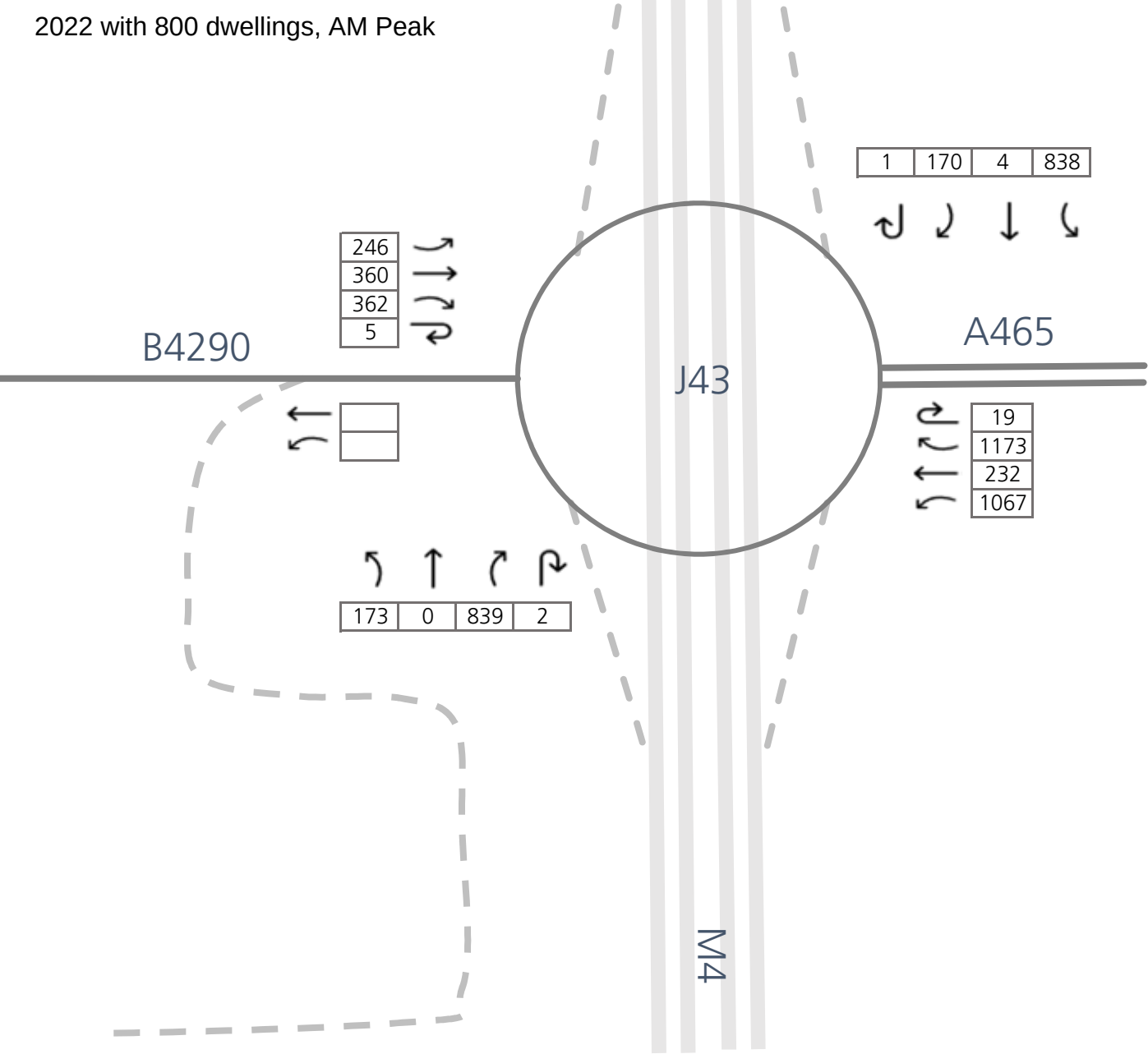
Additional Trip Generation for a total
of 1750 dwellings, AM Peak

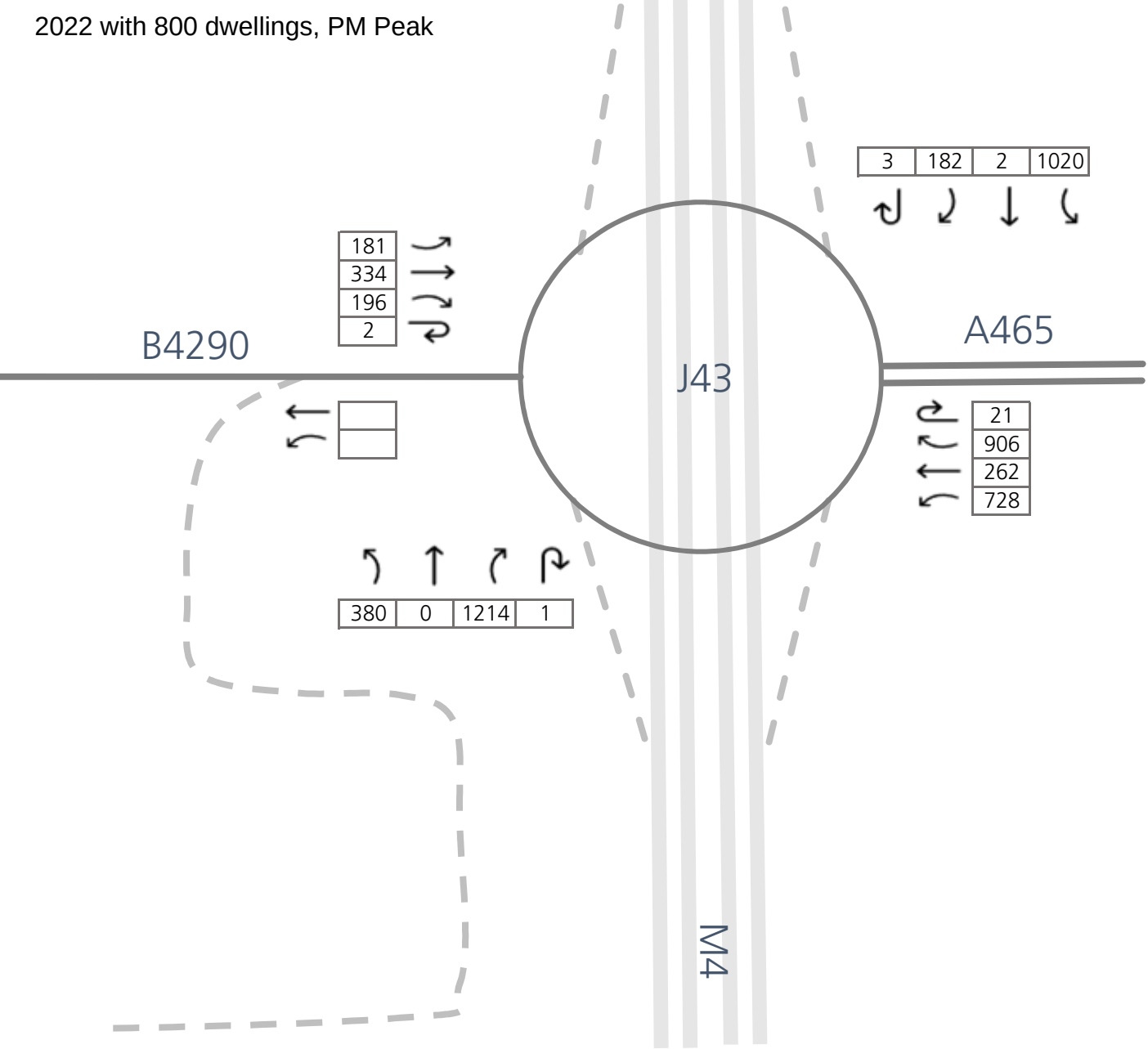


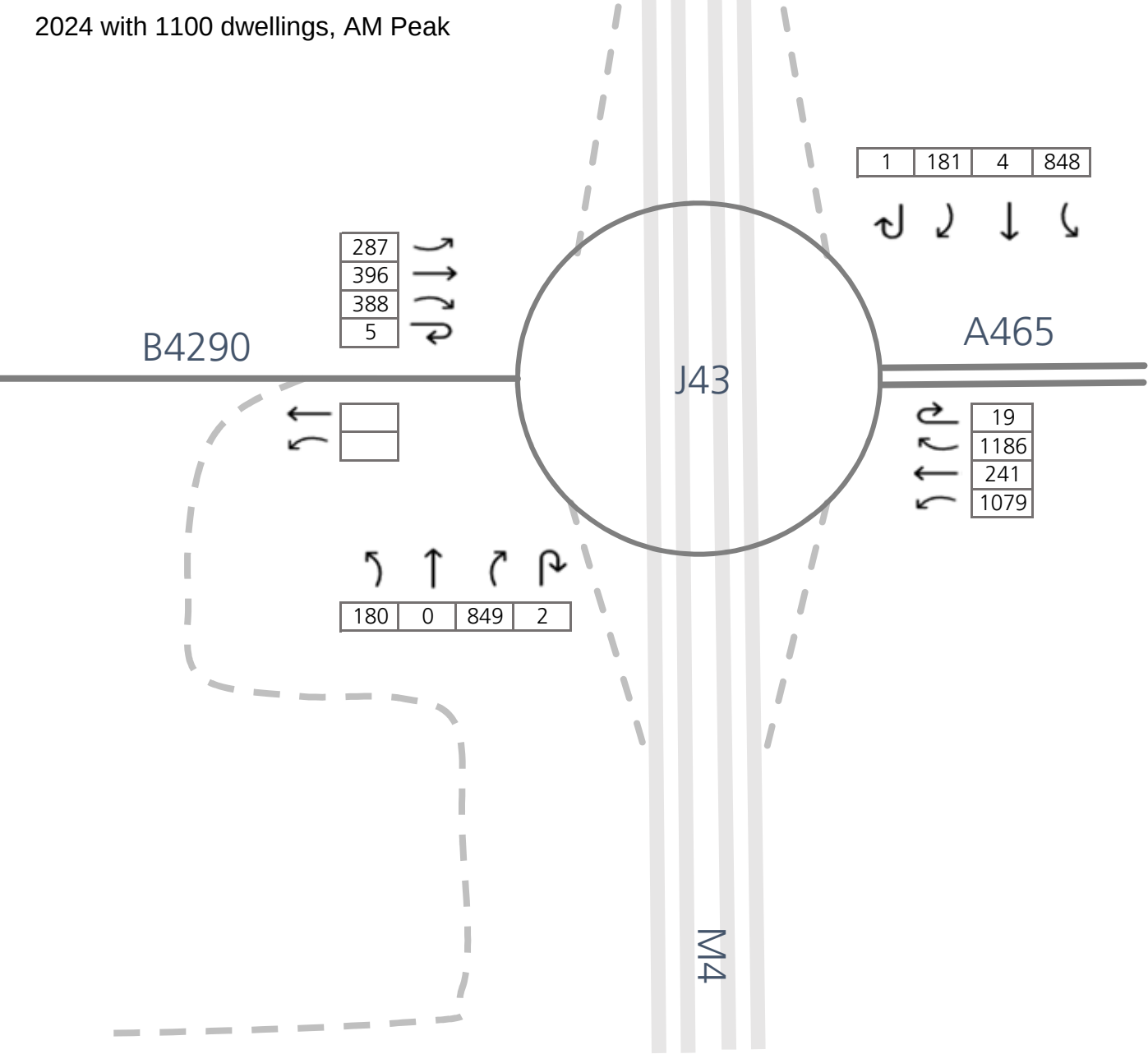
Additional Trip Generation for a total
of 1750 dwellings, PM Peak

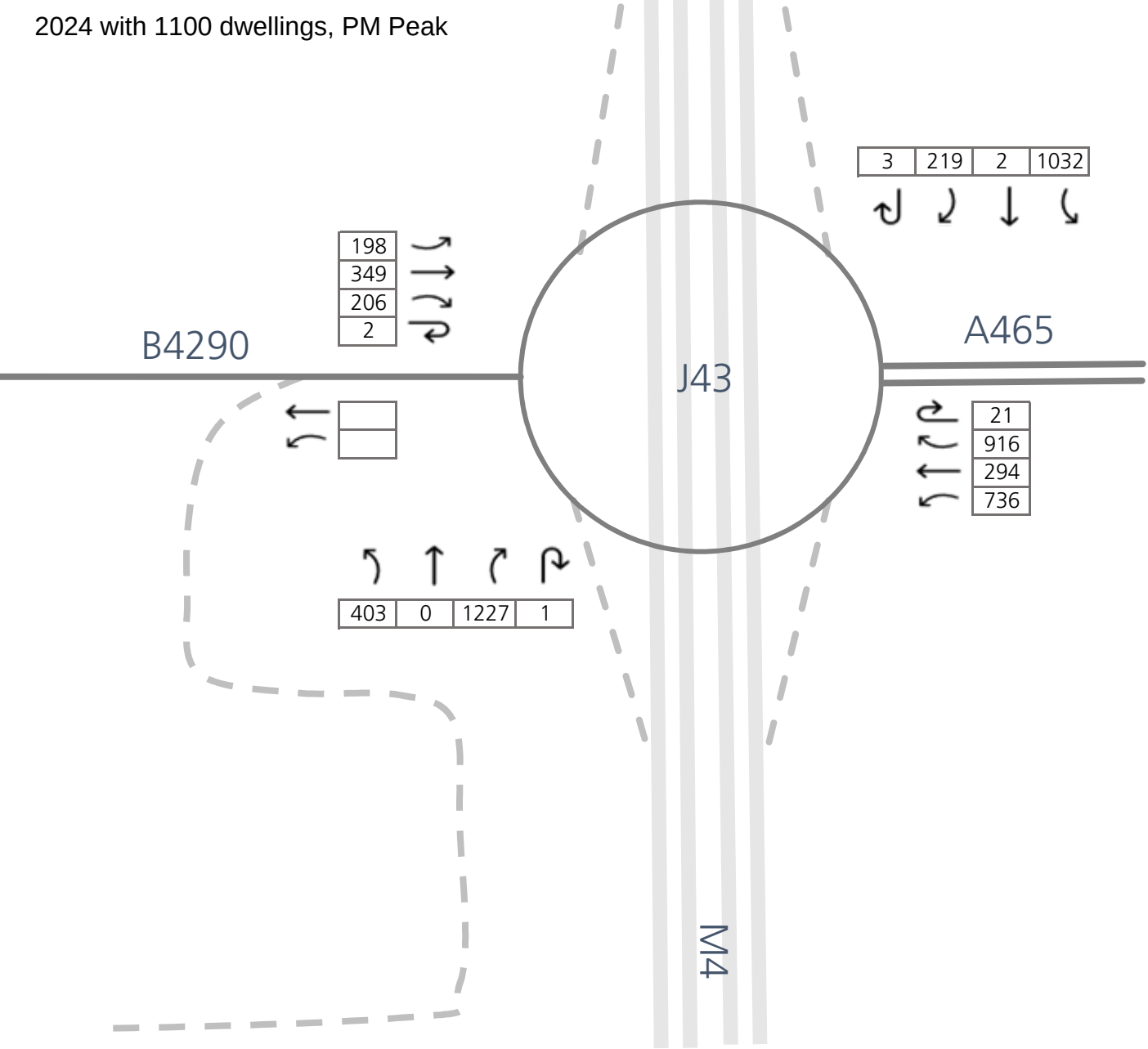


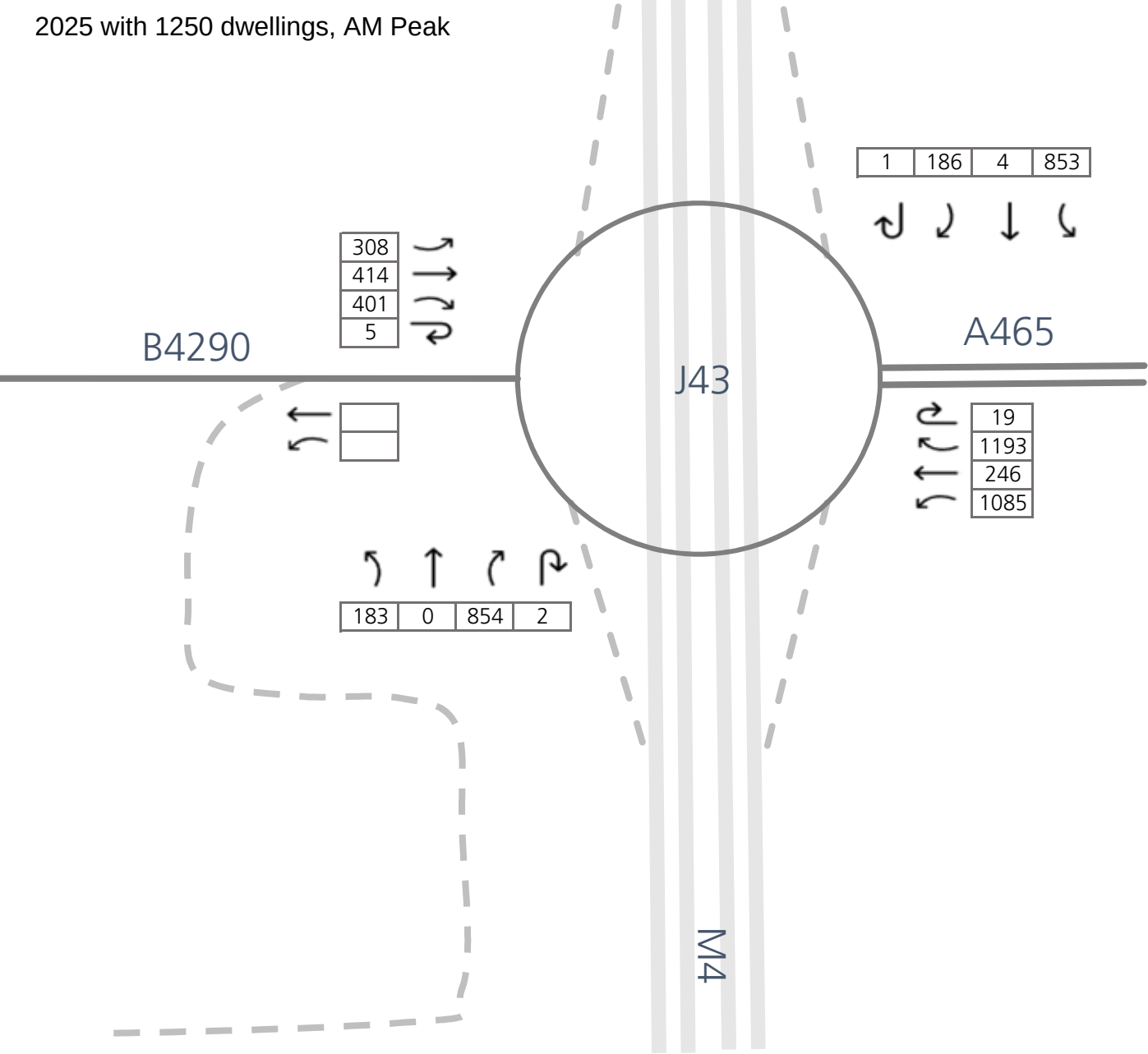
Appendix B. M4 J43 Traffic Flows by Scenario

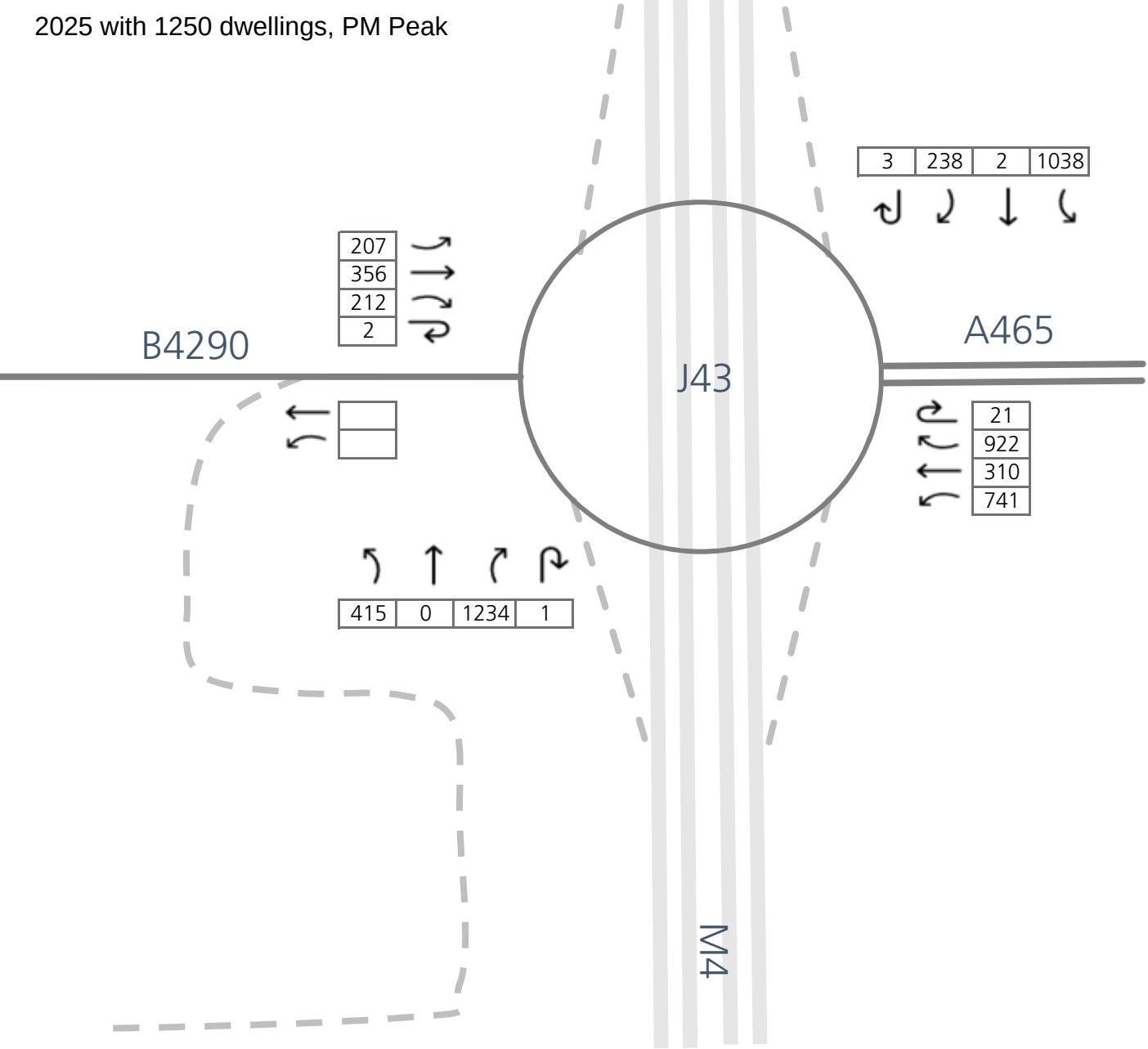


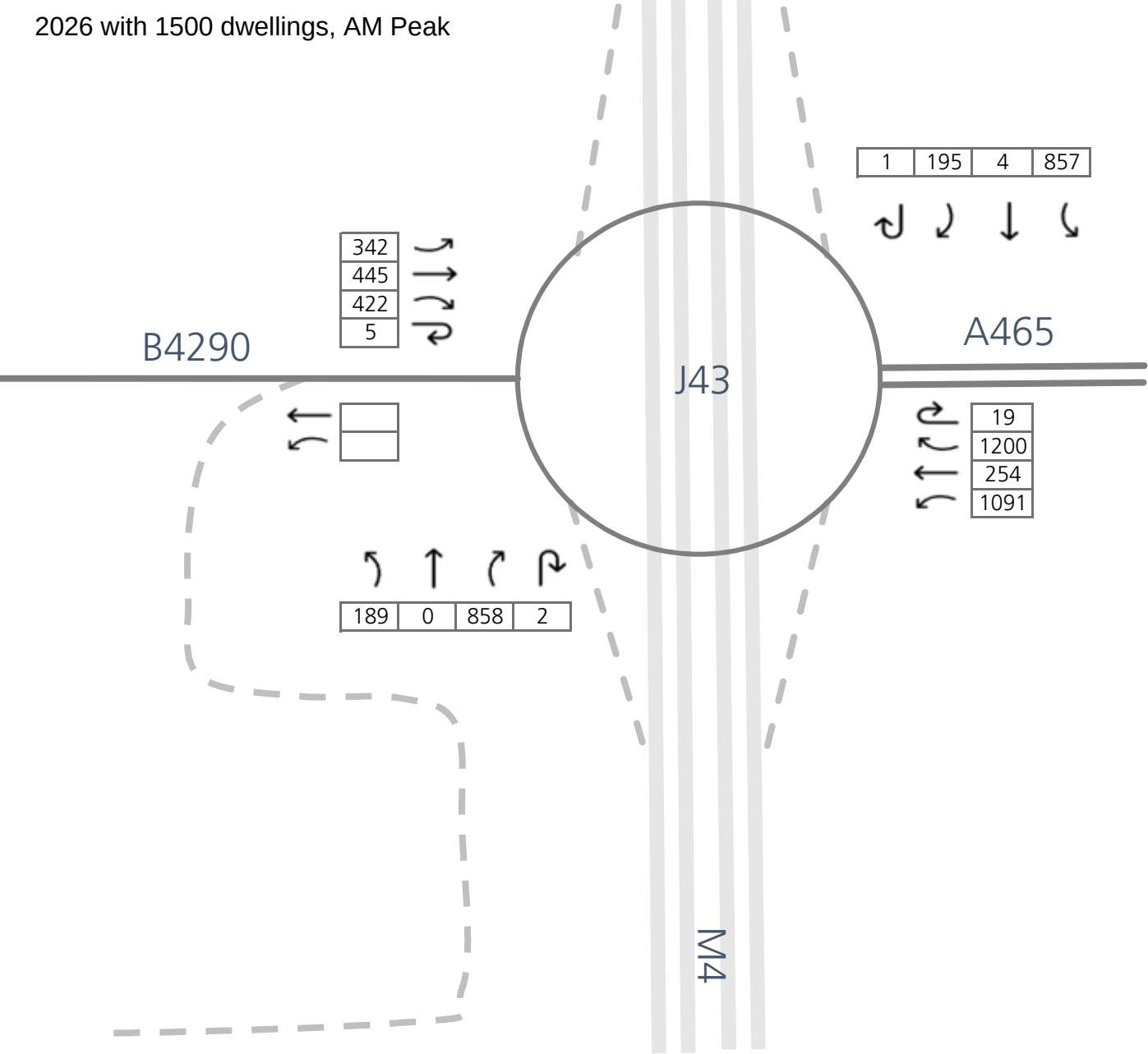


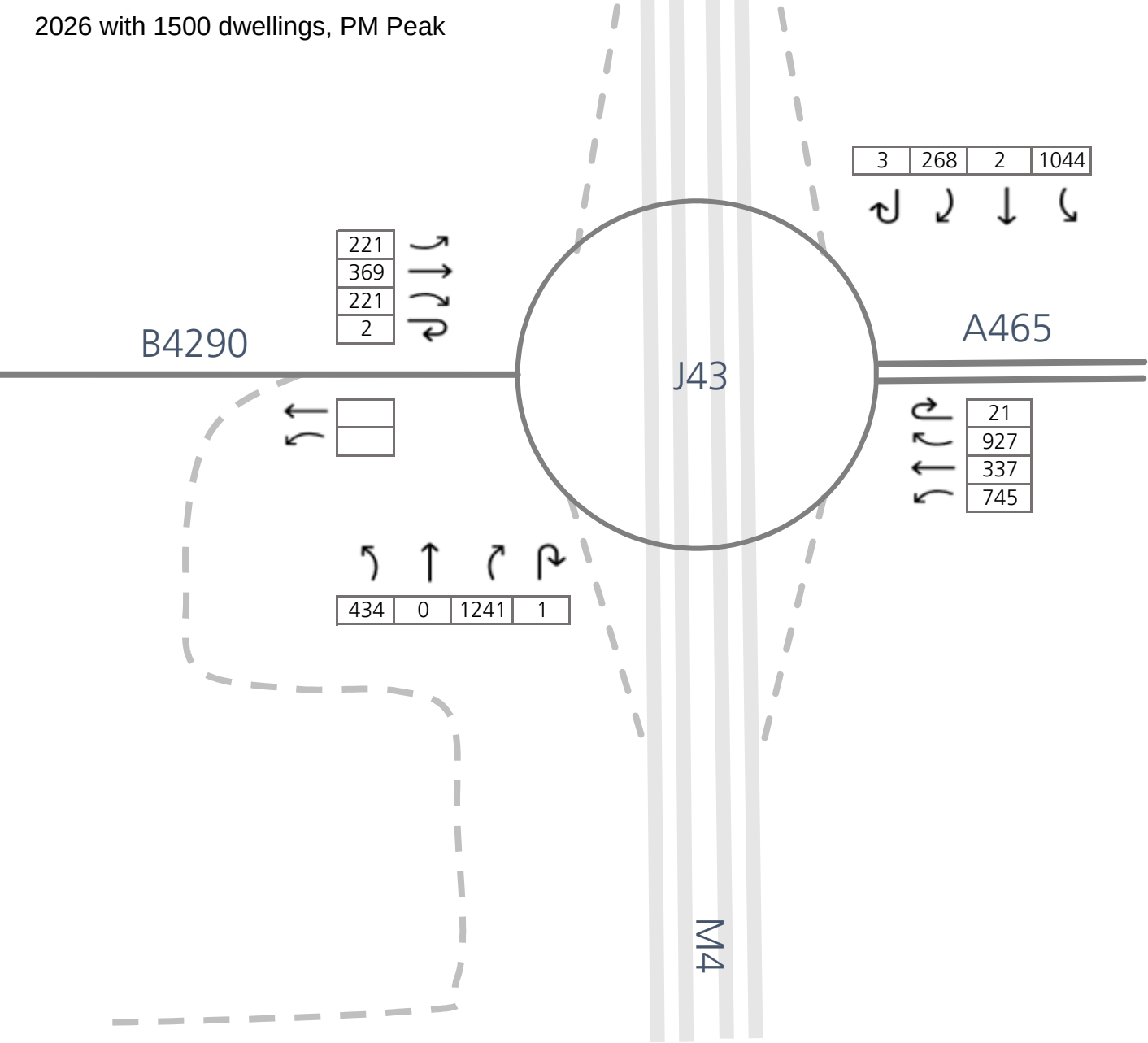


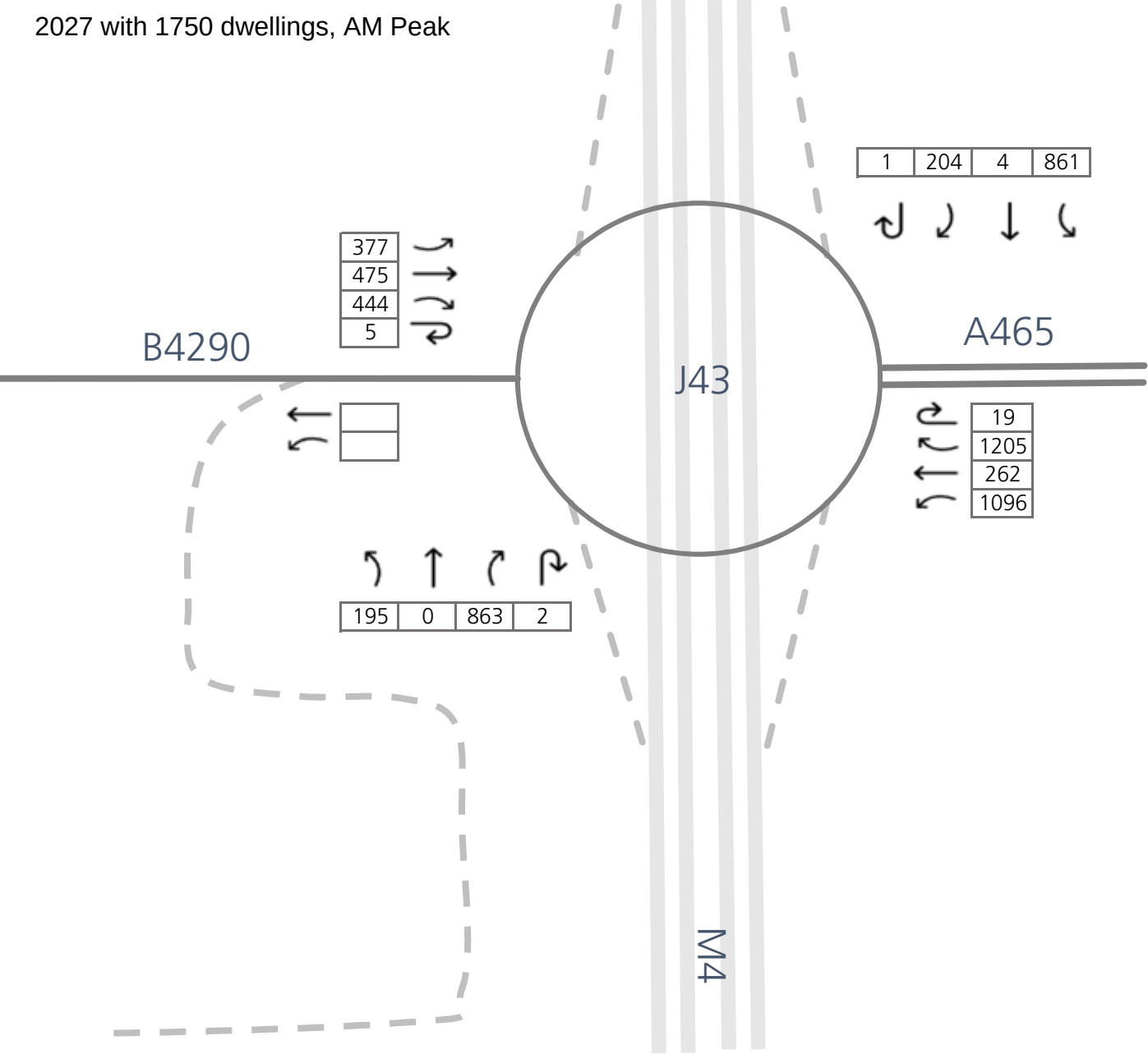


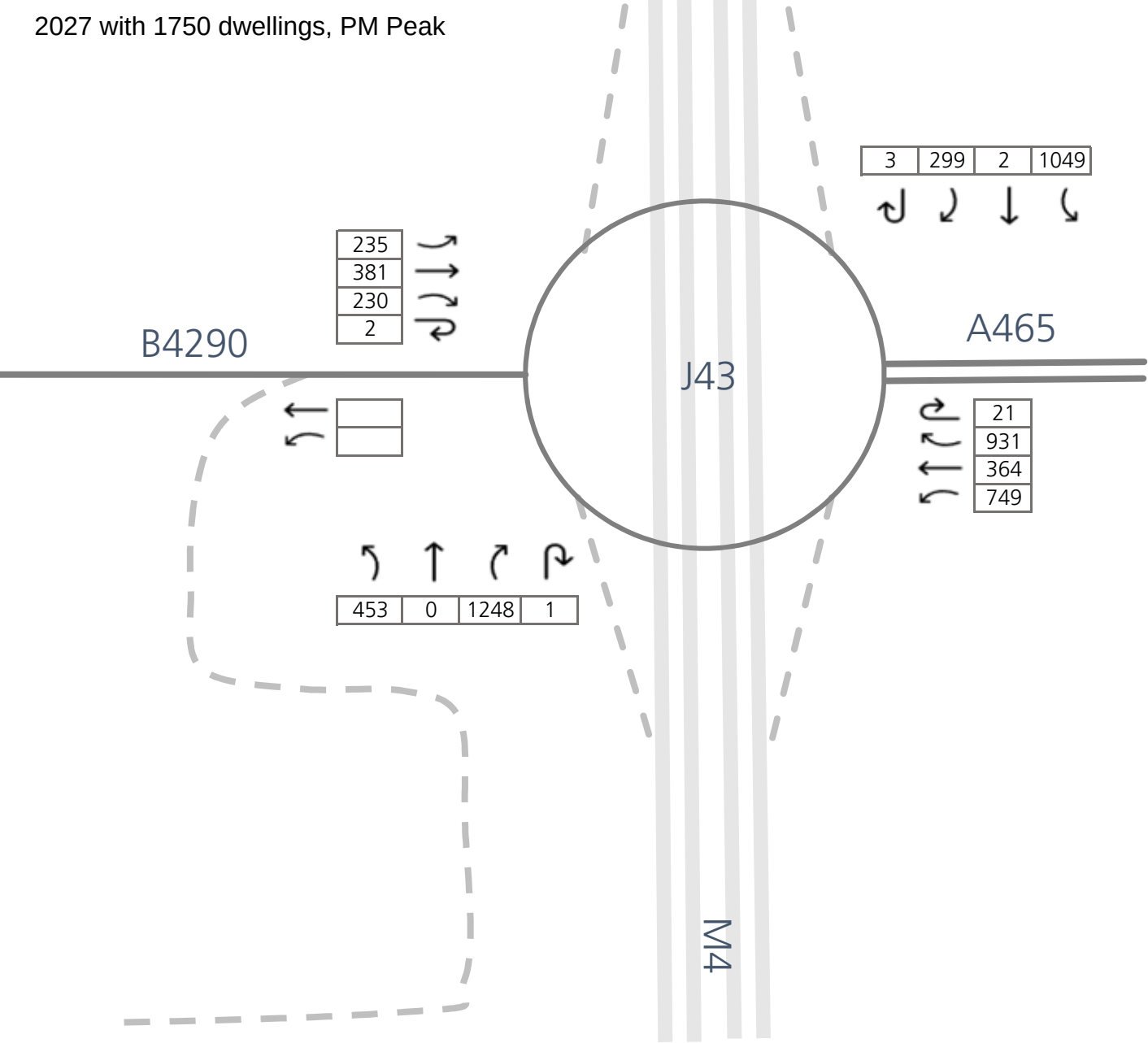












Appendix C. TRANSYT Output Reports - Phase IA

TRANSYT 15	
Version: 15.5.2.7994 © Copyright TRL Limited, 2018	
For sales and distribution information, program advice and maintenance, contact TRL: +44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk	
The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution	

Filename: Coed Darcy - M4 J43 Phase 1A v0.12.t15

Path: \\wsatkins.com\Project\INGUA\H & T\TP\Projects\5122307 - Coed Darcy\Technical\M4 J43 Models\M4 J43 new tests\M4 J43 TRANSYT report

Report generation date: 29/05/2019 18:15:27

»A1 - Phase 1A - AM 2022 inc. 800 D : D1 - 2022 inc. 800 D AM* :
 »A2 - Phase 1A - PM 2022 inc. 800 D : D2 - 2022 inc. 800 D PM* :
 »A3 - Phase 1A - AM 2024 inc. 1100 D : D3 - 2024 inc. 1100 D AM* :
 »A4 - Phase 1A - PM 2024 inc. 1100 D : D4 - 2024 inc. 1100 D PM* :
 »A5 - Phase 1A - AM 2025 inc. 1250 D : D5 - 2025 inc. 1250 D AM* :
 »A6 - Phase 1A - PM 2025 inc. 1250 D : D6 - 2025 inc. 1250 D PM* :

File summary

File description

File title	Coed Darcy Off Site Highways Mitigation
Location	M4 J43
Site number	
UTCRegion	
Driving side	Left
Date	29/05/2019
Version	v1
Status	Updated Phasing Strategy (May 2019)
Identifier	
Client	St. Modwen Developments
Jobnumber	5104234.175
Enumerator	Hitav Patel / Liam Hartas
Description	Assess revised phasing strategy.

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
			✓		✓	✓	✓	✓	✓	✓	✓		

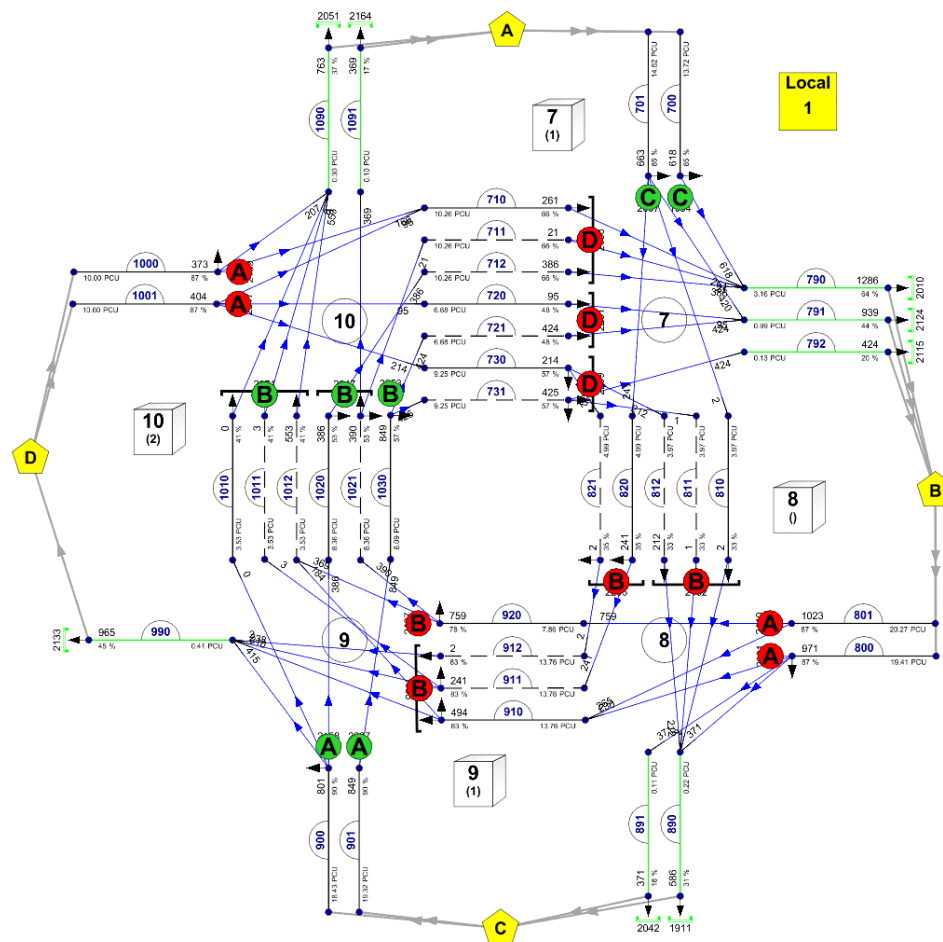
Units

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	✓

Network Diagrams



Coed Darcy Off Site Highways Mitigation
Cyclotime 0s / 70s , Timesteps 69 / 70
6, 6
Diagram produced using TRANSYT 15.5.2.7994

A1 - Phase 1A - AM 2022 inc. 800 D

D1 - 2022 inc. 800 D 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	Item with worst over PR
1	29/05/2019 18:14:59	29/05/2019 18:14:59	08:00	70	2258.85	72.17	92.24	801	2	5	801	790	80

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
Phase 1A - AM 2022 inc. 800 D		D1	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2022 inc. 800 D 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)
70		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	PCU Length (m)	Calculate results for Path Segments	Generate PDM Profile Data
1	90	100	✓	✓		Simplified (TRANSYT 12)	5.75		✓

Normal Traffic parameters

Dispersion type	Dispersion coefficient	Travel time coefficient
Default	35	80

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion type	Acceleration (ms ^{^-2})	Stationary time coefficient	Cruise time coefficient
Bus	1.00	Default	0.94	30	85

Tram parameters

Name	PCU Factor	Dispersion type	Acceleration (ms ^{^-2})	Stationary time coefficient	Cruise time coefficient
Tram	1.00	Default	0.94	100	100

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

Optimisation type	OUTProfile accuracy	SASart temperature	SACooling factor	Random seed	Use enhanced optimisation	Auto optimisation order	Optimisation order	Master controller	Offsets relative to master controller	Master controller offset after each run
Simulated Annealing (Slow)	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05	300.00	100.00	1	✓	✓	7, 8, 9, 10			Do nothing

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
(ALL)		

Links

Links

Link	Name	Description	Traffic node	Length (m)	Has Saturation Flow	Use RR67	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Is minor shared	Major link	Allow Nearside Turn On Red
700			7	200.00	✓		1954	✓		Normal			
701			7	200.00	✓		2097	✓		Normal			
710			7	109.89	✓		2088	✓		Normal			
711				109.89						Normal	✓	710	
712				109.89						Normal	✓	710	
720			7	107.01	✓		2231	✓		Normal			
721				107.01						Normal	✓	720	
730			7	104.31	✓		2299	✓		Normal			
731				104.31						Normal	✓	730	
790			7	106.14	✓		2010			Normal			
791			7	82.17	✓		2124			Normal			
792			7	82.87	✓		2115			Normal			
800			8	200.00	✓		2001	✓		Normal			
801			8	200.00	✓		2110	✓		Normal			
810			8	83.00	✓		2182	✓		Normal			
811				83.14						Normal	✓	810	
812				83.14						Normal	✓	810	
820			8	80.23	✓		2295	✓		Normal			
821				80.23						Normal	✓	820	
890			8	200.00	✓		1911			Normal			
891			8	200.00	✓		2042			Normal			
900			9	200.00	✓		2158	✓		Normal			
901			9	200.00	✓		2287	✓		Normal			
910			9	162.90	✓		1995	✓		Normal			
911				162.90						Normal	✓	910	
912				162.90						Normal	✓	910	
920			9	158.76	✓		2187	✓		Normal			
990			9	200.00	✓		2133			Normal			
1000			10	200.00	✓		2139	✓		Normal			
1001			10	200.00	✓		2317	✓		Normal			
1010			10	95.68	✓		2071	✓		Normal			
1011				95.68						Normal	✓	1010	
1012				95.68						Normal	✓	1010	
1020			10	90.73	✓		2247	✓		Normal			
1021				90.73						Normal	✓	1020	
1030			10	85.01	✓		2253	✓		Normal			
1090			10	63.28	✓		2051			Normal			
1091			10	63.07	✓		2164			Normal			

Modelling

Link	Traffic model	Stop weighting (%)	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Queue limit (PCU)	Excess queue penalty (£)	Has degree of saturation limit
700	NetworkDefault	0	20	100		0.00				
701	NetworkDefault	0	20	100		0.00				
710	NetworkDefault	500	100	100		13.00	✓	10.00	1000.00	
711	NetworkDefault	500	100	100					0.00	
712	NetworkDefault	500	100	100					0.00	
720	NetworkDefault	500	100	100		13.00	✓	10.00	1000.00	
721	NetworkDefault	500	100	100					0.00	
730	NetworkDefault	500	100	100		14.00	✓	11.00	1000.00	
731	NetworkDefault	500	100	100					0.00	
790	NetworkDefault	100	100	100		0.00				
791	NetworkDefault	100	100	100		0.00				
792	NetworkDefault	100	100	100		0.00				
800	NetworkDefault	0	20	100		0.00				
801	NetworkDefault	20	0	100		0.00				
810	NetworkDefault	500	100	100		7.00	✓	4.00	1000.00	
811	NetworkDefault	500	100	100					0.00	
812	NetworkDefault	500	100	100					0.00	
820	NetworkDefault	500	100	100		9.00	✓	5.00	1000.00	
821	NetworkDefault	500	100	100					0.00	
890	NetworkDefault	100	100	100		0.00				
891	NetworkDefault	100	100	100		0.00				
900	NetworkDefault	0	20	100		0.00				
901	NetworkDefault	0	20	100		0.00				
910	NetworkDefault	500	100	100		20.00	✓	16.00	1000.00	
911	NetworkDefault	500	100	100					0.00	
912	NetworkDefault	500	100	100					0.00	
920	NetworkDefault	500	100	100		21.00	✓	18.00	1000.00	
990	NetworkDefault	100	100	100		0.00				
1000	NetworkDefault	0	20	100		0.00				
1001	NetworkDefault	0	20	100		0.00				
1010	NetworkDefault	500	100	100		9.00	✓	7.00	1000.00	
1011	NetworkDefault	500	100	100					0.00	
1012	NetworkDefault	500	100	100					0.00	
1020	NetworkDefault	500	100	100		10.00	✓	8.00	1000.00	
1021	NetworkDefault	500	100	100					0.00	
1030	NetworkDefault	500	100	100		11.00	✓	8.00	1000.00	
1090	NetworkDefault	100	100	100		0.00				
1091	NetworkDefault	100	100	100		0.00				

Modelling - Normal traffic - Advanced

Link	Dispersion type for Normal Traffic	Initial queue (PCU)	Auto cycle time	Cycle time
700	NetworkDefault	0.00	✓	70
701	NetworkDefault	0.00	✓	70
710	NetworkDefault	0.00	✓	70
711	NetworkDefault			
712	NetworkDefault			
720	NetworkDefault	0.00	✓	70
721	NetworkDefault			
730	NetworkDefault	0.00	✓	70
731	NetworkDefault			
790	NetworkDefault	0.00	✓	70
791	NetworkDefault	0.00	✓	70
792	NetworkDefault	0.00	✓	70
800	NetworkDefault	0.00	✓	70
801	NetworkDefault	0.00	✓	70
810	NetworkDefault	0.00	✓	70
811	NetworkDefault			
812	NetworkDefault			
820	NetworkDefault	0.00	✓	70
821	NetworkDefault			
890	NetworkDefault	0.00	✓	70
891	NetworkDefault	0.00	✓	70
900	NetworkDefault	0.00	✓	70
901	NetworkDefault	0.00	✓	70
910	NetworkDefault	0.00	✓	70
911	NetworkDefault			
912	NetworkDefault			
920	NetworkDefault	0.00	✓	70
990	NetworkDefault	0.00	✓	70
1000	NetworkDefault	0.00	✓	70
1001	NetworkDefault	0.00	✓	70
1010	NetworkDefault	0.00	✓	70
1011	NetworkDefault			
1012	NetworkDefault			
1020	NetworkDefault	0.00	✓	70
1021	NetworkDefault			
1030	NetworkDefault	0.00	✓	70
1090	NetworkDefault	0.00	✓	70
1091	NetworkDefault	0.00	✓	70

Flows

Link	Total flow (PCU/hr)	PCU Factor
700	489	1.00
701	524	1.00
710	291	1.00
711	19	1.00
712	319	1.00
720	69	1.00
721	260	1.00
730	367	1.00
731	262	1.00
790	1117	1.00
791	679	1.00
792	260	1.00
800	1212	1.00
801	1279	1.00
810	4	1.00
811	2	1.00
812	362	1.00
820	171	1.00
821	5	1.00
890	902	1.00
891	534	1.00
900	492	1.00
901	522	1.00
910	720	1.00
911	171	1.00
912	5	1.00
920	704	1.00
990	580	1.00
1000	467	1.00
1001	506	1.00
1010	0	1.00
1011	1	1.00
1012	830	1.00
1020	319	1.00
1021	362	1.00
1030	522	1.00
1090	1077	1.00
1091	343	1.00

Flows - Advanced

Link	Detectors
(ALL)	

Signals

Link	Controller stream	Phase	Second phase enabled
700	7	C	
701	7	C	
710	7	D	
711			
712			
720	7	D	
721			
730	7	D	
731			
800	8	A	
801	8	A	
810	8	B	
811			
812			
820	8	B	
821			
900	9	A	
901	9	A	
910	9	B	
911			
912			
920	9	B	
1000	10	A	
1001	10	A	
1010	10	B	
1011			
1012			
1020	10	B	
1021			
1030	10	B	

Entry Sources

Link	Cruise time (seconds)	Cruise speed (kph)
700	18.41	39.10
701	18.41	39.10
800	24.83	29.00
801	24.83	29.00
900	24.91	28.90
901	24.91	28.90
1000	48.00	15.00
1001	48.00	15.00

Sources

Link	Source	Source type	Source link	Destination link	Cruise time (seconds)	Cruise speed (kph)	Total flow (PCU/hr)
710	1	Link	1000	710	12.36	32.00	221
711	1	Link	1021	711	12.36	32.00	19
712	1	Link	1020	712	12.36	32.00	319
720	1	Link	1001	720	12.04	32.00	69
721	1	Link	1030	721	12.04	32.00	260
730	1	Link	1001	730	11.73	32.00	367
731	1	Link	1030	731	11.73	32.00	262
790	1	Link	710	790	11.94	32.00	291
791	1	Link	720	791	9.24	32.00	69
792	1	Link	731	792	9.32	32.00	260
810	1	Link	701	810	9.34	32.00	4
811	1	Link	731	811	9.35	32.00	2
812	1	Link	730	812	9.35	32.00	362
820	1	Link	701	820	9.03	32.00	171
821	1	Link	730	821	9.03	32.00	5
890	1	Link	810	890	22.50	32.00	4
891	1	Link	800	891	22.50	32.00	534
910	1	Link	800	910	18.33	32.00	145
911	1	Link	820	911	18.33	32.00	171
912	1	Link	821	912	18.33	32.00	5
920	1	Link	801	920	17.86	32.00	704
990	1	Link	910	990	22.50	32.00	232
1010	1	Link	900	1010	10.76	32.00	0
1011	1	Link	911	1011	10.76	32.00	1
1012	1	Link	920	1012	10.76	32.00	343
1020	1	Link	900	1020	10.21	32.00	319
1021	1	Link	920	1021	10.21	32.00	362
1030	1	Link	901	1030	9.56	32.00	522
1090	1	Link	1000	1090	7.12	32.00	246
1091	1	Link	1021	1091	7.10	32.00	343
710	2	Link	1001	710	12.36	32.00	69
790	2	Link	711	790	11.94	32.00	19
791	2	Link	721	791	9.24	32.00	260
890	2	Link	800	890	22.50	32.00	534
910	2	Link	801	910	18.33	32.00	575
990	2	Link	900	990	22.50	32.00	173
1012	2	Link	910	1012	10.76	32.00	488
1090	2	Link	1010	1090	7.12	32.00	0
790	3	Link	700	790	11.94	32.00	489
791	3	Link	701	791	9.24	32.00	349
890	3	Link	812	890	22.50	32.00	362
990	3	Link	911	990	22.50	32.00	170
1090	3	Link	1011	1090	7.12	32.00	1
790	4	Link	712	790	11.94	32.00	319
890	4	Link	811	890	22.50	32.00	2
990	4	Link	912	990	22.50	32.00	5
1090	4	Link	1012	1090	7.12	32.00	830

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				
From		A	B	C	D
	A	1	838	4	170
	B	1173	19	1067	232
	C	0	839	2	173
	D	246	360	362	5

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	A	(untitled)	701, 700	1090, 1091	#0000FF
	B	(untitled)	801, 800	792, 791, 790	#FF0000
	C	(untitled)	900, 901	891, 890	#00FF00
	D	(untitled)	1000, 1001	990	#FFFF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
1	1		A	A	701, 820, 911, 1011, 1090	Normal	1
	2		B	A	801, 910, 1012, 1090	Normal	343
	3		B	A	801, 920, 1021, 1091	Normal	343
	4		B	A	801, 920, 1012, 1090	Normal	343
	5		B	A	800, 910, 1012, 1090	Normal	145
	6		A	B	701, 791	Normal	349
	7		A	B	700, 790	Normal	489
	8		B	B	801, 920, 1021, 711, 790	Normal	19
	9		C	A	900, 1010, 1090	Normal	0
	10		C	B	900, 1020, 712, 790	Normal	319
	11		C	B	901, 1030, 721, 791	Normal	260
	12		C	B	901, 1030, 731, 792	Normal	260
	13		B	C	800, 891	Normal	534
	14		A	C	701, 810, 890	Normal	4
	15		B	C	800, 890	Normal	534
	16		C	C	901, 1030, 731, 811, 890	Normal	2
	17		D	B	1000, 710, 790	Normal	221
	18		D	A	1000, 1090	Normal	246
	19		D	B	1001, 710, 790	Normal	69
	20		D	B	1001, 720, 791	Normal	69
	21		D	C	1001, 730, 812, 890	Normal	362
	22		A	D	701, 820, 911, 990	Normal	170
	23		B	D	801, 910, 990	Normal	232
	24		B	D	800, 910, 990	Normal	0
	25		C	D	900, 990	Normal	173
	26		D	D	1001, 730, 821, 912, 990	Normal	5

Link Results

Link Results: Vehicle summary

Time Segment	Link	Major link	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	700		63	44	489	1954	27	22.92	8.44	22.97	8.84	0.00	8.84
	701		62	44	524	2097	27	22.49	8.83	22.40	9.30	0.00	9.30
	710		66	37	291	2088	31	12.65	8.31	63.92	14.50	20.18	34.67
	711	710			19			19.20			1.44	0.86	2.30
	712	710			319			15.76			19.84	8.45	28.29
	720		32	179	69	2231	31	5.90	2.30	17.68	1.62	2.88	4.49
	721	720			260			10.73			11.01	5.08	16.09
	730		60	50	367	2299	31	11.27	8.56	61.14	16.32	25.46	41.78
	731	730			262			10.81			11.17	4.69	15.86
	790		56	62	1118	2010	70	2.01	0.63	3.12	8.88	0.00	8.88
	791		32	182	679	2124	70	1.24	0.23	1.43	3.33	0.00	3.33
	792		12	632	260	2115	70	0.97	0.07	0.43	1.00	0.00	1.00
	800		92	-2	1212	2001	45	26.28	25.53	67.87	25.13	0.00	25.13
	801		92	-2	1279	2110	45	25.65	26.72	67.35	0.00	3.05	3.05
	810		84	7	4	2182	13	46.65	5.26	75.17	0.74	0.37	932.33
	811	810			2			60.84			0.48	0.16	0.65
	812	810			362			45.02			64.29	18.00	82.29
	820		38	135	171	2295	13	26.71	3.66	40.65	18.01	13.18	31.19
	821	820			5			25.87			0.51	0.17	0.68
	890		47	91	901	1911	70	1.78	0.45	1.24	6.33	0.00	6.33
	891		26	245	533	2042	70	1.19	0.18	0.46	2.51	0.00	2.51
	900		84	7	492	2158	18	42.30	11.51	28.37	16.42	0.00	16.42
	901		84	7	522	2287	18	41.42	12.08	28.10	17.06	0.00	17.06
	910		77	17	720	1995	40	20.29	13.46	67.30	57.63	35.77	93.40
	911	910			171			16.85			11.36	12.66	24.02
	912	910			5			14.51			0.29	0.34	0.63
	920		55	64	704	2187	40	15.88	8.43	40.14	44.12	30.84	74.97
	990		27	231	580	2133	70	1.16	0.19	0.47	2.65	0.00	2.65
	1000		73	24	467	2139	20	32.10	9.36	23.27	11.82	0.00	11.82
	1001		73	24	506	2317	20	31.33	10.03	23.03	12.51	0.00	12.51
	1010		72	25	0	2071	38	0.00	8.96	99.60	0.00	0.00	537.85
	1011	1010			1			29.48			0.12	0.07	0.19
	1012	1010			831			16.10			52.77	40.60	93.37
	1020		54	66	319	2247	38	5.76	8.84	88.35	7.25	14.87	43.49
	1021	1020			362			11.46			16.35	12.84	29.19
	1030		42	116	522	2253	38	3.11	8.71	79.16	6.40	12.99	32.33
	1090		53	71	1078	2051	70	1.85	1.70	13.91	7.85	0.81	8.66
	1091		16	468	343	2164	70	0.99	0.09	0.73	1.34	0.00	1.34

Link Results: Flows and signals

Time Segment	Link	Major link	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))	Effective green (s (per cycle))
08:00-09:00	700		489	489	0		1954	782	63		44	0.00	27	28
	701		524	524	0		2097	839	62		44	0.00	27	28
	710		291	291	0		2088	955	66		37	1.25	31	32
	711	710	19	19	0						37	0.97		
	712	710	319	319	0						37	1.35		
	720		69	69	0		2231	1020	32		179	1.26	31	32
	721	720	260	260	0						179	1.24		
	730		367	367	0		2299	1051	60		50	1.26	31	32
	731	730	262	262	0						50	1.24		
	790		1118	1118	0	✓	2010	2010	56		62	0.44	70	70
	791		679	679	0		2124	2124	32		182	0.53	70	70
	792		260	260	0		2115	2115	12		632	1.13	70	70
	800		1212	1212	0		2001	1315	92	✓	-2	0.00	45	46
	801		1279	1279	0		2110	1387	92	✓	-2	0.00	45	46
	810		4	4	0		2182	436	84		7	1.12	13	14
	811	810	2	2	0						7	1.13		
	812	810	362	362	0						7	1.41		
	820		171	171	0		2295	459	38		135	1.13	13	14
	821	820	5	5	0						135	1.42		
	890		901	901	0	✓	1911	1911	47		91	0.19	70	70
	891		533	533	0	✓	2042	2042	26		245	0.54	70	70
	900		492	492	0		2158	586	84		7	0.00	18	19
	901		522	522	0		2287	621	84		7	0.00	18	19
	910		720	720	0		1995	1169	77		17	0.57	40	41
	911	910	171	171	0						17	1.37		
	912	910	5	5	0						17	1.21		
	920		704	704	0		2187	1281	55		64	0.57	40	41
	990		580	580	0		2133	2133	27		231	0.33	70	70
	1000		467	467	0		2139	642	73		24	0.00	20	21
	1001		506	506	0		2317	695	73		24	0.00	20	21
	1010		0	0	0		2071	1154	72		25	0.00	38	39
	1011	1010	1	1	0						25	1.46		
	1012	1010	831	831	0	✓					25	0.75		
	1020		319	319	0		2247	1252	54		66	1.31	38	39
	1021	1020	362	362	0						66	0.78		
	1030		522	522	0		2253	1255	42		116	1.32	38	39
	1090		1078	1078	0	✓	2051	2051	53		71	0.54	70	70
	1091		343	343	0		2164	2164	16		468	1.12	70	70

Link Results: Stops and delays

Time Segment	Link	Major link	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	700		18.41	22.92	2.28	0.83	44.21	8.84	84.40	370.92	41.81	8.79	0.00
	701		18.41	22.49	2.44	0.83	46.48	9.30	83.76	397.18	41.73	9.35	0.00
	710		12.36	12.65	0.58	0.44	14.50	14.50	97.37	260.53	22.35	4.04	20.18
	711	710	12.36	19.20	0.07	0.03	1.44	1.44	63.69	10.64	1.46	0.17	0.86
	712	710	12.36	15.76	0.91	0.49	19.84	19.84	37.14	93.98	24.55	1.69	8.45
	720		12.04	5.90	0.06	0.05	1.62	1.62	58.06	37.78	2.56	0.58	2.88
	721	720	12.04	10.73	0.59	0.19	11.01	11.01	27.40	61.66	9.59	1.02	5.08
	730		11.73	11.27	0.72	0.43	16.32	16.32	97.24	334.95	21.96	5.09	25.46
	731	730	11.73	10.81	0.48	0.31	11.17	11.17	25.10	50.08	15.67	0.94	4.69
	790		11.94	2.01	0.00	0.63	8.88	8.88	0.00	0.00	0.00	0.00	0.00
	791		9.24	1.24	0.00	0.23	3.33	3.33	0.00	0.00	0.00	0.00	0.00
	792		9.32	0.97	0.00	0.07	1.00	1.00	0.00	0.00	0.00	0.00	0.00
	800		24.83	26.28	3.51	5.33	125.63	25.13	102.39	981.64	259.37	14.54	0.00
	801		24.83	25.65	3.71	5.40	129.42	0.00	101.66	1036.91	263.28	15.23	3.05
	810		9.34	46.65	0.02	0.03	0.74	0.74	131.09	3.95	1.28	0.07	0.37
	811	810	9.35	60.84	0.02	0.01	0.48	0.48	115.50	1.67	0.64	0.03	0.16
	812	810	9.35	45.02	2.06	2.47	64.29	64.29	69.69	135.93	116.39	3.60	18.00
	820		9.03	26.71	0.97	0.30	18.01	18.01	108.14	169.65	15.14	2.64	13.18
	821	820	9.03	25.87	0.03	0.01	0.51	0.51	46.36	1.88	0.44	0.03	0.17
	890		22.50	1.78	0.00	0.45	6.33	6.33	0.00	0.00	0.00	0.00	0.00
	891		22.50	1.19	0.00	0.18	2.51	2.51	0.00	0.00	0.00	0.00	0.00
	900		24.91	42.30	3.29	2.49	82.09	16.42	115.60	448.61	120.15	6.62	0.00
	901		24.91	41.42	3.49	2.51	85.28	17.06	114.55	476.32	121.64	6.96	0.00
	910		18.33	20.29	2.75	1.31	57.63	57.63	69.63	435.80	65.62	7.15	35.77
	911	910	18.33	16.85	0.49	0.31	11.36	11.36	103.84	161.87	15.57	2.53	12.66
	912	910	18.33	14.51	0.01	0.01	0.29	0.29	94.99	4.29	0.46	0.07	0.34
	920		17.86	15.88	2.50	0.61	44.12	44.12	61.40	401.41	30.99	6.17	30.84
	990		22.50	1.16	0.00	0.19	2.65	2.65	0.00	0.00	0.00	0.00	0.00
	1000		48.00	32.10	2.85	1.32	59.12	11.82	101.66	409.42	65.32	1.49	0.00
	1001		48.00	31.33	3.08	1.32	62.54	12.51	100.64	443.62	65.63	1.60	0.00
	1010		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1011	1010	10.76	29.48	0.01	0.00	0.12	0.12	102.20	0.87	0.15	0.01	0.07
	1012	1010	10.76	16.10	2.44	1.28	52.77	52.77	68.52	442.71	126.51	8.12	40.60
	1020		10.21	5.76	0.23	0.28	7.25	7.25	65.34	194.32	14.18	2.97	14.87
	1021	1020	10.21	11.46	0.84	0.32	16.35	16.35	49.77	163.92	16.07	2.57	12.84
	1030		9.56	3.11	0.10	0.36	6.40	6.40	34.89	164.01	18.13	2.60	12.99
	1090		7.12	1.85	0.00	0.55	7.85	7.85	5.24	0.33	56.14	0.81	0.81
	1091		7.10	0.99	0.00	0.09	1.34	1.34	0.00	0.00	0.00	0.00	0.00

Link Results: Queues and blocking

Time Segment	Link	Major link	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	700		0.00	8.44	36.74	22.97	0.00	0.00	0.00	0.83	6.54	0.00	0.00	0.00	
	701		0.00	8.83	39.43	22.40	0.00	0.00	0.00	0.83	6.94	0.00	0.00	0.00	
	710		0.00	8.31	13.00	63.92	0.00	0.00	0.00	0.96	5.51	0.00	0.00	0.00	
	711	710							0.00						
	712	710							0.00						
	720		0.00	2.30	13.00	17.68	0.00	0.00	0.00	0.24	2.05	3.00	0.00	3.00	
	721	720							0.00						
	730		0.00	8.56	14.00	61.14	0.00	0.00	0.00	0.74	5.40	0.00	0.00	0.00	
	731	730							0.00						
	790		0.00	0.63	20.06	3.12	0.00	0.00	0.00			0.00	0.00	0.00	
	791		0.00	0.23	16.41	1.43	0.00	0.00	0.00			0.00	0.00	0.00	
	792		0.00	0.07	16.48	0.43	0.00	0.00	0.00			36.00	0.00	36.00	
	800		0.00	25.53	37.62	67.87	0.00	0.00	0.00	5.33	13.41	0.00	0.00	0.00	
	801		0.00	26.72	39.67	67.35	0.00	0.00	0.00	5.40	13.93	0.00	0.00	0.00	
	810		0.00	5.26	7.00	75.17	0.00	0.93	931.22	2.51	5.26	0.00	0.00	0.00	
	811	810							0.00						
	812	810							0.00						
	820		0.00	3.66	9.00	40.65	0.00	0.00	0.00	0.31	3.61	8.00	0.00	8.00	
	821	820							0.00						
	890		0.00	0.45	35.93	1.24	0.00	0.00	0.00			0.00	0.00	0.00	
	891		0.00	0.18	38.39	0.46	0.00	0.00	0.00			9.00	0.00	9.00	
	900		0.00	11.51	40.57	28.37	0.00	0.00	0.00	2.49	9.46	0.00	0.00	0.00	
	901		0.00	12.08	43.00	28.10	0.00	0.00	0.00	2.51	9.91	0.00	0.00	0.00	
	910		0.00	13.46	20.00	67.30	0.00	0.00	0.00	1.62	9.55	0.00	0.00	0.00	
	911	910							0.00						
	912	910							0.00						
	920		0.00	8.43	21.00	40.14	0.00	0.00	0.00	0.61	8.10	5.00	0.00	5.00	
	990		0.00	0.19	40.10	0.47	0.00	0.00	0.00			0.00	0.00	0.00	
	1000		0.00	9.36	40.22	23.27	0.00	0.00	0.00	1.32	7.67	0.00	0.00	0.00	
	1001		0.00	10.03	43.56	23.03	0.00	0.00	0.00	1.32	8.21	0.00	0.00	0.00	
	1010		0.00	8.96	9.00	99.60	0.00	0.54	537.85	1.28	8.82	8.00	0.00	8.00	
	1011	1010							0.00						
	1012	1010							0.00						
	1020		0.00	8.84	10.00	88.35	0.00	0.02	21.37	0.59	4.26	0.00	0.00	0.00	
	1021	1020							0.00						
	1030		0.00	8.71	11.00	79.16	0.00	0.01	12.94	0.36	1.22	15.00	0.00	15.00	
	1090		0.00	1.70	12.20	13.91	0.00	0.00	0.00			2.00	0.00	2.00	
	1091		0.00	0.09	12.83	0.73	0.00	0.00	0.00			35.00	0.00	35.00	

Link Results: Journey times

Time Segment	Link	Major link	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	700		97.80	5.62	17.42	41.34
	701		104.80	5.95	17.60	40.90
	710		31.92	2.02	15.82	25.01
	711	710	2.09	0.17	12.53	31.56
	712	710	35.07	2.49	14.07	28.12
	720		7.43	0.35	21.47	17.94
	721	720	27.82	1.64	16.92	22.77
	730		38.29	2.35	16.32	23.01
	731	730	27.33	1.64	16.66	22.54
	790		118.62	4.33	27.38	13.96
	791		55.76	1.98	28.20	10.49
	792		21.55	0.74	28.98	10.29
	800		242.40	17.21	14.09	51.11
	801		255.80	17.93	14.26	50.48
	810		0.33	0.06	5.34	55.98
	811	810	0.17	0.04	4.26	70.19
	812	810	30.10	5.47	5.50	54.37
	820		13.71	1.70	8.08	35.74
	821	820	0.40	0.05	8.28	34.90
	890		180.27	6.08	29.65	24.28
	891		106.66	3.51	30.39	23.69
	900		98.40	9.19	10.71	67.21
	901		104.40	9.62	10.85	66.33
	910		117.31	7.72	15.19	38.61
	911	910	27.84	1.67	16.67	35.18
	912	910	0.81	0.05	17.86	32.84
	920		111.81	6.60	16.94	33.74
	990		115.97	3.81	30.43	23.66
	1000		93.40	10.39	8.99	80.10
	1001		101.20	11.15	9.08	79.33
	1010		0.00	0.00	0.00	0.00
	1011	1010	0.10	0.01	8.56	40.24
	1012	1010	79.48	6.20	12.82	26.87
	1020		28.95	1.42	20.46	15.96
	1021	1020	32.81	2.18	15.07	21.67
	1030		44.38	1.84	24.15	12.67
	1090		68.20	2.68	25.41	8.97
	1091		21.61	0.77	28.09	8.08

Link Results: Advanced

Time Segment	Link	Major link	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Mean Max Queue EoTS (PCU)	Max End of Green Queue EoTS (PCU)	Max End of Red Queue EoTS (PCU)	PCU Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	700		0.00	0.00	✓	8.44	0.83	6.54	1.00	0.00	53.01	8.84
	701		0.00	0.00	✓	8.84	0.83	6.94	1.00	0.00	55.82	9.30
	710		0.00	0.00	✓	8.31	0.96	5.51	1.00	0.00	18.53	34.67
	711	710	0.00	0.00					1.00	0.00	1.61	2.30
	712	710	0.00	0.00					1.00	0.00	21.53	28.29
	720		0.00	0.00	✓	2.30	0.24	2.05	1.00	0.00	2.19	4.49
	721	720	0.00	0.00					1.00	0.00	12.02	16.09
	730		0.00	0.00	✓	8.56	0.74	5.40	1.00	0.00	21.41	41.78
	731	730	0.00	0.00					1.00	0.00	12.11	15.86
	790		0.00	0.00	✓	0.63			1.00	0.00	8.88	8.88
	791		0.00	0.00	✓	0.23			1.00	0.00	3.33	3.33
	792		0.00	0.00	✓	0.07			1.00	0.00	1.00	1.00
	800		0.00	0.00	✓	25.78	5.58	13.66	1.00	0.00	140.17	25.13
	801		0.00	0.00	✓	26.96	5.65	14.17	1.00	0.00	144.65	3.05
	810		0.00	0.00	✓	5.35	2.59	5.34	1.00	931.22	0.81	932.33
	811	810	0.00	0.00					1.00	0.00	0.51	0.65
	812	810	0.00	0.00					1.00	0.00	67.89	82.29
	820		0.00	0.00	✓	3.66	0.31	3.61	1.00	0.00	20.64	31.19
	821	820	0.00	0.00					1.00	0.00	0.54	0.68
	890		0.00	0.00	✓	0.45			1.00	0.00	6.33	6.33
	891		0.00	0.00	✓	0.18			1.00	0.00	2.51	2.51
	900		0.00	0.00	✓	11.57	2.55	9.52	1.00	0.00	88.71	16.42
	901		0.00	0.00	✓	12.15	2.58	9.97	1.00	0.00	92.24	17.06
	910		0.00	0.00	✓	13.47	1.63	9.56	1.00	0.00	64.78	93.40
	911	910	0.00	0.00					1.00	0.00	13.89	24.02
	912	910	0.00	0.00					1.00	0.00	0.35	0.63
	920		0.00	0.00	✓	8.43	0.61	8.10	1.00	0.00	50.29	74.97
	990		0.00	0.00	✓	0.19			1.00	0.00	2.65	2.65
	1000		0.00	0.00	✓	9.37	1.33	7.68	1.00	0.00	60.61	11.82
	1001		0.00	0.00	✓	10.04	1.33	8.22	1.00	0.00	64.14	12.51
	1010		0.00	0.00	✓	8.97	1.29	8.82	1.00	537.85	0.00	537.85
	1011	1010	0.00	0.00					1.00	0.00	0.13	0.19
	1012	1010	0.00	0.00					1.00	0.00	60.89	93.37
	1020		0.00	0.00	✓	8.84	0.60	4.26	1.00	21.37	10.22	43.49
	1021	1020	0.00	0.00					1.00	0.00	18.92	29.19
	1030		0.00	0.00	✓	8.71	0.36	1.22	1.00	12.94	9.00	32.33
	1090		0.00	0.00	✓	1.70			1.00	0.00	8.66	8.66
	1091		0.00	0.00	✓	0.09			1.00	0.00	1.34	1.34

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	Item with worst over PR
1	29/05/2019 18:14:59	29/05/2019 18:14:59	08:00	70	2258.85	72.17	92.24	801	2	5	801	790	80

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	92	-2	16748	1450	15.51	491.16	264.32	2258.85

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	16748	16748	-1	✓	92	✓	-2	1450	1480

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	18.15	15.51	40.53	31.65	1024.86	491.16	55.24	7696.85	1554.77	117.47	264.32

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	99.60	1503.37	148.00	0.00	148.00

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
08:00-09:00	2444.98	156.61	15.61

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	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	✓	1.00	1503.37	0.00	1142.33	2258.85

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

	To				
From		A	B	C	D
	A	161.0	53.7	121.2	135.5
	B	120.4	151.4	75.1	112.8
	C	0.0	117.1	196.0	90.9
	D	89.1	116.7	181.0	193.7

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	A	A	1	161.03	1	161.03
2	B	A	343	124.93	343	124.93
3	B	A	343	113.98	343	113.98
4	B	A	343	120.06	343	120.06
5	B	A	145	125.56	145	125.56
6	A	B	349	51.39	349	51.39
7	A	B	489	55.29	489	55.29
8	B	B	19	151.41	19	151.41
9	C	A	0	76.18	0	0.00
10	C	B	319	125.26	319	125.26
11	C	B	260	112.26	260	112.26
12	C	B	260	111.84	260	111.84
13	B	C	534	74.80	534	74.80
14	A	C	4	121.17	4	121.17
15	B	C	534	75.39	534	75.39
16	C	C	2	196.02	2	196.02
17	D	B	221	119.06	221	119.06
18	D	A	246	89.06	246	89.06
19	D	B	69	118.30	69	118.30
20	D	B	69	107.76	69	107.76
21	D	C	362	181.00	362	181.00
22	A	D	170	135.48	170	135.48
23	B	D	232	112.75	232	112.75
24	B	D	0	113.38	0	0.00
25	C	D	173	90.87	173	90.87
26	D	D	5	193.73	5	193.73

Final Prediction Table

Link Results

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QUEUES	
Link	Name	Major link	Traffic node	Controller stream	Phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s per cycle)	Wasted time total (s per cycle)	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (PCU)	Max end of red queue (PCU)
700			7	7	C	489	1954	27	0.00	63	44	41.34	22.92	84.40	8.44	6.54
701			7	7	C	524	2097	27	0.00	62	44	40.90	22.49	83.76	8.83	6.94
710		(710)	7	7	D	291	2088	31	0.00	66	37	25.01	12.65	97.37	8.31	5.51
711		710				19						31.56	19.20	63.69		
712		710				319						28.12	15.76	37.14		
720		(720)	7	7	D	69	2231	31	3.00	32	179	17.94	5.90	58.06	2.30	2.05
721		720				260						22.77	10.73	27.40		
730		(730)	7	7	D	367	2299	31	0.00	60	50	23.01	11.27	97.24	8.56	5.40
731		730				262						22.54	10.81	25.10		
790			7			1118	2010	70	0.00	56	62	13.96	2.01	0.00	0.63	
791			7			679	2124	70	0.00	32	182	10.49	1.24	0.00	0.23	
792			7			260	2115	70	36.00	12	632	10.29	0.97	0.00	0.07	
800			8	8	A	1212	2001	45	0.00	92	-2	51.11	26.28	102.39	25.53	13.41
801			8	8	A	1279	2110	45	0.00	92	-2	50.48	25.65	101.66	26.72	13.93
810		(810)	8	8	B	4	2182	13	0.00	84	7	55.98	46.65	131.09	5.26	5.26
811		810				2						70.19	60.84	115.50		
812		810				362						54.37	45.02	69.69		
820		(820)	8	8	B	171	2295	13	8.00	38	135	35.74	26.71	108.14	3.66	3.61
821		820				5						34.90	25.87	46.36		
890			8			901	1911	70	0.00	47	91	24.28	1.78	0.00	0.45	
891			8			533	2042	70	9.00	26	245	23.69	1.19	0.00	0.18	
900			9	9	A	492	2158	18	0.00	84	7	67.21	42.30	115.60	11.51	9.46
901			9	9	A	522	2287	18	0.00	84	7	66.33	41.42	114.55	12.08	9.91
910		(910)	9	9	B	720	1995	40	0.00	77	17	38.61	20.29	69.63	13.46	9.55
911		910				171						35.18	16.85	103.84		
912		910				5						32.84	14.51	94.99		
920			9	9	B	704	2187	40	5.00	55	64	33.74	15.88	61.40	8.43	8.10
990			9			580	2133	70	0.00	27	231	23.66	1.16	0.00	0.19	
1000			10	10	A	467	2139	20	0.00	73	24	80.10	32.10	101.66	9.36	7.67
1001			10	10	A	506	2317	20	0.00	73	24	79.33	31.33	100.64	10.03	8.21
1010		(1010)	10	10	B	0	2071	38	8.00	72	25	0.00	0.00	0.00	8.96	8.82
1011		1010				1						40.24	29.48	102.20		
1012		1010				831						26.87	16.10	68.52		
1020		(1020)	10	10	B	319	2247	38	0.00	54	66	15.96	5.76	65.34	8.84	4.26
1021		1020				362						21.67	11.46	49.77		
1030			10	10	B	522	2253	38	15.00	42	116	12.67	3.11	34.89	8.71	1.22
1090			10			1078	2051	70	2.00	53	71	8.97	1.85	5.24	1.70	
1091			10			343	2164	70	35.00	16	468	8.08	0.99	0.00	0.09	

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	2444.98	156.61	15.61	40.53	31.65	491.16	264.32	1503.37	2258.85
Bus									
Tram									
Pedestrians									
TOTAL	2444.98	156.61	15.61	40.53	31.65	491.16	264.32	1503.37	2258.85

- | < = 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 - Phase 1A - PM 2022 inc. 800 D D2 - 2022 inc. 800 D 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	Item with worst over PR
2	29/05/2019 18:15:00	29/05/2019 18:15:00	17:00	70	687.14	69.02	86.65	901	0	0	901	790	90

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
Phase 1A - PM 2022 inc. 800 D		D2	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2022 inc. 800 D 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)
70		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	PCU Length (m)	Calculate results for Path Segments	Generate PDM Profile Data
1	90	100	✓	✓		Simplified (TRANSYT 12)	5.75		✓

Normal Traffic parameters

Dispersion type	Dispersion coefficient	Travel time coefficient
Default	35	80

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion type	Acceleration (ms ⁻²)	Stationary time coefficient	Cruise time coefficient
Bus	1.00	Default	0.94	30	85

Tram parameters

Name	PCU Factor	Dispersion type	Acceleration (ms ⁻²)	Stationary time coefficient	Cruise time coefficient
Tram	1.00	Default	0.94	100	100

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

Optimisation type	OUTProfile accuracy	SASart temperature	SACooling factor	Random seed	Use enhanced optimisation	Auto optimisation order	Optimisation order	Master controller	Offsets relative to master controller	Master controller offset after each run
Simulated Annealing (Slow)	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05	300.00	100.00	1	✓	✓	7, 8, 9, 10			Do nothing

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
(ALL)		

Links

Links

Link	Name	Description	Traffic node	Length (m)	Has Saturation Flow	Use RR67	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Is minor shared	Major link	Allow Nearside Turn On Red
700			7	200.00	✓		1954	✓		Normal			
701			7	200.00	✓		2097	✓		Normal			
710			7	109.89	✓		2088	✓		Normal			
711				109.89						Normal	✓	710	
712				109.89						Normal	✓	710	
720			7	107.01	✓		2231	✓		Normal			
721				107.01						Normal	✓	720	
730			7	104.31	✓		2299	✓		Normal			
731				104.31						Normal	✓	730	
790			7	106.14	✓		2010			Normal			
791			7	82.17	✓		2124			Normal			
792			7	82.87	✓		2115			Normal			
800			8	200.00	✓		2001	✓		Normal			
801			8	200.00	✓		2110	✓		Normal			
810			8	83.00	✓		2182	✓		Normal			
811				83.14						Normal	✓	810	
812				83.14						Normal	✓	810	
820			8	80.23	✓		2295	✓		Normal			
821				80.23						Normal	✓	820	
890			8	200.00	✓		1911			Normal			
891			8	200.00	✓		2042			Normal			
900			9	200.00	✓		2158	✓		Normal			
901			9	200.00	✓		2287	✓		Normal			
910			9	162.90	✓		1995	✓		Normal			
911				162.90						Normal	✓	910	
912				162.90						Normal	✓	910	
920			9	158.76	✓		2187	✓		Normal			
990			9	200.00	✓		2133			Normal			
1000			10	200.00	✓		2139	✓		Normal			
1001			10	200.00	✓		2317	✓		Normal			
1010			10	95.68	✓		2071	✓		Normal			
1011				95.68						Normal	✓	1010	
1012				95.68						Normal	✓	1010	
1020			10	90.73	✓		2247	✓		Normal			
1021				90.73						Normal	✓	1020	
1030			10	85.01	✓		2253	✓		Normal			
1090			10	63.28	✓		2051			Normal			
1091			10	63.07	✓		2164			Normal			

Modelling

Link	Traffic model	Stop weighting (%)	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Queue limit (PCU)	Excess queue penalty (£)	Has degree of saturation limit
700	NetworkDefault	0	20	100		0.00				
701	NetworkDefault	0	20	100		0.00				
710	NetworkDefault	500	100	100		13.00	✓	10.00	1000.00	
711	NetworkDefault	500	100	100					0.00	
712	NetworkDefault	500	100	100					0.00	
720	NetworkDefault	500	100	100		13.00	✓	10.00	1000.00	
721	NetworkDefault	500	100	100					0.00	
730	NetworkDefault	500	100	100		14.00	✓	11.00	1000.00	
731	NetworkDefault	500	100	100					0.00	
790	NetworkDefault	100	100	100		0.00				
791	NetworkDefault	100	100	100		0.00				
792	NetworkDefault	100	100	100		0.00				
800	NetworkDefault	0	20	100		0.00				
801	NetworkDefault	20	0	100		0.00				
810	NetworkDefault	500	100	100		7.00	✓	4.00	1000.00	
811	NetworkDefault	500	100	100					0.00	
812	NetworkDefault	500	100	100					0.00	
820	NetworkDefault	500	100	100		9.00	✓	5.00	1000.00	
821	NetworkDefault	500	100	100					0.00	
890	NetworkDefault	100	100	100		0.00				
891	NetworkDefault	100	100	100		0.00				
900	NetworkDefault	0	20	100		0.00				
901	NetworkDefault	0	20	100		0.00				
910	NetworkDefault	500	100	100		20.00				
911	NetworkDefault	500	100	100						
912	NetworkDefault	500	100	100						
920	NetworkDefault	500	100	100		21.00				
990	NetworkDefault	100	100	100		0.00				
1000	NetworkDefault	0	20	100		0.00				
1001	NetworkDefault	0	20	100		0.00				
1010	NetworkDefault	500	100	100		9.00	✓	7.00	1000.00	
1011	NetworkDefault	500	100	100					0.00	
1012	NetworkDefault	500	100	100					0.00	
1020	NetworkDefault	500	100	100		10.00	✓	8.00	1000.00	
1021	NetworkDefault	500	100	100					0.00	
1030	NetworkDefault	500	100	100		11.00	✓	8.00	1000.00	
1090	NetworkDefault	100	100	100		0.00				
1091	NetworkDefault	100	100	100		0.00				

Modelling - Normal traffic - Advanced

Link	Dispersion type for Normal Traffic	Initial queue (PCU)	Auto cycle time	Cycle time
700	NetworkDefault	0.00	✓	70
701	NetworkDefault	0.00	✓	70
710	NetworkDefault	0.00	✓	70
711	NetworkDefault			
712	NetworkDefault			
720	NetworkDefault	0.00	✓	70
721	NetworkDefault			
730	NetworkDefault	0.00	✓	70
731	NetworkDefault			
790	NetworkDefault	0.00	✓	70
791	NetworkDefault	0.00	✓	70
792	NetworkDefault	0.00	✓	70
800	NetworkDefault	0.00	✓	70
801	NetworkDefault	0.00	✓	70
810	NetworkDefault	0.00	✓	70
811	NetworkDefault			
812	NetworkDefault			
820	NetworkDefault	0.00	✓	70
821	NetworkDefault			
890	NetworkDefault	0.00	✓	70
891	NetworkDefault	0.00	✓	70
900	NetworkDefault	0.00	✓	70
901	NetworkDefault	0.00	✓	70
910	NetworkDefault	0.00	✓	70
911	NetworkDefault			
912	NetworkDefault			
920	NetworkDefault	0.00	✓	70
990	NetworkDefault	0.00	✓	70
1000	NetworkDefault	0.00	✓	70
1001	NetworkDefault	0.00	✓	70
1010	NetworkDefault	0.00	✓	70
1011	NetworkDefault			
1012	NetworkDefault			
1020	NetworkDefault	0.00	✓	70
1021	NetworkDefault			
1030	NetworkDefault	0.00	✓	70
1090	NetworkDefault	0.00	✓	70
1091	NetworkDefault	0.00	✓	70

Flows

Link	Total flow (PCU/hr)	PCU Factor
700	582	1.00
701	625	1.00
710	248	1.00
711	21	1.00
712	394	1.00
720	86	1.00
721	410	1.00
730	198	1.00
731	411	1.00
790	1245	1.00
791	934	1.00
792	410	1.00
800	933	1.00
801	984	1.00
810	2	1.00
811	1	1.00
812	196	1.00
820	185	1.00
821	2	1.00
890	563	1.00
891	364	1.00
900	774	1.00
901	821	1.00
910	443	1.00
911	185	1.00
912	2	1.00
920	746	1.00
990	826	1.00
1000	342	1.00
1001	371	1.00
1010	0	1.00
1011	3	1.00
1012	544	1.00
1020	394	1.00
1021	383	1.00
1030	821	1.00
1090	728	1.00
1091	362	1.00

Flows - Advanced

Link	Detectors
(ALL)	

Signals

Link	Controller stream	Phase	Second phase enabled
700	7	C	
701	7	C	
710	7	D	
711			
712			
720	7	D	
721			
730	7	D	
731			
800	8	A	
801	8	A	
810	8	B	
811			
812			
820	8	B	
821			
900	9	A	
901	9	A	
910	9	B	
911			
912			
920	9	B	
1000	10	A	
1001	10	A	
1010	10	B	
1011			
1012			
1020	10	B	
1021			
1030	10	B	

Entry Sources

Link	Cruise time (seconds)	Cruise speed (kph)
700	18.41	39.10
701	18.41	39.10
800	24.83	29.00
801	24.83	29.00
900	24.91	28.90
901	24.91	28.90
1000	48.00	15.00
1001	48.00	15.00

Sources

Link	Source	Source type	Source link	Destination link	Cruise time (seconds)	Cruise speed (kph)	Total flow (PCU/hr)
710	1	Link	1000	710	12.36	32.00	161
711	1	Link	1021	711	12.36	32.00	21
712	1	Link	1020	712	12.36	32.00	394
720	1	Link	1001	720	12.04	32.00	86
721	1	Link	1030	721	12.04	32.00	410
730	1	Link	1001	730	11.73	32.00	198
731	1	Link	1030	731	11.73	32.00	411
790	1	Link	710	790	11.94	32.00	248
791	1	Link	720	791	9.24	32.00	86
792	1	Link	731	792	9.32	32.00	410
810	1	Link	701	810	9.34	32.00	2
811	1	Link	731	811	9.35	32.00	1
812	1	Link	730	812	9.35	32.00	196
820	1	Link	701	820	9.03	32.00	185
821	1	Link	730	821	9.03	32.00	2
890	1	Link	810	890	22.50	32.00	2
891	1	Link	800	891	22.50	32.00	364
910	1	Link	800	910	18.33	32.00	205
911	1	Link	820	911	18.33	32.00	185
912	1	Link	821	912	18.33	32.00	2
920	1	Link	801	920	17.86	32.00	746
990	1	Link	910	990	22.50	32.00	262
1010	1	Link	900	1010	10.76	32.00	0
1011	1	Link	911	1011	10.76	32.00	3
1012	1	Link	920	1012	10.76	32.00	362
1020	1	Link	900	1020	10.21	32.00	394
1021	1	Link	920	1021	10.21	32.00	383
1030	1	Link	901	1030	9.56	32.00	821
1090	1	Link	1000	1090	7.12	32.00	181
1091	1	Link	1021	1091	7.10	32.00	362
710	2	Link	1001	710	12.36	32.00	86
790	2	Link	711	790	11.94	32.00	21
791	2	Link	721	791	9.24	32.00	410
890	2	Link	800	890	22.50	32.00	364
910	2	Link	801	910	18.33	32.00	238
990	2	Link	900	990	22.50	32.00	380
1012	2	Link	910	1012	10.76	32.00	181
1090	2	Link	1010	1090	7.12	32.00	0
790	3	Link	700	790	11.94	32.00	582
791	3	Link	701	791	9.24	32.00	438
890	3	Link	812	890	22.50	32.00	196
990	3	Link	911	990	22.50	32.00	182
1090	3	Link	1011	1090	7.12	32.00	3
790	4	Link	712	790	11.94	32.00	394
890	4	Link	811	890	22.50	32.00	1
990	4	Link	912	990	22.50	32.00	2
1090	4	Link	1012	1090	7.12	32.00	544

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				
		A	B	C	D
From	A	3	1020	2	182
	B	906	21	728	262
	C	0	1214	1	380
	D	181	334	196	2

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	A	(untitled)	701, 700	1090, 1091	#0000FF
	B	(untitled)	801, 800	792, 791, 790	#FF0000
	C	(untitled)	900, 901	891, 890	#00FF00
	D	(untitled)	1000, 1001	990	#FFFF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
1	1		A	A	701, 820, 911, 1011, 1090	Normal	3
	2		B	A	801, 910, 1012, 1090	Percentage	91
	3		B	A	801, 920, 1021, 1091	Normal	362
	4		B	A	801, 920, 1012, 1090	Percentage	362
	5		B	A	800, 910, 1012, 1090	Percentage	91
	6		A	B	701, 791	Normal	438
	7		A	B	700, 790	Normal	582
	8		B	B	801, 920, 1021, 711, 790	Normal	21
	9		C	A	900, 1010, 1090	Normal	0
	10		C	B	900, 1020, 712, 790	Normal	394
	11		C	B	901, 1030, 721, 791	Normal	410
	12		C	B	901, 1030, 731, 792	Normal	410
	13		B	C	800, 891	Normal	364
	14		A	C	701, 810, 890	Normal	2
	15		B	C	800, 890	Normal	364
	16		C	C	901, 1030, 731, 811, 890	Normal	1
	17		D	B	1000, 710, 790	Normal	161
	18		D	A	1000, 1090	Normal	181
	19		D	B	1001, 710, 790	Normal	86
	20		D	B	1001, 720, 791	Normal	86
	21		D	C	1001, 730, 812, 890	Normal	196
	22		A	D	701, 820, 911, 990	Normal	182
	23		B	D	801, 910, 990	Normal	148
	24		B	D	800, 910, 990	Normal	114
	25		C	D	900, 990	Normal	380
	26		D	D	1001, 730, 821, 912, 990	Normal	2

Link Results

Link Results: Vehicle summary

Time Segment	Link	Major link	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (PCU)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	700		80	12	582	1954	25	31.88	11.99	32.65	14.64	0.00	14.64
	701		80	12	625	2097	25	31.11	12.74	32.32	15.34	0.00	15.34
	710		65	38	248	2088	33	11.94	10.24	78.79	11.66	17.46	33.40
	711	710			21			15.32			1.27	0.61	1.88
	712	710			394			14.98			23.29	18.07	41.37
	720		46	96	86	2231	33	7.39	6.43	49.50	2.52	4.65	7.17
	721	720			410			13.27			21.45	18.30	39.76
	730		55	65	198	2299	33	9.95	8.84	63.15	7.78	13.17	20.95
	731	730			411			14.14			22.93	18.46	41.39
	790		62	45	1245	2010	70	2.35	3.08	15.37	11.54	0.62	12.16
	791		44	105	934	2124	70	1.51	0.39	2.39	5.57	0.00	5.57
	792		19	364	410	2115	70	1.06	0.12	0.73	1.71	0.00	1.71
	800		84	8	933	2001	38	22.50	17.53	46.59	16.56	0.00	16.56
	801		84	8	984	2110	38	22.02	18.36	46.27	0.00	2.10	2.10
	810		30	196	2	2182	20	34.13	3.59	51.35	0.27	0.15	0.42
	811	810			1			9.28			0.04	0.05	0.08
	812	810			196			6.60			5.11	10.32	15.42
	820		27	231	185	2295	20	36.20	3.82	42.43	26.42	13.87	40.29
	821	820			2			8.61			0.07	0.12	0.19
	890		29	205	563	1911	70	1.34	0.21	0.58	2.97	0.00	2.97
	891		18	405	364	2042	70	1.07	0.11	0.28	1.54	0.00	1.54
	900		87	4	774	2158	28	32.99	16.61	40.94	20.14	0.00	20.14
	901		87	4	821	2287	28	32.30	17.46	40.61	20.92	0.00	20.92
	910		71	26	443	1995	30	15.90	9.29	46.45	27.79	17.60	45.39
	911	910			185			31.74			23.17	14.47	37.63
	912	910			2			30.05			0.24	0.16	0.39
	920		77	17	746	2187	30	15.37	7.19	34.26	45.21	22.43	67.65
	990		39	132	826	2133	70	1.38	0.32	0.79	4.48	0.00	4.48
	1000		80	13	342	2139	13	46.76	8.18	20.34	12.62	0.00	12.62
	1001		80	12	371	2317	13	45.38	8.73	20.04	13.28	0.00	13.28
	1010		40	124	0	2071	45	0.00	3.85	42.81	0.00	0.00	0.00
	1011	1010			3			3.66			0.04	0.11	0.15
	1012	1010			544			3.07			6.59	9.94	16.53
	1020		53	71	394	2247	45	11.44	8.24	82.41	17.79	13.28	34.78
	1021	1020			383			6.01			9.09	15.06	24.15
	1030		55	62	821	2253	45	12.74	7.50	68.15	41.27	27.51	68.78
	1090		35	154	727	2051	70	1.36	0.27	2.25	3.90	0.00	3.90
	1091		17	437	362	2164	70	1.00	0.10	0.78	1.43	0.00	1.43

Link Results: Flows and signals

Time Segment	Link	Major link	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))	Effective green (s (per cycle))
17:00-18:00	700		582	582	0		1954	726	80		12	0.00	25	26
	701		625	625	0		2097	779	80		12	0.00	25	26
	710		248	248	0		2088	1014	65		38	1.38	33	34
	711	710	21	21	0						38	1.18		
	712	710	394	394	0						38	0.94		
	720		86	86	0		2231	1084	46		96	1.38	33	34
	721	720	410	410	0						96	0.86		
	730		198	198	0		2299	1117	55		65	1.39	33	34
	731	730	411	411	0						65	0.86		
	790		1245	1245	0		2010	2010	62		45	0.45	70	70
	791		934	934	0		2124	2124	44		105	0.49	70	70
	792		410	410	0		2115	2115	19		364	1.04	70	70
	800		933	933	0		2001	1115	84		8	0.00	38	39
	801		984	984	0		2110	1176	84		8	0.00	38	39
	810		2	2	0		2182	655	30		196	1.17	20	21
	811	810	1	1	0						196	1.04		
	812	810	196	196	0						196	1.51		
	820		185	185	0		2295	689	27		231	1.17	20	21
	821	820	2	2	0						231	1.52		
	890		563	563	0		1911	1911	29		205	0.38	70	70
	891		364	364	0		2042	2042	18		405	0.71	70	70
	900		774	774	0		2158	894	87		4	0.00	28	29
	901		821	821	0		2287	947	87		4	0.00	28	29
	910		443	443	0		1995	884	71		26	0.75	30	31
	911	910	185	185	0						26	1.36		
	912	910	2	2	0						26	1.41		
	920		746	746	0		2187	969	77		17	0.76	30	31
	990		826	826	0		2133	2133	39		132	0.29	70	70
	1000		342	342	0		2139	428	80		13	0.00	13	14
	1001		371	371	0		2317	463	80		12	0.00	13	14
	1010		0	0	0		2071	1361	40		124	0.00	45	46
	1011	1010	3	3	0						124	1.49		
	1012	1010	544	544	0						124	0.97		
	1020		394	394	0		2247	1477	53		71	1.07	45	46
	1021	1020	383	383	0						71	0.99		
	1030		821	821	0		2253	1481	55		62	1.08	45	46
	1090		727	727	0	✓	2051	2051	35		154	0.71	70	70
	1091		362	362	0		2164	2164	17		437	1.25	70	70

Link Results: Stops and delays

Time Segment	Link	Major link	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	700		18.41	31.88	3.18	1.97	73.20	14.64	101.98	496.48	97.03	12.64	0.00
	701		18.41	31.11	3.42	1.98	76.69	15.34	100.97	533.26	97.78	13.44	0.00
	710		12.36	11.94	0.47	0.35	11.66	11.66	98.85	227.02	17.69	3.49	17.46
	711	710	12.36	15.32	0.06	0.03	1.27	1.27	40.92	7.09	1.50	0.12	0.61
	712	710	12.36	14.98	1.08	0.56	23.29	23.29	64.28	225.22	28.17	3.61	18.07
	720		12.04	7.39	0.10	0.07	2.52	2.52	75.50	61.51	3.74	0.93	4.65
	721	720	12.04	13.27	1.16	0.35	21.45	21.45	62.59	238.87	17.73	3.66	18.30
	730		11.73	9.95	0.35	0.19	7.78	7.78	93.18	174.75	9.89	2.63	13.17
	731	730	11.73	14.14	1.21	0.40	22.93	22.93	62.96	238.24	20.51	3.69	18.46
	790		11.94	2.35	0.00	0.81	11.54	11.54	3.50	2.16	41.39	0.62	0.62
	791		9.24	1.51	0.00	0.39	5.57	5.57	0.00	0.00	0.00	0.00	0.00
	792		9.32	1.06	0.00	0.12	1.71	1.71	0.00	0.00	0.00	0.00	0.00
	800		24.83	22.50	3.33	2.50	82.79	16.56	91.84	732.80	124.09	10.04	0.00
	801		24.83	22.02	3.52	2.50	85.47	0.00	91.22	773.00	124.60	10.52	2.10
	810		9.34	34.13	0.02	0.00	0.27	0.27	105.54	2.00	0.11	0.03	0.15
	811	810	9.35	9.28	0.00	0.00	0.04	0.04	63.17	0.58	0.06	0.01	0.05
	812	810	9.35	6.60	0.14	0.22	5.11	5.11	73.75	133.75	10.91	2.06	10.32
	820		9.03	36.20	1.68	0.18	26.42	26.42	105.05	185.05	9.36	2.77	13.87
	821	820	9.03	8.61	0.00	0.00	0.07	0.07	84.12	1.58	0.10	0.02	0.12
	890		22.50	1.34	0.00	0.21	2.97	2.97	0.00	0.00	0.00	0.00	0.00
	891		22.50	1.07	0.00	0.11	1.54	1.54	0.00	0.00	0.00	0.00	0.00
	900		24.91	32.99	4.03	3.07	100.72	20.14	106.96	677.90	149.98	9.63	0.00
	901		24.91	32.30	4.27	3.09	104.60	20.92	106.08	719.24	151.67	10.13	0.00
	910		18.33	15.90	1.09	0.87	27.79	27.79	55.66	203.23	43.47	3.52	17.60
	911	910	18.33	31.74	1.27	0.36	23.17	23.17	109.59	184.65	18.15	2.89	14.47
	912	910	18.33	30.05	0.01	0.00	0.24	0.24	109.42	1.99	0.20	0.03	0.16
	920		17.86	15.37	1.53	1.65	45.21	45.21	42.17	232.00	82.51	4.49	22.43
	990		22.50	1.38	0.00	0.32	4.48	4.48	0.00	0.00	0.00	0.00	0.00
	1000		48.00	46.76	2.53	1.91	63.08	12.62	120.21	319.70	91.42	1.29	0.00
	1001		48.00	45.38	2.75	1.93	66.41	13.28	118.49	346.83	92.78	1.38	0.00
	1010		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1011	1010	10.76	3.66	0.00	0.00	0.04	0.04	51.38	1.45	0.09	0.02	0.11
	1012	1010	10.76	3.07	0.13	0.33	6.59	6.59	25.64	122.39	17.02	1.99	9.94
	1020		10.21	11.44	0.97	0.28	17.79	17.79	47.23	171.81	14.35	2.66	13.28
	1021	1020	10.21	6.01	0.37	0.27	9.09	9.09	55.05	197.12	13.95	3.01	15.06
	1030		9.56	12.74	2.28	0.62	41.27	41.27	46.98	354.07	31.64	5.50	27.51
	1090		7.12	1.36	0.00	0.27	3.90	3.90	0.00	0.00	0.00	0.00	0.00
	1091		7.10	1.00	0.00	0.10	1.43	1.43	0.00	0.00	0.00	0.00	0.00

Link Results: Queues and blocking

Time Segment	Link	Major link	Initial queue (PCU)	Mean max queue (PCU)	Max queue storage (PCU)	Utilised storage (%)	Average storage excess queue (PCU)	Average limit excess queue (PCU)	Excess queue penalty (£ per hr)	Max end of green queue (PCU)	Max end of red queue (PCU)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))	Estimated blocking
17:00-18:00	700		0.00	11.99	36.74	32.65	0.00	0.00	0.00	1.97	9.08	0.00	0.00	0.00	
	701		0.00	12.74	39.43	32.32	0.00	0.00	0.00	1.98	9.62	0.00	0.00	0.00	
	710		0.00	10.24	13.00	78.79	0.00	0.00	4.28	0.94	6.12	0.00	0.00	0.00	
	711	710							0.00						
	712	710							0.00						
	720		0.00	6.43	13.00	49.50	0.00	0.00	0.00	0.42	5.26	0.00	0.00	0.00	
	721	720							0.00						
	730		0.00	8.84	14.00	63.15	0.00	0.00	0.00	0.60	6.06	0.00	0.00	0.00	
	731	730							0.00						
	790		0.00	3.08	20.06	15.37	0.00	0.00	0.00			0.00	0.00	0.00	
	791		0.00	0.39	16.41	2.39	0.00	0.00	0.00			0.00	0.00	0.00	
	792		0.00	0.12	16.48	0.73	0.00	0.00	0.00			32.00	0.00	32.00	
	800		0.00	17.53	37.62	46.59	0.00	0.00	0.00	2.50	10.53	0.00	0.00	0.00	
	801		0.00	18.36	39.67	46.27	0.00	0.00	0.00	2.50	10.98	0.00	0.00	0.00	
	810		0.00	3.59	7.00	51.35	0.00	0.00	0.00	0.22	2.00	8.00	0.00	8.00	
	811	810							0.00						
	812	810							0.00						
	820		0.00	3.82	9.00	42.43	0.00	0.00	0.00	0.19	3.80	15.00	0.00	15.00	
	821	820							0.00						
	890		0.00	0.21	35.93	0.58	0.00	0.00	0.00			0.00	0.00	0.00	
	891		0.00	0.11	38.39	0.28	0.00	0.00	0.00			18.00	0.00	18.00	
	900		0.00	16.61	40.57	40.94	0.00	0.00	0.00	3.07	11.88	0.00	0.00	0.00	
	901		0.00	17.46	43.00	40.61	0.00	0.00	0.00	3.09	12.44	0.00	0.00	0.00	
	910		0.00	9.29	20.00	46.45	0.00	0.00	0.00	1.23	6.78	0.00	0.00	0.00	
	911	910							0.00						
	912	910							0.00						
	920		0.00	7.19	21.00	34.26	0.00	0.00	0.00	1.65	4.69	0.00	0.00	0.00	
	990		0.00	0.32	40.10	0.79	0.00	0.00	0.00			0.00	0.00	0.00	
	1000		0.00	8.18	40.22	20.34	0.00	0.00	0.00	1.91	7.23	0.00	0.00	0.00	
	1001		0.00	8.73	43.56	20.04	0.00	0.00	0.00	1.93	7.70	0.00	0.00	0.00	
	1010		0.00	3.85	9.00	42.81	0.00	0.00	0.00	0.34	1.94	12.00	0.00	12.00	
	1011	1010							0.00						
	1012	1010							0.00						
	1020		0.00	8.24	10.00	82.41	0.00	0.00	3.71	0.56	5.29	0.00	0.00	0.00	
	1021	1020							0.00						
	1030		0.00	7.50	11.00	68.15	0.00	0.00	0.00	0.64	7.48	18.00	0.00	18.00	
	1090		0.00	0.27	12.20	2.25	0.00	0.00	0.00			15.00	0.00	15.00	
	1091		0.00	0.10	12.83	0.78	0.00	0.00	0.00			40.00	0.00	40.00	

Link Results: Journey times

Time Segment	Link	Major link	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
17:00-18:00	700		116.40	8.13	14.31	50.30
	701		125.00	8.60	14.54	49.52
	710		27.21	1.67	16.28	24.31
	711	710	2.31	0.16	14.29	27.68
	712	710	43.32	2.99	14.47	27.35
	720		9.25	0.47	19.83	19.42
	721	720	43.87	2.88	15.22	25.30
	730		20.67	1.19	17.31	21.69
	731	730	42.87	2.95	14.51	25.88
	790		132.12	4.94	26.74	14.29
	791		76.78	2.79	27.50	10.76
	792		33.98	1.18	28.75	10.38
	800		186.60	12.26	15.21	47.32
	801		196.80	12.81	15.37	46.85
	810		0.17	0.02	6.87	43.47
	811	810	0.08	0.01	16.06	18.64
	812	810	16.31	0.87	18.76	15.95
	820		14.85	2.32	6.39	45.22
	821	820	0.16	0.01	16.38	17.63
	890		112.62	3.73	30.21	23.84
	891		72.79	2.38	30.54	23.57
	900		154.80	12.45	12.43	57.90
	901		164.20	13.05	12.58	57.21
	910		72.20	4.21	17.13	34.23
	911	910	30.15	2.57	11.71	50.06
	912	910	0.33	0.03	12.12	48.37
	920		118.41	6.88	17.20	33.23
	990		165.18	5.48	30.16	23.88
	1000		68.40	9.00	7.60	94.76
	1001		74.20	9.62	7.71	93.38
	1010		0.00	0.00	0.00	0.00
	1011	1010	0.29	0.01	23.87	14.43
	1012	1010	52.01	2.09	24.89	13.84
	1020		35.76	2.37	15.09	21.65
	1021	1020	34.79	1.73	20.14	16.22
	1030		69.79	5.09	13.72	22.31
	1090		46.04	1.71	26.87	8.48
	1091		22.86	0.81	28.05	8.09

Link Results: Advanced

Time Segment	Link	Major link	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Mean Max Queue EoTS (PCU)	Max End of Green Queue EoTS (PCU)	Max End of Red Queue EoTS (PCU)	PCU Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
17:00-18:00	700		0.00	0.00	✓	12.02	2.00	9.11	1.00	0.00	85.84	14.64
	701		0.00	0.00	✓	12.77	2.00	9.64	1.00	0.00	90.13	15.34
	710		0.00	0.00	✓	10.25	0.94	6.12	1.00	4.28	15.16	33.40
	711	710	0.00	0.00					1.00	0.00	1.39	1.88
	712	710	0.00	0.00					1.00	0.00	26.91	41.37
	720		0.00	0.00	✓	6.44	0.42	5.26	1.00	0.00	3.45	7.17
	721	720	0.00	0.00					1.00	0.00	25.12	39.76
	730		0.00	0.00	✓	8.84	0.60	6.06	1.00	0.00	10.41	20.95
	731	730	0.00	0.00					1.00	0.00	26.62	41.39
	790		0.00	0.00	✓	3.08			1.00	0.00	12.16	12.16
	791		0.00	0.00	✓	0.39			1.00	0.00	5.57	5.57
	792		0.00	0.00	✓	0.12			1.00	0.00	1.71	1.71
	800		0.00	0.00	✓	17.56	2.53	10.56	1.00	0.00	92.83	16.56
	801		0.00	0.00	✓	18.39	2.53	11.01	1.00	0.00	95.98	2.10
	810		0.00	0.00	✓	3.59	0.22	2.00	1.00	0.00	0.30	0.42
	811	810	0.00	0.00					1.00	0.00	0.05	0.08
	812	810	0.00	0.00					1.00	0.00	7.17	15.42
	820		0.00	0.00	✓	3.82	0.19	3.80	1.00	0.00	29.20	40.29
	821	820	0.00	0.00					1.00	0.00	0.09	0.19
	890		0.00	0.00	✓	0.21			1.00	0.00	2.97	2.97
	891		0.00	0.00	✓	0.11			1.00	0.00	1.54	1.54
	900		0.00	0.00	✓	16.69	3.14	11.96	1.00	0.00	110.35	20.14
	901		0.00	0.00	✓	17.53	3.17	12.52	1.00	0.00	114.74	20.92
	910		0.00	0.00	✓	9.30	1.24	6.79	1.00	0.00	31.31	45.39
	911	910	0.00	0.00					1.00	0.00	26.06	37.63
	912	910	0.00	0.00					1.00	0.00	0.27	0.39
	920		0.00	0.00	✓	7.21	1.66	4.70	1.00	0.00	49.70	67.65
	990		0.00	0.00	✓	0.32			1.00	0.00	4.48	4.48
	1000		0.00	0.00	✓	8.22	1.95	7.27	1.00	0.00	64.36	12.62
	1001		0.00	0.00	✓	8.77	1.97	7.74	1.00	0.00	67.79	13.28
	1010		0.00	0.00	✓	3.85	0.34	1.94	1.00	0.00	0.00	0.00
	1011	1010	0.00	0.00					1.00	0.00	0.07	0.15
	1012	1010	0.00	0.00					1.00	0.00	8.58	16.53
	1020		0.00	0.00	✓	8.24	0.56	5.29	1.00	3.71	20.44	34.78
	1021	1020	0.00	0.00					1.00	0.00	12.10	24.15
	1030		0.00	0.00	✓	7.50	0.64	7.48	1.00	0.00	46.77	68.78
	1090		0.00	0.00	✓	0.27			1.00	0.00	3.90	3.90
	1091		0.00	0.00	✓	0.10			1.00	0.00	1.43	1.43

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	Item with worst over PR
2	29/05/2019 18:15:00	29/05/2019 18:15:00	17:00	70	687.14	69.02	86.65	901	0	0	901	790	90

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	87	4	16540	1489	15.02	440.64	238.51	687.14

Network Results: Flows and signals

Time Segment	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))	Effective green (s (per cycle))
17:00-18:00	16540	16540	-1	✓	87		4	1489	1519

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	17.52	15.02	40.98	28.04	980.08	440.64	53.67	7565.73	1311.90	116.85	238.51

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))
17:00-18:00	82.41	7.99	213.00	0.00	213.00

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
17:00-18:00	2383.54	149.50	15.94

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	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	✓	1.00	7.99	0.00	1096.93	687.14

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

	To				
From		A	B	C	D
	A	167.7	62.7	116.8	168.7
	B	103.4	138.3	71.0	105.2
	C	0.0	117.5	147.9	81.8
	D	103.2	130.5	154.9	205.0

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	A	A	3	167.72	3	167.72
2	B	A	91	103.39	91	103.39
3	B	A	362	104.39	362	104.39
4	B	A	362	102.39	362	102.39
5	B	A	91	103.86	91	103.86
6	A	B	438	60.28	438	60.28
7	A	B	582	64.59	582	64.59
8	B	B	21	138.27	21	138.27
9	C	A	0	66.38	0	0.00
10	C	B	394	121.19	394	121.19
11	C	B	410	115.58	410	115.58
12	C	B	410	115.78	410	115.78
13	B	C	364	70.90	364	70.90
14	A	C	2	116.83	2	116.83
15	B	C	364	71.16	364	71.16
16	C	C	1	147.87	1	147.87
17	D	B	161	133.36	161	133.36
18	D	A	181	103.24	181	103.24
19	D	B	86	131.98	86	131.98
20	D	B	86	123.56	86	123.56
21	D	C	196	154.86	196	154.86
22	A	D	182	168.68	182	168.68
23	B	D	148	104.95	148	104.95
24	B	D	114	105.43	114	105.43
25	C	D	380	81.78	380	81.78
26	D	D	2	204.95	2	204.95

Final Prediction Table

Link Results

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QUEUES	
Link	Name	Major link	Traffic node	Controller stream	Phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s per cycle)	Wasted time total (s per cycle)	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (PCU)	Max end of red queue (PCU)
700			7	7	C	582	1954	25	0.00	80	12	50.30	31.88	101.98	11.99	9.08
701			7	7	C	625	2097	25	0.00	80	12	49.52	31.11	100.97	12.74	9.62
710		(710)	7	7	D	248	2088	33	0.00	65	38	24.31	11.94	98.85	10.24	6.12
711		710				21						27.68	15.32	40.92		
712		710				394						27.35	14.98	64.28		
720		(720)	7	7	D	86	2231	33	0.00	46	96	19.42	7.39	75.50	6.43	5.26
721		720				410						25.30	13.27	62.59		
730		(730)	7	7	D	198	2299	33	0.00	55	65	21.69	9.95	93.18	8.84	6.06
731		730				411						25.88	14.14	62.96		
790			7			1245	2010	70	0.00	62	45	14.29	2.35	3.50	3.08	
791			7			934	2124	70	0.00	44	105	10.76	1.51	0.00	0.39	
792			7			410	2115	70	32.00	19	364	10.38	1.06	0.00	0.12	
800			8	8	A	933	2001	38	0.00	84	8	47.32	22.50	91.84	17.53	10.53
801			8	8	A	984	2110	38	0.00	84	8	46.85	22.02	91.22	18.36	10.98
810		(810)	8	8	B	2	2182	20	8.00	30	196	43.47	34.13	105.54	3.59	2.00
811		810				1						18.64	9.28	63.17		
812		810				196						15.95	6.60	73.75		
820		(820)	8	8	B	185	2295	20	15.00	27	231	45.22	36.20	105.05	3.82	3.80
821		820				2						17.63	8.61	84.12		
890			8			563	1911	70	0.00	29	205	23.84	1.34	0.00	0.21	
891			8			364	2042	70	18.00	18	405	23.57	1.07	0.00	0.11	
900			9	9	A	774	2158	28	0.00	87	4	57.90	32.99	106.96	16.61	11.88
901			9	9	A	821	2287	28	0.00	87	4	57.21	32.30	106.08	17.46	12.44
910		(910)	9	9	B	443	1995	30	0.00	71	26	34.23	15.90	55.66	9.29	6.78
911		910				185						50.06	31.74	109.59		
912		910				2						48.37	30.05	109.42		
920			9	9	B	746	2187	30	0.00	77	17	33.23	15.37	42.17	7.19	4.69
990			9			826	2133	70	0.00	39	132	23.88	1.38	0.00	0.32	
1000			10	10	A	342	2139	13	0.00	80	13	94.76	46.76	120.21	8.18	7.23
1001			10	10	A	371	2317	13	0.00	80	12	93.38	45.38	118.49	8.73	7.70
1010		(1010)	10	10	B	0	2071	45	12.00	40	124	0.00	0.00	0.00	3.85	1.94
1011		1010				3						14.43	3.66	51.38		
1012		1010				544						13.84	3.07	25.64		
1020		(1020)	10	10	B	394	2247	45	0.00	53	71	21.65	11.44	47.23	8.24	5.29
1021		1020				383						16.22	6.01	55.05		
1030			10	10	B	821	2253	45	18.00	55	62	22.31	12.74	46.98	7.50	7.48
1090			10			727	2051	70	15.00	35	154	8.48	1.36	0.00	0.27	
1091			10			362	2164	70	40.00	17	437	8.09	1.00	0.00	0.10	

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	2383.54	149.50	15.94	40.98	28.04	440.64	238.51	7.99	687.14
Bus									
Tram									
Pedestrians									
TOTAL	2383.54	149.50	15.94	40.98	28.04	440.64	238.51	7.99	687.14

- | < = 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 - Phase 1A - AM 2024 inc. 1100 D D3 - 2024 inc. 1100 D 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	Item with worst over PR
3	29/05/2019 18:15:00	29/05/2019 18:15:01	08:00	70	2663.45	84.57	95.55	801	2	5	801	790	80

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
Phase 1A - AM 2024 inc. 1100 D		D3	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2024 inc. 1100 D 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)
70		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	PCU Length (m)	Calculate results for Path Segments	Generate PDM Profile Data
1	90	100	✓	✓		Simplified (TRANSYT 12)	5.75		✓

Normal Traffic parameters

Dispersion type	Dispersion coefficient	Travel time coefficient
Default	35	80

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion type	Acceleration (ms ^{^-2})	Stationary time coefficient	Cruise time coefficient
Bus	1.00	Default	0.94	30	85

Tram parameters

Name	PCU Factor	Dispersion type	Acceleration (ms ^{^-2})	Stationary time coefficient	Cruise time coefficient
Tram	1.00	Default	0.94	100	100

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

Optimisation type	OUTProfile accuracy	SASart temperature	SACooling factor	Random seed	Use enhanced optimisation	Auto optimisation order	Optimisation order	Master controller	Offsets relative to master controller	Master controller offset after each run
Simulated Annealing (Slow)	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05	300.00	100.00	1	✓	✓	7, 8, 9, 10			Do nothing

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
(ALL)		

Links

Links

Link	Name	Description	Traffic node	Length (m)	Has Saturation Flow	Use RR67	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Is minor shared	Major link	Allow Nearside Turn On Red
700			7	200.00	✓		1954	✓		Normal			
701			7	200.00	✓		2097	✓		Normal			
710			7	109.89	✓		2088	✓		Normal			
711				109.89						Normal	✓	710	
712				109.89						Normal	✓	710	
720			7	107.01	✓		2231	✓		Normal			
721				107.01						Normal	✓	720	
730			7	104.31	✓		2299	✓		Normal			
731				104.31						Normal	✓	730	
790			7	106.14	✓		2010			Normal			
791			7	82.17	✓		2124			Normal			
792			7	82.87	✓		2115			Normal			
800			8	200.00	✓		2001	✓		Normal			
801			8	200.00	✓		2110	✓		Normal			
810			8	83.00	✓		2182	✓		Normal			
811				83.14						Normal	✓	810	
812				83.14						Normal	✓	810	
820			8	80.23	✓		2295	✓		Normal			
821				80.23						Normal	✓	820	
890			8	200.00	✓		1911			Normal			
891			8	200.00	✓		2042			Normal			
900			9	200.00	✓		2158	✓		Normal			
901			9	200.00	✓		2287	✓		Normal			
910			9	162.90	✓		1995	✓		Normal			
911				162.90						Normal	✓	910	
912				162.90						Normal	✓	910	
920			9	158.76	✓		2187	✓		Normal			
990			9	200.00	✓		2133			Normal			
1000			10	200.00	✓		2139	✓		Normal			
1001			10	200.00	✓		2317	✓		Normal			
1010			10	95.68	✓		2071	✓		Normal			
1011				95.68						Normal	✓	1010	
1012				95.68						Normal	✓	1010	
◀ ▶													
1021				90.73						Normal	✓	1020	
1030			10	85.01	✓		2253	✓		Normal			
1090			10	63.28	✓		2051			Normal			
1091			10	63.07	✓		2164			Normal			

Modelling

Link	Traffic model	Stop weighting (%)	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Queue limit (PCU)	Excess queue penalty (£)	Has degree of saturation limit
700	NetworkDefault	0	20	100		0.00				
701	NetworkDefault	0	20	100		0.00				
710	NetworkDefault	500	100	100		13.00	✓	10.00	1000.00	
711	NetworkDefault	500	100	100					0.00	
712	NetworkDefault	500	100	100					0.00	
720	NetworkDefault	500	100	100		13.00	✓	10.00	1000.00	
721	NetworkDefault	500	100	100					0.00	
730	NetworkDefault	500	100	100		14.00	✓	11.00	1000.00	
731	NetworkDefault	500	100	100					0.00	
790	NetworkDefault	100	100	100		0.00				
791	NetworkDefault	100	100	100		0.00				
792	NetworkDefault	100	100	100		0.00				
800	NetworkDefault	0	20	100		0.00				
801	NetworkDefault	20	0	100		0.00				
810	NetworkDefault	500	100	100		7.00	✓	4.00	1000.00	
811	NetworkDefault	500	100	100					0.00	
812	NetworkDefault	500	100	100					0.00	
820	NetworkDefault	500	100	100		9.00	✓	5.00	1000.00	
821	NetworkDefault	500	100	100					0.00	
890	NetworkDefault	100	100	100		0.00				
891	NetworkDefault	100	100	100		0.00				
900	NetworkDefault	0	20	100		0.00				
901	NetworkDefault	0	20	100		0.00				
910	NetworkDefault	500	100	100		20.00				
911	NetworkDefault	500	100	100						
912	NetworkDefault	500	100	100						
920	NetworkDefault	500	100	100		21.00				
990	NetworkDefault	100	100	100		0.00				
1000	NetworkDefault	0	20	100		0.00				
1001	NetworkDefault	0	20	100		0.00				
1010	NetworkDefault	500	100	100		9.00	✓	7.00	1000.00	
1011	NetworkDefault	500	100	100					0.00	
1012	NetworkDefault	500	100	100					0.00	
1020	NetworkDefault	500	100	100		10.00	✓	8.00	1000.00	
1021	NetworkDefault	500	100	100					0.00	
1030	NetworkDefault	500	100	100		11.00	✓	8.00	1000.00	
1090	NetworkDefault	100	100	100		0.00				
1091	NetworkDefault	100	100	100		0.00				

Modelling - Normal traffic - Advanced

Link	Dispersion type for Normal Traffic	Initial queue (PCU)	Auto cycle time	Cycle time
700	NetworkDefault	0.00	✓	70
701	NetworkDefault	0.00	✓	70
710	NetworkDefault	0.00	✓	70
711	NetworkDefault			
712	NetworkDefault			
720	NetworkDefault	0.00	✓	70
721	NetworkDefault			
730	NetworkDefault	0.00	✓	70
731	NetworkDefault			
790	NetworkDefault	0.00	✓	70
791	NetworkDefault	0.00	✓	70
792	NetworkDefault	0.00	✓	70
800	NetworkDefault	0.00	✓	70
801	NetworkDefault	0.00	✓	70
810	NetworkDefault	0.00	✓	70
811	NetworkDefault			
812	NetworkDefault			
820	NetworkDefault	0.00	✓	70
821	NetworkDefault			
890	NetworkDefault	0.00	✓	70
891	NetworkDefault	0.00	✓	70
900	NetworkDefault	0.00	✓	70
901	NetworkDefault	0.00	✓	70
910	NetworkDefault	0.00	✓	70
911	NetworkDefault			
912	NetworkDefault			
920	NetworkDefault	0.00	✓	70
990	NetworkDefault	0.00	✓	70
1000	NetworkDefault	0.00	✓	70
1001	NetworkDefault	0.00	✓	70
1010	NetworkDefault	0.00	✓	70
1011	NetworkDefault			
1012	NetworkDefault			
1020	NetworkDefault	0.00	✓	70
1021	NetworkDefault			
1030	NetworkDefault	0.00	✓	70
1090	NetworkDefault	0.00	✓	70
1091	NetworkDefault	0.00	✓	70

Flows

Link	Total flow (PCU/hr)	PCU Factor
700	499	1.00
701	535	1.00
710	313	1.00
711	19	1.00
712	321	1.00
720	83	1.00
721	264	1.00
730	393	1.00
731	266	1.00
790	1151	1.00
791	697	1.00
792	264	1.00
800	1229	1.00
801	1296	1.00
810	4	1.00
811	2	1.00
812	388	1.00
820	182	1.00
821	5	1.00
890	934	1.00
891	540	1.00
900	501	1.00
901	530	1.00
910	736	1.00
911	182	1.00
912	5	1.00
920	710	1.00
990	607	1.00
1000	517	1.00
1001	559	1.00
1010	0	1.00
1011	1	1.00
1012	841	1.00
1020	321	1.00
1021	364	1.00
1030	530	1.00
1090	1129	1.00
1091	345	1.00

Flows - Advanced

Link	Detectors
(ALL)	

Signals

Link	Controller stream	Phase	Second phase enabled
700	7	C	
701	7	C	
710	7	D	
711			
712			
720	7	D	
721			
730	7	D	
731			
800	8	A	
801	8	A	
810	8	B	
811			
812			
820	8	B	
821			
900	9	A	
901	9	A	
910	9	B	
911			
912			
920	9	B	
1000	10	A	
1001	10	A	
1010	10	B	
1011			
1012			
1020	10	B	
1021			
1030	10	B	

Entry Sources

Link	Cruise time (seconds)	Cruise speed (kph)
700	18.41	39.10
701	18.41	39.10
800	24.83	29.00
801	24.83	29.00
900	24.91	28.90
901	24.91	28.90
1000	48.00	15.00
1001	48.00	15.00

Sources

Link	Source	Source type	Source link	Destination link	Cruise time (seconds)	Cruise speed (kph)	Total flow (PCU/hr)
710	1	Link	1000	710	12.36	32.00	230
711	1	Link	1021	711	12.36	32.00	19
712	1	Link	1020	712	12.36	32.00	321
720	1	Link	1001	720	12.04	32.00	83
721	1	Link	1030	721	12.04	32.00	264
730	1	Link	1001	730	11.73	32.00	393
731	1	Link	1030	731	11.73	32.00	266
790	1	Link	710	790	11.94	32.00	313
791	1	Link	720	791	9.24	32.00	83
792	1	Link	731	792	9.32	32.00	264
810	1	Link	701	810	9.34	32.00	4
811	1	Link	731	811	9.35	32.00	2
812	1	Link	730	812	9.35	32.00	388
820	1	Link	701	820	9.03	32.00	182
821	1	Link	730	821	9.03	32.00	5
890	1	Link	810	890	22.50	32.00	4
891	1	Link	800	891	22.50	32.00	540
910	1	Link	800	910	18.33	32.00	150
911	1	Link	820	911	18.33	32.00	182
912	1	Link	821	912	18.33	32.00	5
920	1	Link	801	920	17.86	32.00	710
990	1	Link	910	990	22.50	32.00	241
1010	1	Link	900	1010	10.76	32.00	0
1011	1	Link	911	1011	10.76	32.00	1
1012	1	Link	920	1012	10.76	32.00	345
1020	1	Link	900	1020	10.21	32.00	321
1021	1	Link	920	1021	10.21	32.00	364
1030	1	Link	901	1030	9.56	32.00	530
1090	1	Link	1000	1090	7.12	32.00	287
1091	1	Link	1021	1091	7.10	32.00	345
710	2	Link	1001	710	12.36	32.00	83
790	2	Link	711	790	11.94	32.00	19
791	2	Link	721	791	9.24	32.00	264
890	2	Link	800	890	22.50	32.00	540
910	2	Link	801	910	18.33	32.00	586
990	2	Link	900	990	22.50	32.00	180
1012	2	Link	910	1012	10.76	32.00	495
1090	2	Link	1010	1090	7.12	32.00	0
790	3	Link	700	790	11.94	32.00	499
791	3	Link	701	791	9.24	32.00	349
890	3	Link	812	890	22.50	32.00	388
990	3	Link	911	990	22.50	32.00	181
1090	3	Link	1011	1090	7.12	32.00	1
790	4	Link	712	790	11.94	32.00	321
890	4	Link	811	890	22.50	32.00	2
990	4	Link	912	990	22.50	32.00	5
1090	4	Link	1012	1090	7.12	32.00	841

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				
From		A	B	C	D
	A	1	848	4	181
	B	1186	19	1079	241
	C	0	849	2	180
	D	287	396	388	5

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	A	(untitled)	701, 700	1090, 1091	#0000FF
	B	(untitled)	801, 800	792, 791, 790	#FF0000
	C	(untitled)	900, 901	891, 890	#00FF00
	D	(untitled)	1000, 1001	990	#FFFF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
1	1		A	A	701, 820, 911, 1011, 1090	Normal	1
	2		B	A	801, 910, 1012, 1090	Normal	345
	3		B	A	801, 920, 1021, 1091	Normal	345
	4		B	A	801, 920, 1012, 1090	Normal	345
	5		B	A	800, 910, 1012, 1090	Normal	150
	6		A	B	701, 791	Normal	349
	7		A	B	700, 790	Normal	499
	8		B	B	801, 920, 1021, 711, 790	Normal	19
	9		C	A	900, 1010, 1090	Normal	0
	10		C	B	900, 1020, 712, 790	Normal	321
	11		C	B	901, 1030, 721, 791	Normal	264
	12		C	B	901, 1030, 731, 792	Normal	264
	13		B	C	800, 891	Normal	540
	14		A	C	701, 810, 890	Normal	4
	15		B	C	800, 890	Normal	540
	16		C	C	901, 1030, 731, 811, 890	Normal	2
	17		D	B	1000, 710, 790	Normal	230
	18		D	A	1000, 1090	Normal	287
	19		D	B	1001, 710, 790	Normal	83
	20		D	B	1001, 720, 791	Normal	83
	21		D	C	1001, 730, 812, 890	Normal	388
	22		A	D	701, 820, 911, 990	Normal	181
	23		B	D	801, 910, 990	Normal	241
	24		B	D	800, 910, 990	Normal	0
	25		C	D	900, 990	Normal	180
	26		D	D	1001, 730, 821, 912, 990	Normal	5

Link Results

Link Results: Vehicle summary

Time Segment	Link	Major link	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	700		64	41	499	1954	27	23.26	8.64	23.52	9.16	0.00	9.16
	701		64	41	535	2097	27	22.81	9.20	23.33	9.63	0.00	9.63
	710		68	32	313	2088	31	11.91	8.83	67.92	14.70	21.19	35.90
	711	710			19			19.78			1.48	0.89	2.37
	712	710			321			16.18			20.47	8.63	29.10
	720		34	164	83	2231	31	5.18	2.36	18.12	1.70	2.82	4.52
	721	720			264			11.06			11.52	5.32	16.84
	730		63	44	393	2299	31	10.48	9.16	65.46	16.23	26.46	42.69
	731	730			266			11.35			11.90	4.96	16.87
	790		57	57	1152	2010	70	2.09	1.23	6.14	9.51	0.49	10.00
	791		33	175	696	2124	70	1.26	0.24	1.49	3.46	0.00	3.46
	792		12	621	264	2115	70	0.97	0.07	0.43	1.01	0.00	1.01
	800		96	-6	1229	2001	44	35.91	30.16	80.16	34.81	0.00	34.81
	801		96	-6	1296	2110	44	34.88	31.43	79.23	0.00	3.56	3.56
	810		84	7	4	2182	14	44.80	5.79	82.67	0.71	0.37	1346.69
	811	810			2			58.72			0.46	0.16	0.62
	812	810			388			45.52			69.60	19.99	89.59
	820		38	137	182	2295	14	25.32	3.87	42.96	18.17	13.92	32.09
	821	820			5			27.40			0.54	0.18	0.72
	890		49	84	933	1911	70	1.84	0.48	1.33	6.77	0.00	6.77
	891		26	241	539	2042	70	1.20	0.18	0.47	2.55	0.00	2.55
	900		86	5	501	2158	18	44.14	11.96	29.48	17.44	0.00	17.44
	901		85	5	530	2287	18	42.89	12.47	29.00	17.93	0.00	17.93
	910		79	14	736	1995	40	21.28	14.34	71.70	61.80	37.70	99.50
	911	910			182			18.97			13.61	13.79	27.41
	912	910			5			16.56			0.33	0.35	0.68
	920		55	62	710	2187	40	16.10	8.59	40.89	45.08	31.43	76.50
	990		28	216	607	2133	70	1.18	0.20	0.50	2.82	0.00	2.82
	1000		85	6	517	2139	19	41.67	11.94	29.68	16.99	0.00	16.99
	1001		84	7	559	2317	19	40.18	12.68	29.10	17.72	0.00	17.72
	1010		71	27	0	2071	39	0.00	8.76	97.32	0.00	0.00	471.54
	1011	1010			1			27.33			0.11	0.07	0.18
	1012	1010			841			15.24			50.55	39.77	90.32
	1020		53	69	321	2247	39	5.43	8.71	87.10	6.88	14.11	36.48
	1021	1020			364			10.96			15.76	12.55	28.31
	1030		41	119	530	2253	39	3.03	9.18	83.47	6.34	13.18	49.75
	1090		55	64	1129	2051	70	1.95	1.76	14.39	8.68	0.89	9.57
	1091		16	464	345	2164	70	0.99	0.09	0.74	1.35	0.00	1.35

Link Results: Flows and signals

Time Segment	Link	Major link	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))	Effective green (s (per cycle))
08:00-09:00	700		499	499	0		1954	782	64		41	0.00	27	28
	701		535	535	0		2097	839	64		41	0.00	27	28
	710		313	313	0		2088	955	68		32	1.25	31	32
	711	710	19	19	0						32	0.96		
	712	710	321	321	0						32	1.34		
	720		83	83	0		2231	1020	34		164	1.25	31	32
	721	720	264	264	0						164	1.23		
	730		393	393	0		2299	1051	63		44	1.26	31	32
	731	730	266	266	0						44	1.24		
	790		1152	1152	-1	✓	2010	2010	57		57	0.43	70	70
	791		696	696	0	✓	2124	2124	33		175	0.50	70	70
	792		264	264	0		2115	2115	12		621	1.13	70	70
	800		1229	1229	0		2001	1286	96	✓	-6	0.00	44	45
	801		1296	1296	0		2110	1356	96	✓	-6	0.00	44	45
	810		4	4	0		2182	468	84		7	1.12	14	15
	811	810	2	2	0						7	1.13		
	812	810	388	388	0						7	1.40		
	820		182	182	0		2295	492	38		137	1.13	14	15
	821	820	5	5	0						137	1.40		
	890		933	933	0	✓	1911	1911	49		84	0.20	70	70
	891		539	539	0	✓	2042	2042	26		241	0.55	70	70
	900		501	501	0		2158	586	86		5	0.00	18	19
	901		530	530	0		2287	621	85		5	0.00	18	19
	910		736	736	0		1995	1169	79		14	0.58	40	41
	911	910	182	182	0						14	1.36		
	912	910	5	5	0						14	1.19		
	920		710	710	0		2187	1281	55		62	0.59	40	41
	990		607	607	0		2133	2133	28		216	0.33	70	70
	1000		517	517	0		2139	611	85		6	0.00	19	20
	1001		559	559	0		2317	662	84		7	0.00	19	20
	1010		0	0	0		2071	1183	71		27	0.00	39	40
	1011	1010	1	1	0						27	1.46		
	1012	1010	841	841	0						27	0.74		
	1020		321	321	0		2247	1284	53		69	1.30	39	40
	1021	1020	364	364	0						69	0.78		
	1030		530	530	0		2253	1287	41		119	1.32	39	40
	1090		1129	1129	0		2051	2051	55		64	0.50	70	70
	1091		345	345	0		2164	2164	16		464	1.10	70	70

Link Results: Stops and delays

Time Segment	Link	Major link	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	700		18.41	23.26	2.35	0.88	45.78	9.16	85.56	382.82	44.12	9.09	0.00
	701		18.41	22.81	2.51	0.88	48.14	9.63	84.94	410.34	44.09	9.68	0.00
	710		12.36	11.91	0.52	0.51	14.70	14.70	94.96	271.21	25.92	4.24	21.19
	711	710	12.36	19.78	0.07	0.03	1.48	1.48	65.47	10.87	1.57	0.18	0.89
	712	710	12.36	16.18	0.91	0.53	20.47	20.47	37.72	94.44	26.58	1.73	8.63
	720		12.04	5.18	0.06	0.06	1.70	1.70	47.61	36.45	3.15	0.56	2.82
	721	720	12.04	11.06	0.62	0.20	11.52	11.52	28.25	64.59	9.99	1.06	5.32
	730		11.73	10.48	0.64	0.50	16.23	16.23	94.47	345.73	25.21	5.29	26.46
	731	730	11.73	11.35	0.50	0.34	11.90	11.90	26.17	52.52	17.08	0.99	4.96
	790		11.94	2.09	0.00	0.67	9.51	9.51	2.98	0.10	34.20	0.49	0.49
	791		9.24	1.26	0.00	0.24	3.46	3.46	0.00	0.00	0.00	0.00	0.00
	792		9.32	0.97	0.00	0.07	1.01	1.01	0.00	0.00	0.00	0.00	0.00
	800		24.83	35.91	3.95	8.31	174.06	34.81	118.41	1063.12	392.16	17.05	0.00
	801		24.83	34.88	4.17	8.39	178.33	0.00	117.19	1121.13	397.59	17.79	3.56
	810		9.34	44.80	0.02	0.03	0.71	0.71	129.01	3.96	1.20	0.07	0.37
	811	810	9.35	58.72	0.02	0.01	0.46	0.46	112.79	1.65	0.60	0.03	0.16
	812	810	9.35	45.52	2.44	2.46	69.60	69.60	72.29	163.65	116.58	4.00	19.99
	820		9.03	25.32	0.98	0.30	18.17	18.17	107.26	180.13	14.99	2.78	13.92
	821	820	9.03	27.40	0.03	0.01	0.54	0.54	49.82	2.08	0.41	0.04	0.18
	890		22.50	1.84	0.00	0.48	6.77	6.77	0.00	0.00	0.00	0.00	0.00
	891		22.50	1.20	0.00	0.18	2.55	2.55	0.00	0.00	0.00	0.00	0.00
	900		24.91	44.14	3.37	2.77	87.22	17.44	118.55	460.94	132.99	6.91	0.00
	901		24.91	42.89	3.56	2.75	89.66	17.93	116.97	487.43	132.53	7.21	0.00
	910		18.33	21.28	2.87	1.48	61.80	61.80	71.78	454.40	74.13	7.54	37.70
	911	910	18.33	18.97	0.59	0.37	13.61	13.61	106.29	175.04	18.31	2.76	13.79
	912	910	18.33	16.56	0.01	0.01	0.33	0.33	99.20	4.45	0.50	0.07	0.35
	920		17.86	16.10	2.55	0.62	45.08	45.08	62.08	409.07	31.52	6.29	31.43
	990		22.50	1.18	0.00	0.20	2.82	2.82	0.00	0.00	0.00	0.00	0.00
	1000		48.00	41.67	3.38	2.60	84.97	16.99	116.29	475.72	125.52	1.88	0.00
	1001		48.00	40.18	3.65	2.58	88.59	17.72	114.42	514.29	125.29	2.00	0.00
	1010		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1011	1010	10.76	27.33	0.01	0.00	0.11	0.11	97.27	0.83	0.14	0.01	0.07
	1012	1010	10.76	15.24	2.34	1.22	50.55	50.55	66.32	436.52	121.04	7.95	39.77
	1020		10.21	5.43	0.22	0.27	6.88	6.88	61.67	184.25	13.60	2.82	14.11
	1021	1020	10.21	10.96	0.81	0.30	15.76	15.76	48.30	160.54	15.45	2.51	12.55
	1030		9.56	3.03	0.10	0.35	6.34	6.34	34.88	167.02	17.83	2.64	13.18
	1090		7.12	1.95	0.00	0.61	8.68	8.68	5.52	0.33	62.02	0.89	0.89
	1091		7.10	0.99	0.00	0.09	1.35	1.35	0.00	0.00	0.00	0.00	0.00

Link Results: Queues and blocking

Time Segment	Link	Major link	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	700		0.00	8.64	36.74	23.52	0.00	0.00	0.00	0.88	6.70	0.00	0.00	0.00	
	701		0.00	9.20	39.43	23.33	0.00	0.00	0.00	0.88	7.12	0.00	0.00	0.00	
	710		0.00	8.83	13.00	67.92	0.00	0.00	0.00	1.07	5.24	0.00	0.00	0.00	
	711	710							0.00						
	712	710							0.00						
	720		0.00	2.36	13.00	18.12	0.00	0.00	0.00	0.26	2.08	1.00	0.00	1.00	
	721	720							0.00						
	730		0.00	9.16	14.00	65.46	0.00	0.00	0.00	0.84	5.00	0.00	0.00	0.00	
	731	730							0.00						
	790		0.00	1.23	20.06	6.14	0.00	0.00	0.00			0.00	0.00	0.00	
	791		0.00	0.24	16.41	1.49	0.00	0.00	0.00			0.00	0.00	0.00	
	792		0.00	0.07	16.48	0.43	0.00	0.00	0.00			35.00	0.00	35.00	
	800		0.00	30.16	37.62	80.16	0.00	0.00	0.00	8.31	16.84	0.00	0.00	0.00	
	801		0.00	31.43	39.67	79.23	0.00	0.00	0.00	8.39	17.39	0.00	0.00	0.00	
	810		0.00	5.79	7.00	82.67	0.00	1.35	1345.61	2.49	5.78	0.00	0.00	0.00	
	811	810							0.00						
	812	810							0.00						
	820		0.00	3.87	9.00	42.96	0.00	0.00	0.00	0.31	3.79	9.00	0.00	9.00	
	821	820							0.00						
	890		0.00	0.48	35.93	1.33	0.00	0.00	0.00			0.00	0.00	0.00	
	891		0.00	0.18	38.39	0.47	0.00	0.00	0.00			9.00	0.00	9.00	
	900		0.00	11.96	40.57	29.48	0.00	0.00	0.00	2.77	9.87	0.00	0.00	0.00	
	901		0.00	12.47	43.00	29.00	0.00	0.00	0.00	2.75	10.26	0.00	0.00	0.00	
	910		0.00	14.34	20.00	71.70	0.00	0.00	0.00	1.85	10.18	0.00	0.00	0.00	
	911	910							0.00						
	912	910							0.00						
	920		0.00	8.59	21.00	40.89	0.00	0.00	0.00	0.62	8.28	4.00	0.00	4.00	
	990		0.00	0.20	40.10	0.50	0.00	0.00	0.00			0.00	0.00	0.00	
	1000		0.00	11.94	40.22	29.68	0.00	0.00	0.00	2.60	9.78	0.00	0.00	0.00	
	1001		0.00	12.68	43.56	29.10	0.00	0.00	0.00	2.58	10.35	0.00	0.00	0.00	
	1010		0.00	8.76	9.00	97.32	0.00	0.47	471.54	1.22	8.61	8.00	0.00	8.00	
	1011	1010							0.00						
	1012	1010							0.00						
	1020		0.00	8.71	10.00	87.10	0.00	0.02	15.49	0.57	4.16	0.00	0.00	0.00	
	1021	1020							0.00						
	1030		0.00	9.18	11.00	83.47	0.00	0.03	30.23	0.35	1.21	15.00	0.00	15.00	
	1090		0.00	1.76	12.20	14.39	0.00	0.00	0.00			1.00	0.00	1.00	
	1091		0.00	0.09	12.83	0.74	0.00	0.00	0.00			34.00	0.00	34.00	

Link Results: Journey times

Time Segment	Link	Major link	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	700		99.80	5.78	17.28	41.67
	701		107.00	6.13	17.46	41.23
	710		34.38	2.11	16.30	24.28
	711	710	2.09	0.17	12.31	32.15
	712	710	35.26	2.54	13.86	28.54
	720		8.90	0.40	22.37	17.22
	721	720	28.25	1.69	16.67	23.10
	730		40.96	2.42	16.91	22.21
	731	730	27.75	1.71	16.27	23.08
	790		122.25	4.49	27.23	14.03
	791		57.21	2.03	28.16	10.50
	792		21.88	0.75	28.98	10.30
	800		245.80	20.73	11.86	60.73
	801		259.20	21.50	12.06	59.71
	810		0.33	0.06	5.52	54.14
	811	810	0.17	0.04	4.40	68.07
	812	810	32.23	5.91	5.45	54.87
	820		14.60	1.74	8.41	34.35
	821	820	0.40	0.05	7.93	36.42
	890		186.63	6.31	29.58	24.34
	891		107.90	3.55	30.38	23.70
	900		100.20	9.61	10.43	69.05
	901		106.00	9.98	10.62	67.80
	910		119.95	8.10	14.81	39.60
	911	910	29.63	1.88	15.72	37.30
	912	910	0.81	0.05	16.81	34.89
	920		112.67	6.70	16.83	33.96
	990		121.42	3.99	30.41	23.68
	1000		103.40	12.88	8.03	89.67
	1001		111.80	13.69	8.17	88.18
	1010		0.00	0.00	0.00	0.00
	1011	1010	0.10	0.01	9.04	38.09
	1012	1010	80.44	6.07	13.24	26.01
	1020		29.11	1.39	20.88	15.64
	1021	1020	33.06	2.14	15.43	21.17
	1030		45.06	1.85	24.30	12.59
	1090		71.44	2.84	25.12	9.07
	1091		21.78	0.78	28.08	8.09

Link Results: Advanced

Time Segment	Link	Major link	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Mean Max Queue EoTS (PCU)	Max End of Green Queue EoTS (PCU)	Max End of Red Queue EoTS (PCU)	PCU Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	700		0.00	0.00	✓	8.64	0.88	6.70	1.00	0.00	54.87	9.16
	701		0.00	0.00	✓	9.20	0.88	7.12	1.00	0.00	57.82	9.63
	710		0.00	0.00	✓	8.83	1.08	5.25	1.00	0.00	18.94	35.90
	711	710	0.00	0.00					1.00	0.00	1.66	2.37
	712	710	0.00	0.00					1.00	0.00	22.20	29.10
	720		0.00	0.00	✓	2.36	0.26	2.08	1.00	0.00	2.27	4.52
	721	720	0.00	0.00					1.00	0.00	12.59	16.84
	730		0.00	0.00	✓	9.17	0.84	5.00	1.00	0.00	21.52	42.69
	731	730	0.00	0.00					1.00	0.00	12.90	16.87
	790		0.00	0.00	✓	1.23			1.00	0.00	10.00	10.00
	791		0.00	0.00	✓	0.24			1.00	0.00	3.46	3.46
	792		0.00	0.00	✓	0.07			1.00	0.00	1.01	1.01
	800		0.00	0.00	✓	31.08	9.23	17.76	1.00	0.00	191.11	34.81
	801		0.00	0.00	✓	32.33	9.29	18.29	1.00	0.00	196.13	3.56
	810		0.00	0.00	✓	5.87	2.57	5.86	1.00	1345.61	0.78	1346.69
	811	810	0.00	0.00					1.00	0.00	0.49	0.62
	812	810	0.00	0.00					1.00	0.00	73.60	89.59
	820		0.00	0.00	✓	3.87	0.31	3.79	1.00	0.00	20.95	32.09
	821	820	0.00	0.00					1.00	0.00	0.58	0.72
	890		0.00	0.00	✓	0.48			1.00	0.00	6.77	6.77
	891		0.00	0.00	✓	0.18			1.00	0.00	2.55	2.55
	900		0.00	0.00	✓	12.04	2.86	9.96	1.00	0.00	94.13	17.44
	901		0.00	0.00	✓	12.55	2.83	10.34	1.00	0.00	96.87	17.93
	910		0.00	0.00	✓	14.35	1.87	10.19	1.00	0.00	69.34	99.50
	911	910	0.00	0.00					1.00	0.00	16.37	27.41
	912	910	0.00	0.00					1.00	0.00	0.40	0.68
	920		0.00	0.00	✓	8.59	0.62	8.28	1.00	0.00	51.36	76.50
	990		0.00	0.00	✓	0.20			1.00	0.00	2.82	2.82
	1000		0.00	0.00	✓	12.00	2.67	9.85	1.00	0.00	86.86	16.99
	1001		0.00	0.00	✓	12.74	2.65	10.41	1.00	0.00	90.60	17.72
	1010		0.00	0.00	✓	8.76	1.23	8.62	1.00	471.54	0.00	471.54
	1011	1010	0.00	0.00					1.00	0.00	0.12	0.18
	1012	1010	0.00	0.00					1.00	0.00	58.51	90.32
	1020		0.00	0.00	✓	8.71	0.57	4.16	1.00	15.49	9.70	36.48
	1021	1020	0.00	0.00					1.00	0.00	18.27	28.31
	1030		0.00	0.00	✓	9.18	0.35	1.21	1.00	30.23	8.97	49.75
	1090		0.00	0.00	✓	1.76			1.00	0.00	9.57	9.57
	1091		0.00	0.00	✓	0.09			1.00	0.00	1.35	1.35

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	Item with worst over PR
3	29/05/2019 18:15:00	29/05/2019 18:15:01	08:00	70	2663.45	84.57	95.55	801	2	5	801	790	80

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	96	-6	17261	1457	17.64	527.78	272.80	2663.45

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	17261	17261	1	✓	96	✓	-6	1457	1487

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	18.25	17.64	43.27	41.30	1200.85	527.78	58.87	8135.58	2026.32	126.58	272.80

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	97.32	1862.87	142.00	0.00	142.00

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
08:00-09:00	2519.83	172.08	14.64

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	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	✓	1.00	1862.87	0.00	1327.43	2663.45

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

	To				
From		A	B	C	D
	A	160.0	54.1	119.7	136.6
	B	129.5	161.0	84.8	123.0
	C	0.0	118.9	195.9	92.7
	D	98.7	125.1	189.6	205.4

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	A	A	1	160.03	1	160.03
2	B	A	345	134.39	345	134.39
3	B	A	345	122.93	345	122.93
4	B	A	345	128.75	345	128.75
5	B	A	150	135.41	150	135.41
6	A	B	349	51.73	349	51.73
7	A	B	499	55.71	499	55.71
8	B	B	19	161.03	19	161.03
9	C	A	0	78.12	0	0.00
10	C	B	321	127.27	321	127.27
11	C	B	264	114.00	264	114.00
12	C	B	264	113.77	264	113.77
13	B	C	540	84.43	540	84.43
14	A	C	4	119.71	4	119.71
15	B	C	540	85.07	540	85.07
16	C	C	2	195.89	2	195.89
17	D	B	230	127.98	230	127.98
18	D	A	287	98.74	287	98.74
19	D	B	83	126.49	83	126.49
20	D	B	83	115.90	83	115.90
21	D	C	388	189.60	388	189.60
22	A	D	181	136.55	181	136.55
23	B	D	241	123.00	241	123.00
24	B	D	0	124.02	0	0.00
25	C	D	180	92.73	180	92.73
26	D	D	5	205.38	5	205.38

Final Prediction Table

Link Results

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QUEUES	
Link	Name	Major link	Traffic node	Controller stream	Phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s per cycle)	Wasted time total (s per cycle)	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (PCU)	Max end of red queue (PCU)
700			7	7	C	499	1954	27	0.00	64	41	41.67	23.26	85.56	8.64	6.70
701			7	7	C	535	2097	27	0.00	64	41	41.23	22.81	84.94	9.20	7.12
710		(710)	7	7	D	313	2088	31	0.00	68	32	24.28	11.91	94.96	8.83	5.24
711		710				19						32.15	19.78	65.47		
712		710				321						28.54	16.18	37.72		
720		(720)	7	7	D	83	2231	31	1.00	34	164	17.22	5.18	47.61	2.36	2.08
721		720				264						23.10	11.06	28.25		
730		(730)	7	7	D	393	2299	31	0.00	63	44	22.21	10.48	94.47	9.16	5.00
731		730				266						23.08	11.35	26.17		
790			7			1152	2010	70	0.00	57	57	14.03	2.09	2.98	1.23	
791			7			696	2124	70	0.00	33	175	10.50	1.26	0.00	0.24	
792			7			264	2115	70	35.00	12	621	10.30	0.97	0.00	0.07	
800			8	8	A	1229	2001	44	0.00	96	-6	60.73	35.91	118.41	30.16	16.84
801			8	8	A	1296	2110	44	0.00	96	-6	59.71	34.88	117.19	31.43	17.39
810		(810)	8	8	B	4	2182	14	0.00	84	7	54.14	44.80	129.01	5.79	5.78
811		810				2						68.07	58.72	112.79		
812		810				388						54.87	45.52	72.29		
820		(820)	8	8	B	182	2295	14	9.00	38	137	34.35	25.32	107.26	3.87	3.79
821		820				5						36.42	27.40	49.82		
890			8			933	1911	70	0.00	49	84	24.34	1.84	0.00	0.48	
891			8			539	2042	70	9.00	26	241	23.70	1.20	0.00	0.18	
900			9	9	A	501	2158	18	0.00	86	5	69.05	44.14	118.55	11.96	9.87
901			9	9	A	530	2287	18	0.00	85	5	67.80	42.89	116.97	12.47	10.26
910		(910)	9	9	B	736	1995	40	0.00	79	14	39.60	21.28	71.78	14.34	10.18
911		910				182						37.30	18.97	106.29		
912		910				5						34.89	16.56	99.20		
920			9	9	B	710	2187	40	4.00	55	62	33.96	16.10	62.08	8.59	8.28
990			9			607	2133	70	0.00	28	216	23.68	1.18	0.00	0.20	
1000			10	10	A	517	2139	19	0.00	85	6	89.67	41.67	116.29	11.94	9.78
1001			10	10	A	559	2317	19	0.00	84	7	88.18	40.18	114.42	12.68	10.35
1010		(1010)	10	10	B	0	2071	39	8.00	71	27	0.00	0.00	0.00	8.76	8.61
1011		1010				1						38.09	27.33	97.27		
1012		1010				841						26.01	15.24	66.32		
1020		(1020)	10	10	B	321	2247	39	0.00	53	69	15.64	5.43	61.67	8.71	4.16
1021		1020				364						21.17	10.96	48.30		
1030			10	10	B	530	2253	39	15.00	41	119	12.59	3.03	34.88	9.18	1.21
1090			10			1129	2051	70	1.00	55	64	9.07	1.95	5.52	1.76	
1091			10			345	2164	70	34.00	16	464	8.09	0.99	0.00	0.09	

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	2519.83	172.08	14.64	43.27	41.30	527.78	272.80	1862.87	2663.45
Bus									
Tram									
Pedestrians									
TOTAL	2519.83	172.08	14.64	43.27	41.30	527.78	272.80	1862.87	2663.45

- | < = 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 - Phase 1A - PM 2024 inc. 1100 D D4 - 2024 inc. 1100 D 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	Item with worst over PR
4	29/05/2019 18:15:01	29/05/2019 18:15:01	17:00	70	751.40	76.74	88.59	900	0	0	900	790	90

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
Phase 1A - PM 2024 inc. 1100 D		D4	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2024 inc. 1100 D 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)
70		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	PCU Length (m)	Calculate results for Path Segments	Generate PDM Profile Data
1	90	100	✓	✓		Simplified (TRANSYT 12)	5.75		✓

Normal Traffic parameters

Dispersion type	Dispersion coefficient	Travel time coefficient
Default	35	80

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion type	Acceleration (ms ² [-2])	Stationary time coefficient	Cruise time coefficient
Bus	1.00	Default	0.94	30	85

Tram parameters

Name	PCU Factor	Dispersion type	Acceleration (ms ² [-2])	Stationary time coefficient	Cruise time coefficient
Tram	1.00	Default	0.94	100	100

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

Optimisation type	OUTProfile accuracy	SASart temperature	SACooling factor	Random seed	Use enhanced optimisation	Auto optimisation order	Optimisation order	Master controller	Offsets relative to master controller	Master controller offset after each run
Simulated Annealing (Slow)	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05	300.00	100.00	1	✓	✓	7, 8, 9, 10			Do nothing

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
(ALL)		

Links

Links

Link	Name	Description	Traffic node	Length (m)	Has Saturation Flow	Use RR67	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Is minor shared	Major link	Allow Nearside Turn On Red
700			7	200.00	✓		1954	✓		Normal			
701			7	200.00	✓		2097	✓		Normal			
710			7	109.89	✓		2088	✓		Normal			
711				109.89						Normal	✓	710	
712				109.89						Normal	✓	710	
720			7	107.01	✓		2231	✓		Normal			
721				107.01						Normal	✓	720	
730			7	104.31	✓		2299	✓		Normal			
731				104.31						Normal	✓	730	
790			7	106.14	✓		2010			Normal			
791			7	82.17	✓		2124			Normal			
792			7	82.87	✓		2115			Normal			
800			8	200.00	✓		2001	✓		Normal			
801			8	200.00	✓		2110	✓		Normal			
810			8	83.00	✓		2182	✓		Normal			
811				83.14						Normal	✓	810	
812				83.14						Normal	✓	810	
820			8	80.23	✓		2295	✓		Normal			
821				80.23						Normal	✓	820	
890			8	200.00	✓		1911			Normal			
891			8	200.00	✓		2042			Normal			
900			9	200.00	✓		2158	✓		Normal			
901			9	200.00	✓		2287	✓		Normal			
910			9	162.90	✓		1995	✓		Normal			
911				162.90						Normal	✓	910	
912				162.90						Normal	✓	910	
920			9	158.76	✓		2187	✓		Normal			
990			9	200.00	✓		2133			Normal			
1000			10	200.00	✓		2139	✓		Normal			
1001			10	200.00	✓		2317	✓		Normal			
1010			10	95.68	✓		2071	✓		Normal			
1011				95.68						Normal	✓	1010	
1012				95.68						Normal	✓	1010	
1020			10	90.73	✓		2247	✓		Normal			
1021				90.73						Normal	✓	1020	
1030			10	85.01	✓		2253	✓		Normal			
1090			10	63.28	✓		2051			Normal			
1091			10	63.07	✓		2164			Normal			

Modelling

Link	Traffic model	Stop weighting (%)	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Queue limit (PCU)	Excess queue penalty (£)	Has degree of saturation limit
700	NetworkDefault	0	20	100		0.00				
701	NetworkDefault	0	20	100		0.00				
710	NetworkDefault	500	100	100		13.00	✓	10.00	1000.00	
711	NetworkDefault	500	100	100					0.00	
712	NetworkDefault	500	100	100					0.00	
720	NetworkDefault	500	100	100		13.00	✓	10.00	1000.00	
721	NetworkDefault	500	100	100					0.00	
730	NetworkDefault	500	100	100		14.00	✓	11.00	1000.00	
731	NetworkDefault	500	100	100					0.00	
790	NetworkDefault	100	100	100		0.00				
791	NetworkDefault	100	100	100		0.00				
792	NetworkDefault	100	100	100		0.00				
800	NetworkDefault	0	20	100		0.00				
801	NetworkDefault	20	0	100		0.00				
810	NetworkDefault	500	100	100		7.00	✓	4.00	1000.00	
811	NetworkDefault	500	100	100					0.00	
812	NetworkDefault	500	100	100					0.00	
820	NetworkDefault	500	100	100		9.00	✓	5.00	1000.00	
821	NetworkDefault	500	100	100					0.00	
890	NetworkDefault	100	100	100		0.00				
891	NetworkDefault	100	100	100		0.00				
900	NetworkDefault	0	20	100		0.00				
901	NetworkDefault	0	20	100		0.00				
910	NetworkDefault	500	100	100		20.00				
911	NetworkDefault	500	100	100						
912	NetworkDefault	500	100	100						
920	NetworkDefault	500	100	100		21.00				
990	NetworkDefault	100	100	100		0.00				
1000	NetworkDefault	0	20	100		0.00				
1001	NetworkDefault	0	20	100		0.00				
1010	NetworkDefault	500	100	100		9.00	✓	7.00	1000.00	
1011	NetworkDefault	500	100	100					0.00	
1012	NetworkDefault	500	100	100					0.00	
1020	NetworkDefault	500	100	100		10.00	✓	8.00	1000.00	
1021	NetworkDefault	500	100	100					0.00	
1030	NetworkDefault	500	100	100		11.00	✓	8.00	1000.00	
1090	NetworkDefault	100	100	100		0.00				
1091	NetworkDefault	100	100	100		0.00				

Modelling - Normal traffic - Advanced

Link	Dispersion type for Normal Traffic	Initial queue (PCU)	Auto cycle time	Cycle time
700	NetworkDefault	0.00	✓	70
701	NetworkDefault	0.00	✓	70
710	NetworkDefault	0.00	✓	70
711	NetworkDefault			
712	NetworkDefault			
720	NetworkDefault	0.00	✓	70
721	NetworkDefault			
730	NetworkDefault	0.00	✓	70
731	NetworkDefault			
790	NetworkDefault	0.00	✓	70
791	NetworkDefault	0.00	✓	70
792	NetworkDefault	0.00	✓	70
800	NetworkDefault	0.00	✓	70
801	NetworkDefault	0.00	✓	70
810	NetworkDefault	0.00	✓	70
811	NetworkDefault			
812	NetworkDefault			
820	NetworkDefault	0.00	✓	70
821	NetworkDefault			
890	NetworkDefault	0.00	✓	70
891	NetworkDefault	0.00	✓	70
900	NetworkDefault	0.00	✓	70
901	NetworkDefault	0.00	✓	70
910	NetworkDefault	0.00	✓	70
911	NetworkDefault			
912	NetworkDefault			
920	NetworkDefault	0.00	✓	70
990	NetworkDefault	0.00	✓	70
1000	NetworkDefault	0.00	✓	70
1001	NetworkDefault	0.00	✓	70
1010	NetworkDefault	0.00	✓	70
1011	NetworkDefault			
1012	NetworkDefault			
1020	NetworkDefault	0.00	✓	70
1021	NetworkDefault			
1030	NetworkDefault	0.00	✓	70
1090	NetworkDefault	0.00	✓	70
1091	NetworkDefault	0.00	✓	70

Flows

Link	Total flow (PCU/hr)	PCU Factor
700	606	1.00
701	650	1.00
710	257	1.00
711	21	1.00
712	389	1.00
720	92	1.00
721	419	1.00
730	208	1.00
731	420	1.00
790	1272	1.00
791	938	1.00
792	419	1.00
800	957	1.00
801	1010	1.00
810	2	1.00
811	1	1.00
812	206	1.00
820	222	1.00
821	2	1.00
890	577	1.00
891	368	1.00
900	792	1.00
901	839	1.00
910	477	1.00
911	222	1.00
912	2	1.00
920	754	1.00
990	918	1.00
1000	362	1.00
1001	393	1.00
1010	0	1.00
1011	3	1.00
1012	550	1.00
1020	389	1.00
1021	387	1.00
1030	839	1.00
1090	751	1.00
1091	366	1.00

Flows - Advanced

Link	Detectors
(ALL)	

Signals

Link	Controller stream	Phase	Second phase enabled
700	7	C	
701	7	C	
710	7	D	
711			
712			
720	7	D	
721			
730	7	D	
731			
800	8	A	
801	8	A	
810	8	B	
811			
812			
820	8	B	
821			
900	9	A	
901	9	A	
910	9	B	
911			
912			
920	9	B	
1000	10	A	
1001	10	A	
1010	10	B	
1011			
1012			
1020	10	B	
1021			
1030	10	B	

Entry Sources

Link	Cruise time (seconds)	Cruise speed (kph)
700	18.41	39.10
701	18.41	39.10
800	24.83	29.00
801	24.83	29.00
900	24.91	28.90
901	24.91	28.90
1000	48.00	15.00
1001	48.00	15.00

Sources

Link	Source	Source type	Source link	Destination link	Cruise time (seconds)	Cruise speed (kph)	Total flow (PCU/hr)
710	1	Link	1000	710	12.36	32.00	164
711	1	Link	1021	711	12.36	32.00	21
712	1	Link	1020	712	12.36	32.00	389
720	1	Link	1001	720	12.04	32.00	92
721	1	Link	1030	721	12.04	32.00	419
730	1	Link	1001	730	11.73	32.00	208
731	1	Link	1030	731	11.73	32.00	420
790	1	Link	710	790	11.94	32.00	257
791	1	Link	720	791	9.24	32.00	92
792	1	Link	731	792	9.32	32.00	419
810	1	Link	701	810	9.34	32.00	2
811	1	Link	731	811	9.35	32.00	1
812	1	Link	730	812	9.35	32.00	206
820	1	Link	701	820	9.03	32.00	222
821	1	Link	730	821	9.03	32.00	2
890	1	Link	810	890	22.50	32.00	2
891	1	Link	800	891	22.50	32.00	368
910	1	Link	800	910	18.33	32.00	221
911	1	Link	820	911	18.33	32.00	222
912	1	Link	821	912	18.33	32.00	2
920	1	Link	801	920	17.86	32.00	754
990	1	Link	910	990	22.50	32.00	294
1010	1	Link	900	1010	10.76	32.00	0
1011	1	Link	911	1011	10.76	32.00	3
1012	1	Link	920	1012	10.76	32.00	366
1020	1	Link	900	1020	10.21	32.00	389
1021	1	Link	920	1021	10.21	32.00	387
1030	1	Link	901	1030	9.56	32.00	839
1090	1	Link	1000	1090	7.12	32.00	198
1091	1	Link	1021	1091	7.10	32.00	366
710	2	Link	1001	710	12.36	32.00	92
790	2	Link	711	790	11.94	32.00	21
791	2	Link	721	791	9.24	32.00	419
890	2	Link	800	890	22.50	32.00	368
910	2	Link	801	910	18.33	32.00	256
990	2	Link	900	990	22.50	32.00	403
1012	2	Link	910	1012	10.76	32.00	183
1090	2	Link	1010	1090	7.12	32.00	0
790	3	Link	700	790	11.94	32.00	606
791	3	Link	701	791	9.24	32.00	426
890	3	Link	812	890	22.50	32.00	206
990	3	Link	911	990	22.50	32.00	219
1090	3	Link	1011	1090	7.12	32.00	3
790	4	Link	712	790	11.94	32.00	389
890	4	Link	811	890	22.50	32.00	1
990	4	Link	912	990	22.50	32.00	2
1090	4	Link	1012	1090	7.12	32.00	550

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				
		A	B	C	D
From	A	3	1032	2	219
	B	916	21	736	294
	C	0	1227	1	403
	D	198	349	206	2

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	A	(untitled)	701, 700	1090, 1091	#0000FF
	B	(untitled)	801, 800	792, 791, 790	#FF0000
	C	(untitled)	900, 901	891, 890	#00FF00
	D	(untitled)	1000, 1001	990	#FFFF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
1	1		A	A	701, 820, 911, 1011, 1090	Normal	3
	2		B	A	801, 910, 1012, 1090	Percentage	92
	3		B	A	801, 920, 1021, 1091	Normal	366
	4		B	A	801, 920, 1012, 1090	Percentage	366
	5		B	A	800, 910, 1012, 1090	Percentage	92
	6		A	B	701, 791	Normal	426
	7		A	B	700, 790	Normal	606
	8		B	B	801, 920, 1021, 711, 790	Normal	21
	9		C	A	900, 1010, 1090	Normal	0
	10		C	B	900, 1020, 712, 790	Normal	389
	11		C	B	901, 1030, 721, 791	Normal	419
	12		C	B	901, 1030, 731, 792	Normal	419
	13		B	C	800, 891	Normal	368
	14		A	C	701, 810, 890	Normal	2
	15		B	C	800, 890	Normal	368
	16		C	C	901, 1030, 731, 811, 890	Normal	1
	17		D	B	1000, 710, 790	Normal	164
	18		D	A	1000, 1090	Normal	198
	19		D	B	1001, 710, 790	Normal	92
	20		D	B	1001, 720, 791	Normal	92
	21		D	C	1001, 730, 812, 890	Normal	206
	22		A	D	701, 820, 911, 990	Normal	219
	23		B	D	801, 910, 990	Normal	164
	24		B	D	800, 910, 990	Normal	130
	25		C	D	900, 990	Normal	403
	26		D	D	1001, 730, 821, 912, 990	Normal	2

Link Results

Link Results: Vehicle summary

Time Segment	Link	Major link	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (PCU)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	700		83	8	606	1954	25	34.49	13.04	35.48	16.49	0.00	16.49
	701		83	8	650	2097	25	33.50	13.80	35.01	17.18	0.00	17.18
	710		66	37	257	2088	33	11.62	10.26	78.94	11.76	17.89	34.39
	711	710			21			15.55			1.29	0.62	1.91
	712	710			389			14.75			22.63	17.51	40.14
	720		47	91	92	2231	33	7.30	6.54	50.30	2.66	4.84	7.50
	721	720			419			13.23			21.87	18.45	40.32
	730		56	60	208	2299	33	9.99	9.12	65.16	8.20	13.92	22.12
	731	730			420			14.13			23.41	18.61	42.02
	790		63	42	1273	2010	70	2.44	3.13	15.62	12.24	0.66	12.90
	791		44	104	937	2124	70	1.52	0.99	6.02	5.61	0.29	5.90
	792		20	354	419	2115	70	1.06	0.12	0.75	1.75	0.00	1.75
	800		86	5	957	2001	38	24.15	18.61	49.46	18.24	0.00	18.24
	801		86	5	1010	2110	38	23.67	19.50	49.15	0.00	2.25	2.25
	810		32	182	2	2182	20	33.88	3.88	55.42	0.27	0.15	0.42
	811	810			1			9.47			0.04	0.04	0.08
	812	810			206			6.64			5.40	10.75	16.15
	820		33	177	222	2295	20	36.70	4.59	51.01	32.13	16.69	48.82
	821	820			2			9.63			0.08	0.13	0.20
	890		30	198	577	1911	70	1.35	0.22	0.60	3.07	0.00	3.07
	891		18	400	368	2042	70	1.08	0.11	0.29	1.56	0.00	1.56
	900		89	2	792	2158	28	35.44	17.70	43.63	22.14	0.00	22.14
	901		89	2	839	2287	28	34.52	18.54	43.12	22.85	0.00	22.85
	910		79	13	477	1995	30	19.54	12.07	60.33	36.79	23.52	60.31
	911	910			222			34.88			30.54	17.92	48.46
	912	910			2			33.23			0.26	0.16	0.42
	920		78	16	754	2187	30	15.99	7.38	35.14	47.56	23.61	71.17
	990		43	109	918	2133	70	1.48	0.38	0.94	5.36	0.00	5.36
	1000		85	6	362	2139	13	52.36	9.29	23.10	14.95	0.00	14.95
	1001		85	6	393	2317	13	50.79	9.91	22.76	15.75	0.00	15.75
	1010		41	122	0	2071	45	0.00	3.50	38.89	0.00	0.00	0.00
	1011	1010			3			3.35			0.04	0.09	0.13
	1012	1010			550			3.08			6.68	9.90	16.58
	1020		53	71	389	2247	45	11.65	8.32	83.19	17.87	13.46	37.28
	1021	1020			388			6.06			9.26	15.31	24.56
	1030		57	59	839	2253	45	13.16	7.88	71.61	43.57	28.91	72.48
	1090		37	146	751	2051	70	1.38	0.29	2.36	4.10	0.00	4.10
	1091		17	431	367	2164	70	1.00	0.10	0.79	1.45	0.00	1.45

Link Results: Flows and signals

Time Segment	Link	Major link	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))	Effective green (s (per cycle))
17:00-18:00	700		606	606	0		1954	726	83		8	0.00	25	26
	701		650	650	0		2097	779	83		8	0.00	25	26
	710		257	257	0		2088	1014	66		37	1.36	33	34
	711	710	21	21	0						37	1.18		
	712	710	389	389	0						37	0.94		
	720		92	92	0		2231	1084	47		91	1.37	33	34
	721	720	419	419	0						91	0.85		
	730		208	208	0		2299	1117	56		60	1.38	33	34
	731	730	420	420	0						60	0.85		
	790		1273	1273	0	✓	2010	2010	63		42	0.44	70	70
	791		937	937	0	✓	2124	2124	44		104	0.46	70	70
	792		419	419	0		2115	2115	20		354	1.03	70	70
	800		957	957	0		2001	1115	86		5	0.00	38	39
	801		1010	1010	0		2110	1176	86		5	0.00	38	39
	810		2	2	0		2182	655	32		182	1.16	20	21
	811	810	1	1	0						182	1.03		
	812	810	206	206	0						182	1.50		
	820		222	222	0		2295	689	33		177	1.17	20	21
	821	820	2	2	0						177	1.51		
	890		577	577	0		1911	1911	30		198	0.38	70	70
	891		368	368	0		2042	2042	18		400	0.71	70	70
	900		792	792	0		2158	894	89		2	0.00	28	29
	901		839	839	0		2287	947	89		2	0.00	28	29
	910		477	477	0		1995	884	79		13	0.75	30	31
	911	910	222	222	0						13	1.34		
	912	910	2	2	0						13	1.42		
	920		754	754	0		2187	969	78		16	0.75	30	31
	990		918	918	0		2133	2133	43		109	0.28	70	70
	1000		362	362	0		2139	428	85		6	0.00	13	14
	1001		393	393	0		2317	463	85		6	0.00	13	14
	1010		0	0	0		2071	1361	41		122	0.00	45	46
	1011	1010	3	3	0						122	1.45		
	1012	1010	550	550	0						122	0.97		
	1020		389	389	0		2247	1477	53		71	1.07	45	46
	1021	1020	388	388	0	✓					71	0.98		
	1030		839	839	0		2253	1481	57		59	1.08	45	46
	1090		751	751	0		2051	2051	37		146	0.69	70	70
	1091		367	367	0	✓	2164	2164	17		431	1.24	70	70

Link Results: Stops and delays

Time Segment	Link	Major link	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	700		18.41	34.49	3.37	2.43	82.44	16.49	106.37	525.79	118.80	13.73	0.00
	701		18.41	33.50	3.62	2.43	85.89	17.18	105.08	563.89	119.15	14.55	0.00
	710		12.36	11.62	0.46	0.37	11.76	11.76	97.75	232.32	18.54	3.58	17.89
	711	710	12.36	15.55	0.06	0.03	1.29	1.29	41.66	7.23	1.52	0.12	0.62
	712	710	12.36	14.75	1.04	0.56	22.63	22.63	63.12	217.39	28.09	3.50	17.51
	720		12.04	7.30	0.11	0.08	2.66	2.66	73.43	63.74	4.10	0.97	4.84
	721	720	12.04	13.23	1.17	0.37	21.87	21.87	61.72	240.01	18.59	3.69	18.45
	730		11.73	9.99	0.37	0.21	8.20	8.20	93.69	184.29	10.79	2.78	13.92
	731	730	11.73	14.13	1.22	0.43	23.41	23.41	62.11	239.09	21.77	3.72	18.61
	790		11.94	2.44	0.00	0.86	12.24	12.24	3.62	2.21	43.89	0.66	0.66
	791		9.24	1.52	0.00	0.39	5.61	5.61	2.16	0.08	20.19	0.29	0.29
	792		9.32	1.06	0.00	0.12	1.75	1.75	0.00	0.00	0.00	0.00	0.00
	800		24.83	24.15	3.50	2.92	91.18	18.24	95.51	769.43	144.58	10.71	0.00
	801		24.83	23.67	3.69	2.95	94.29	0.00	94.92	812.73	145.93	11.23	2.25
	810		9.34	33.88	0.02	0.00	0.27	0.27	105.66	2.00	0.11	0.03	0.15
	811	810	9.35	9.47	0.00	0.00	0.04	0.04	62.73	0.57	0.06	0.01	0.04
	812	810	9.35	6.64	0.15	0.23	5.40	5.40	73.05	138.92	11.72	2.15	10.75
	820		9.03	36.70	2.02	0.24	32.13	32.13	105.45	221.93	12.10	3.34	16.69
	821	820	9.03	9.63	0.00	0.00	0.08	0.08	88.35	1.66	0.11	0.03	0.13
	890		22.50	1.35	0.00	0.22	3.07	3.07	0.00	0.00	0.00	0.00	0.00
	891		22.50	1.08	0.00	0.11	1.56	1.56	0.00	0.00	0.00	0.00	0.00
	900		24.91	35.44	4.17	3.62	110.72	22.14	111.05	703.72	175.82	10.23	0.00
	901		24.91	34.52	4.42	3.63	114.24	22.85	109.87	745.39	176.45	10.73	0.00
	910		18.33	19.54	1.31	1.28	36.79	36.79	69.10	266.06	63.71	4.70	23.52
	911	910	18.33	34.88	1.55	0.60	30.54	30.54	113.21	221.64	29.63	3.58	17.92
	912	910	18.33	33.23	0.01	0.01	0.26	0.26	113.09	2.00	0.27	0.03	0.16
	920		17.86	15.99	1.62	1.73	47.56	47.56	43.90	244.63	86.43	4.72	23.61
	990		22.50	1.48	0.00	0.38	5.36	5.36	0.00	0.00	0.00	0.00	0.00
	1000		48.00	52.36	2.71	2.55	74.76	14.95	127.92	343.02	120.07	1.45	0.00
	1001		48.00	50.79	2.95	2.60	78.74	15.75	126.05	372.46	122.93	1.55	0.00
	1010		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1011	1010	10.76	3.35	0.00	0.00	0.04	0.04	41.59	1.15	0.09	0.02	0.09
	1012	1010	10.76	3.08	0.13	0.34	6.68	6.68	25.26	121.52	17.34	1.98	9.90
	1020		10.21	11.65	0.98	0.28	17.87	17.87	48.50	174.50	14.13	2.69	13.46
	1021	1020	10.21	6.06	0.38	0.28	9.26	9.26	55.37	200.50	14.08	3.06	15.31
	1030		9.56	13.16	2.42	0.65	43.57	43.57	48.31	372.08	33.23	5.78	28.91
	1090		7.12	1.38	0.00	0.29	4.10	4.10	0.00	0.00	0.00	0.00	0.00
	1091		7.10	1.00	0.00	0.10	1.45	1.45	0.00	0.00	0.00	0.00	0.00

Link Results: Queues and blocking

Time Segment	Link	Major link	Initial queue (PCU)	Mean max queue (PCU)	Max queue storage (PCU)	Utilised storage (%)	Average storage excess queue (PCU)	Average limit excess queue (PCU)	Excess queue penalty (£ per hr)	Max end of green queue (PCU)	Max end of red queue (PCU)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))	Estimated blocking
17:00-18:00	700		0.00	13.04	36.74	35.48	0.00	0.00	0.00	2.43	9.84	0.00	0.00	0.00	
	701		0.00	13.80	39.43	35.01	0.00	0.00	0.00	2.43	10.37	0.00	0.00	0.00	
	710		0.00	10.26	13.00	78.94	0.00	0.00	4.74	0.95	5.97	0.00	0.00	0.00	
	711	710							0.00						
	712	710							0.00						
	720		0.00	6.54	13.00	50.30	0.00	0.00	0.00	0.45	5.31	0.00	0.00	0.00	
	721	720							0.00						
	730		0.00	9.12	14.00	65.16	0.00	0.00	0.00	0.64	6.11	0.00	0.00	0.00	
	731	730							0.00						
	790		0.00	3.13	20.06	15.62	0.00	0.00	0.00			0.00	0.00	0.00	
	791		0.00	0.99	16.41	6.02	0.00	0.00	0.00			0.00	0.00	0.00	
	792		0.00	0.12	16.48	0.75	0.00	0.00	0.00			32.00	0.00	32.00	
	800		0.00	18.61	37.62	49.46	0.00	0.00	0.00	2.92	11.16	0.00	0.00	0.00	
	801		0.00	19.50	39.67	49.15	0.00	0.00	0.00	2.95	11.64	0.00	0.00	0.00	
	810		0.00	3.88	7.00	55.42	0.00	0.00	0.00	0.23	2.01	8.00	0.00	8.00	
	811	810							0.00						
	812	810							0.00						
	820		0.00	4.59	9.00	51.01	0.00	0.00	0.00	0.24	4.57	14.00	0.00	14.00	
	821	820							0.00						
	890		0.00	0.22	35.93	0.60	0.00	0.00	0.00			0.00	0.00	0.00	
	891		0.00	0.11	38.39	0.29	0.00	0.00	0.00			18.00	0.00	18.00	
	900		0.00	17.70	40.57	43.63	0.00	0.00	0.00	3.62	12.64	0.00	0.00	0.00	
	901		0.00	18.54	43.00	43.12	0.00	0.00	0.00	3.63	13.18	0.00	0.00	0.00	
	910		0.00	12.07	20.00	60.33	0.00	0.00	0.00	1.88	8.37	0.00	0.00	0.00	
	911	910							0.00						
	912	910							0.00						
	920		0.00	7.38	21.00	35.14	0.00	0.00	0.00	1.73	4.91	0.00	0.00	0.00	
	990		0.00	0.38	40.10	0.94	0.00	0.00	0.00			0.00	0.00	0.00	
	1000		0.00	9.29	40.22	23.10	0.00	0.00	0.00	2.55	8.18	0.00	0.00	0.00	
	1001		0.00	9.91	43.56	22.76	0.00	0.00	0.00	2.60	8.71	0.00	0.00	0.00	
	1010		0.00	3.50	9.00	38.89	0.00	0.00	0.00	0.34	1.95	12.00	0.00	12.00	
	1011	1010							0.00						
	1012	1010							0.00						
	1020		0.00	8.32	10.00	83.19	0.00	0.01	5.96	0.55	5.34	0.00	0.00	0.00	
	1021	1020							0.00						
	1030		0.00	7.88	11.00	71.61	0.00	0.00	0.00	0.67	7.86	17.00	0.00	17.00	
	1090		0.00	0.29	12.20	2.36	0.00	0.00	0.00			13.00	0.00	13.00	
	1091		0.00	0.10	12.83	0.79	0.00	0.00	0.00			40.00	0.00	40.00	

Link Results: Journey times

Time Segment	Link	Major link	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
17:00-18:00	700		121.20	8.91	13.61	52.90
	701		130.00	9.37	13.87	51.92
	710		28.20	1.71	16.50	23.98
	711	710	2.31	0.16	14.17	27.92
	712	710	42.74	2.93	14.59	27.12
	720		9.89	0.50	19.92	19.34
	721	720	44.84	2.94	15.24	25.27
	730		21.72	1.26	17.29	21.72
	731	730	43.81	3.02	14.52	25.87
	790		135.07	5.08	26.57	14.38
	791		77.03	2.80	27.49	10.76
	792		34.72	1.21	28.73	10.38
	800		191.40	13.02	14.70	48.98
	801		202.00	13.61	14.85	48.49
	810		0.17	0.02	6.91	43.22
	811	810	0.08	0.01	15.90	18.82
	812	810	17.15	0.92	18.71	16.00
	820		17.81	2.82	6.32	45.72
	821	820	0.16	0.01	15.48	18.65
	890		115.41	3.82	30.19	23.85
	891		73.57	2.41	30.54	23.58
	900		158.40	13.28	11.93	60.36
	901		167.80	13.85	12.11	59.43
	910		77.74	5.02	15.49	37.87
	911	910	36.15	3.28	11.02	53.21
	912	910	0.33	0.03	11.37	51.56
	920		119.72	7.09	16.88	33.85
	990		183.61	6.12	30.02	23.98
	1000		72.40	10.09	7.17	100.36
	1001		78.60	10.79	7.29	98.79
	1010		0.00	0.00	0.00	0.00
	1011	1010	0.29	0.01	24.41	14.11
	1012	1010	52.60	2.11	24.88	13.84
	1020		35.29	2.36	14.95	21.85
	1021	1020	35.16	1.75	20.08	16.26
	1030		71.32	5.30	13.46	22.73
	1090		47.49	1.77	26.79	8.50
	1091		23.12	0.82	28.04	8.10

Link Results: Advanced

Time Segment	Link	Major link	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Mean Max Queue EoTS (PCU)	Max End of Green Queue EoTS (PCU)	Max End of Red Queue EoTS (PCU)	PCU Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
17:00-18:00	700		0.00	0.00	✓	13.08	2.48	9.89	1.00	0.00	96.17	16.49
	701		0.00	0.00	✓	13.85	2.47	10.42	1.00	0.00	100.44	17.18
	710		0.00	0.00	✓	10.26	0.96	5.98	1.00	4.74	15.34	34.39
	711	710	0.00	0.00					1.00	0.00	1.41	1.91
	712	710	0.00	0.00					1.00	0.00	26.14	40.14
	720		0.00	0.00	✓	6.54	0.45	5.31	1.00	0.00	3.63	7.50
	721	720	0.00	0.00					1.00	0.00	25.56	40.32
	730		0.00	0.00	✓	9.12	0.64	6.11	1.00	0.00	10.99	22.12
	731	730	0.00	0.00					1.00	0.00	27.13	42.02
	790		0.00	0.00	✓	3.13			1.00	0.00	12.90	12.90
	791		0.00	0.00	✓	0.99			1.00	0.00	5.90	5.90
	792		0.00	0.00	✓	0.12			1.00	0.00	1.75	1.75
	800		0.00	0.00	✓	18.66	2.98	11.22	1.00	0.00	101.89	18.24
	801		0.00	0.00	✓	19.55	3.00	11.69	1.00	0.00	105.52	2.25
	810		0.00	0.00	✓	3.88	0.23	2.01	1.00	0.00	0.30	0.42
	811	810	0.00	0.00					1.00	0.00	0.05	0.08
	812	810	0.00	0.00					1.00	0.00	7.55	16.15
	820		0.00	0.00	✓	4.59	0.24	4.57	1.00	0.00	35.47	48.82
	821	820	0.00	0.00					1.00	0.00	0.10	0.20
	890		0.00	0.00	✓	0.22			1.00	0.00	3.07	3.07
	891		0.00	0.00	✓	0.11			1.00	0.00	1.56	1.56
	900		0.00	0.00	✓	17.82	3.74	12.76	1.00	0.00	120.96	22.14
	901		0.00	0.00	✓	18.65	3.74	13.29	1.00	0.00	124.97	22.85
	910		0.00	0.00	✓	12.08	1.90	8.39	1.00	0.00	41.49	60.31
	911	910	0.00	0.00					1.00	0.00	34.12	48.46
	912	910	0.00	0.00					1.00	0.00	0.29	0.42
	920		0.00	0.00	✓	7.39	1.74	4.92	1.00	0.00	52.28	71.17
	990		0.00	0.00	✓	0.38			1.00	0.00	5.36	5.36
	1000		0.00	0.00	✓	9.38	2.64	8.28	1.00	0.00	76.21	14.95
	1001		0.00	0.00	✓	10.00	2.69	8.80	1.00	0.00	80.29	15.75
	1010		0.00	0.00	✓	3.50	0.34	1.95	1.00	0.00	0.00	0.00
	1011	1010	0.00	0.00					1.00	0.00	0.06	0.13
	1012	1010	0.00	0.00					1.00	0.00	8.66	16.58
	1020		0.00	0.00	✓	8.32	0.55	5.34	1.00	5.96	20.56	37.28
	1021	1020	0.00	0.00					1.00	0.00	12.32	24.56
	1030		0.00	0.00	✓	7.88	0.67	7.86	1.00	0.00	49.35	72.48
	1090		0.00	0.00	✓	0.29			1.00	0.00	4.10	4.10
	1091		0.00	0.00	✓	0.10			1.00	0.00	1.45	1.45

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	Item with worst over PR
4	29/05/2019 18:15:01	29/05/2019 18:15:01	17:00	70	751.40	76.74	88.59	900	0	0	900	790	90

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	89	2	17081	1489	16.17	485.02	255.68	751.40

Network Results: Flows and signals

Time Segment	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))	Effective green (s (per cycle))
17:00-18:00	17081	17081	-1	✓	89		2	1489	1519

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	17.59	16.17	43.46	33.28	1089.70	485.02	56.01	7991.96	1574.21	125.63	255.68

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	83.19	10.70	208.00	0.00	208.00

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
17:00-18:00	2469.28	160.19	15.41

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	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	✓	1.00	10.70	0.00	1215.33	751.40

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

	To				
From		A	B	C	D
	A	173.5	65.4	119.0	174.8
	B	106.3	140.9	72.7	110.6
	C	0.0	120.0	150.7	84.3
	D	108.9	135.7	160.4	214.7

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	A	A	3	173.46	3	173.46
2	B	A	92	108.71	92	108.71
3	B	A	366	106.70	366	106.70
4	B	A	366	104.69	366	104.69
5	B	A	92	109.20	92	109.20
6	A	B	426	62.68	426	62.68
7	A	B	606	67.28	606	67.28
8	B	B	21	140.90	21	140.90
9	C	A	0	68.86	0	0.00
10	C	B	389	123.71	389	123.71
11	C	B	419	118.20	419	118.20
12	C	B	419	118.41	419	118.41
13	B	C	368	72.56	368	72.56
14	A	C	2	118.98	2	118.98
15	B	C	368	72.83	368	72.83
16	C	C	1	150.70	1	150.70
17	D	B	164	138.72	164	138.72
18	D	A	198	108.86	198	108.86
19	D	B	92	137.15	92	137.15
20	D	B	92	128.89	92	128.89
21	D	C	206	160.36	206	160.36
22	A	D	219	174.83	219	174.83
23	B	D	164	110.34	164	110.34
24	B	D	130	110.83	130	110.83
25	C	D	403	84.34	403	84.34
26	D	D	2	214.71	2	214.71

Final Prediction Table

Link Results

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QUEUES	
Link	Name	Major link	Traffic node	Controller stream	Phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s per cycle)	Wasted time total (s per cycle)	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (PCU)	Max end of red queue (PCU)
700			7	7	C	606	1954	25	0.00	83	8	52.90	34.49	106.37	13.04	9.84
701			7	7	C	650	2097	25	0.00	83	8	51.92	33.50	105.08	13.80	10.37
710		(710)	7	7	D	257	2088	33	0.00	66	37	23.98	11.62	97.75	10.26	5.97
711		710				21						27.92	15.55	41.66		
712		710				389						27.12	14.75	63.12		
720		(720)	7	7	D	92	2231	33	0.00	47	91	19.34	7.30	73.43	6.54	5.31
721		720				419						25.27	13.23	61.72		
730		(730)	7	7	D	208	2299	33	0.00	56	60	21.72	9.99	93.69	9.12	6.11
731		730				420						25.87	14.13	62.11		
790			7			1273	2010	70	0.00	63	42	14.38	2.44	3.62	3.13	
791			7			937	2124	70	0.00	44	104	10.76	1.52	2.16	0.99	
792			7			419	2115	70	32.00	20	354	10.38	1.06	0.00	0.12	
800			8	8	A	957	2001	38	0.00	86	5	48.98	24.15	95.51	18.61	11.16
801			8	8	A	1010	2110	38	0.00	86	5	48.49	23.67	94.92	19.50	11.64
810		(810)	8	8	B	2	2182	20	8.00	32	182	43.22	33.88	105.66	3.88	2.01
811		810				1						18.82	9.47	62.73		
812		810				206						16.00	6.64	73.05		
820		(820)	8	8	B	222	2295	20	14.00	33	177	45.72	36.70	105.45	4.59	4.57
821		820				2						18.65	9.63	88.35		
890			8			577	1911	70	0.00	30	198	23.85	1.35	0.00	0.22	
891			8			368	2042	70	18.00	18	400	23.58	1.08	0.00	0.11	
900			9	9	A	792	2158	28	0.00	89	2	60.36	35.44	111.05	17.70	12.64
901			9	9	A	839	2287	28	0.00	89	2	59.43	34.52	109.87	18.54	13.18
910		(910)	9	9	B	477	1995	30	0.00	79	13	37.87	19.54	69.10	12.07	8.37
911		910				222						53.21	34.88	113.21		
912		910				2						51.56	33.23	113.09		
920			9	9	B	754	2187	30	0.00	78	16	33.85	15.99	43.90	7.38	4.91
990			9			918	2133	70	0.00	43	109	23.98	1.48	0.00	0.38	
1000			10	10	A	362	2139	13	0.00	85	6	100.36	52.36	127.92	9.29	8.18
1001			10	10	A	393	2317	13	0.00	85	6	98.79	50.79	126.05	9.91	8.71
1010		(1010)	10	10	B	0	2071	45	12.00	41	122	0.00	0.00	0.00	3.50	1.95
1011		1010				3						14.11	3.35	41.59		
1012		1010				550						13.84	3.08	25.26		
1020		(1020)	10	10	B	389	2247	45	0.00	53	71	21.85	11.65	48.50	8.32	5.34
1021		1020				388						16.26	6.06	55.37		
1030			10	10	B	839	2253	45	17.00	57	59	22.73	13.16	48.31	7.88	7.86
1090			10			751	2051	70	13.00	37	146	8.50	1.38	0.00	0.29	
1091			10			367	2164	70	40.00	17	431	8.10	1.00	0.00	0.10	

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	2469.28	160.19	15.41	43.46	33.28	485.02	255.68	10.70	751.40
Bus									
Tram									
Pedestrians									
TOTAL	2469.28	160.19	15.41	43.46	33.28	485.02	255.68	10.70	751.40

- | < = 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 - Phase 1A - AM 2025 inc. 1250 D D5 - 2025 inc. 1250 D 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	Item with worst over PR
5	29/05/2019 18:15:01	29/05/2019 18:15:02	08:00	70	3464.72	90.81	96.24	800	2	5	800	790	80

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
Phase 1A - AM 2025 inc. 1250 D		D5	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2025 inc. 1250 D 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)
70		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	PCU Length (m)	Calculate results for Path Segments	Generate PDM Profile Data
1	90	100	✓	✓		Simplified (TRANSYT 12)	5.75		✓

Normal Traffic parameters

Dispersion type	Dispersion coefficient	Travel time coefficient
Default	35	80

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion type	Acceleration (ms ⁻²)	Stationary time coefficient	Cruise time coefficient
Bus	1.00	Default	0.94	30	85

Tram parameters

Name	PCU Factor	Dispersion type	Acceleration (ms ⁻²)	Stationary time coefficient	Cruise time coefficient
Tram	1.00	Default	0.94	100	100

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

Optimisation type	OUTProfile accuracy	SASart temperature	SACooling factor	Random seed	Use enhanced optimisation	Auto optimisation order	Optimisation order	Master controller	Offsets relative to master controller	Master controller offset after each run
Simulated Annealing (Slow)	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05	300.00	100.00	1	✓	✓	10			Do nothing

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
(ALL)		

Links

Links

Link	Name	Description	Traffic node	Length (m)	Has Saturation Flow	Use RR67	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Is minor shared	Major link	Allow Nearside Turn On Red
700			7	200.00	✓		1954	✓		Normal			
701			7	200.00	✓		2097	✓		Normal			
710			7	109.89	✓		2088	✓		Normal			
711				109.89						Normal	✓	710	
712				109.89						Normal	✓	710	
720			7	107.01	✓		2231	✓		Normal			
721				107.01						Normal	✓	720	
730			7	104.31	✓		2299	✓		Normal			
731				104.31						Normal	✓	730	
790			7	106.14	✓		2010			Normal			
791			7	82.17	✓		2124			Normal			
792			7	82.87	✓		2115			Normal			
800			8	200.00	✓		2001	✓		Normal			
801			8	200.00	✓		2110	✓		Normal			
810			8	83.00	✓		2182	✓		Normal			
811				83.14						Normal	✓	810	
812				83.14						Normal	✓	810	
820			8	80.23	✓		2295	✓		Normal			
821				80.23						Normal	✓	820	
890			8	200.00	✓		1911			Normal			
891			8	200.00	✓		2042			Normal			
900			9	200.00	✓		2158	✓		Normal			
901			9	200.00	✓		2287	✓		Normal			
910			9	162.90	✓		1995	✓		Normal			
911				162.90						Normal	✓	910	
912				162.90						Normal	✓	910	
920			9	158.76	✓		2187	✓		Normal			
990			9	200.00	✓		2133			Normal			
1000			10	200.00	✓		2139	✓		Normal			
1001			10	200.00	✓		2317	✓		Normal			
1010			10	95.68	✓		2071	✓		Normal			
1011				95.68						Normal	✓	1010	
1012				95.68						Normal	✓	1010	
1020			10	90.73	✓		2247	✓		Normal			
1021				90.73						Normal	✓	1020	
1030			10	85.01	✓		2253	✓		Normal			
1090			10	63.28	✓		2051			Normal			
1091			10	63.07	✓		2164			Normal			

Modelling

Link	Traffic model	Stop weighting (%)	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Queue limit (PCU)	Excess queue penalty (£)	Has degree of saturation limit
700	NetworkDefault	0	20	100		0.00				
701	NetworkDefault	0	20	100		0.00				
710	NetworkDefault	500	100	100		13.00	✓	10.00	1000.00	
711	NetworkDefault	500	100	100					0.00	
712	NetworkDefault	500	100	100					0.00	
720	NetworkDefault	500	100	100		13.00	✓	10.00	1000.00	
721	NetworkDefault	500	100	100					0.00	
730	NetworkDefault	500	100	100		14.00	✓	11.00	1000.00	
731	NetworkDefault	500	100	100					0.00	
790	NetworkDefault	100	100	100		0.00				
791	NetworkDefault	100	100	100		0.00				
792	NetworkDefault	100	100	100		0.00				
800	NetworkDefault	0	20	100		0.00				
801	NetworkDefault	20	0	100		0.00				
810	NetworkDefault	500	100	100		7.00	✓	4.00	1000.00	
811	NetworkDefault	500	100	100					0.00	
812	NetworkDefault	500	100	100					0.00	
820	NetworkDefault	500	100	100		9.00	✓	5.00	1000.00	
821	NetworkDefault	500	100	100					0.00	
890	NetworkDefault	100	100	100		0.00				
891	NetworkDefault	100	100	100		0.00				
900	NetworkDefault	0	20	100		0.00				
901	NetworkDefault	0	20	100		0.00				
910	NetworkDefault	500	100	100		20.00				
911	NetworkDefault	500	100	100						
912	NetworkDefault	500	100	100						
920	NetworkDefault	500	100	100		21.00				
990	NetworkDefault	100	100	100		0.00				
1000	NetworkDefault	0	20	100		0.00				
1001	NetworkDefault	0	20	100		0.00				
1010	NetworkDefault	500	100	100		9.00	✓	7.00	1000.00	
1011	NetworkDefault	500	100	100					0.00	
1012	NetworkDefault	500	100	100					0.00	
1020	NetworkDefault	500	100	100		10.00	✓	8.00	1000.00	
1021	NetworkDefault	500	100	100					0.00	
1030	NetworkDefault	500	100	100		11.00	✓	8.00	1000.00	
1090	NetworkDefault	100	100	100		0.00				
1091	NetworkDefault	100	100	100		0.00				

Modelling - Normal traffic - Advanced

Link	Dispersion type for Normal Traffic	Initial queue (PCU)	Auto cycle time	Cycle time
700	NetworkDefault	0.00	✓	70
701	NetworkDefault	0.00	✓	70
710	NetworkDefault	0.00	✓	70
711	NetworkDefault			
712	NetworkDefault			
720	NetworkDefault	0.00	✓	70
721	NetworkDefault			
730	NetworkDefault	0.00	✓	70
731	NetworkDefault			
790	NetworkDefault	0.00	✓	70
791	NetworkDefault	0.00	✓	70
792	NetworkDefault	0.00	✓	70
800	NetworkDefault	0.00	✓	70
801	NetworkDefault	0.00	✓	70
810	NetworkDefault	0.00	✓	70
811	NetworkDefault			
812	NetworkDefault			
820	NetworkDefault	0.00	✓	70
821	NetworkDefault			
890	NetworkDefault	0.00	✓	70
891	NetworkDefault	0.00	✓	70
900	NetworkDefault	0.00	✓	70
901	NetworkDefault	0.00	✓	70
910	NetworkDefault	0.00	✓	70
911	NetworkDefault			
912	NetworkDefault			
920	NetworkDefault	0.00	✓	70
990	NetworkDefault	0.00	✓	70
1000	NetworkDefault	0.00	✓	70
1001	NetworkDefault	0.00	✓	70
1010	NetworkDefault	0.00	✓	70
1011	NetworkDefault			
1012	NetworkDefault			
1020	NetworkDefault	0.00	✓	70
1021	NetworkDefault			
1030	NetworkDefault	0.00	✓	70
1090	NetworkDefault	0.00	✓	70
1091	NetworkDefault	0.00	✓	70

Flows

Link	Total flow (PCU/hr)	PCU Factor
700	504	1.00
701	540	1.00
710	324	1.00
711	19	1.00
712	321	1.00
720	90	1.00
721	266	1.00
730	406	1.00
731	268	1.00
790	1168	1.00
791	706	1.00
792	266	1.00
800	1238	1.00
801	1305	1.00
810	4	1.00
811	2	1.00
812	401	1.00
820	187	1.00
821	5	1.00
890	950	1.00
891	543	1.00
900	504	1.00
901	535	1.00
910	746	1.00
911	187	1.00
912	5	1.00
920	712	1.00
990	620	1.00
1000	541	1.00
1001	587	1.00
1010	0	1.00
1011	1	1.00
1012	846	1.00
1020	321	1.00
1021	366	1.00
1030	535	1.00
1090	1155	1.00
1091	347	1.00

Flows - Advanced

Link	Detectors
(ALL)	

Signals

Link	Controller stream	Phase	Second phase enabled
700	7	C	
701	7	C	
710	7	D	
711			
712			
720	7	D	
721			
730	7	D	
731			
800	8	A	
801	8	A	
810	8	B	
811			
812			
820	8	B	
821			
900	9	A	
901	9	A	
910	9	B	
911			
912			
920	9	B	
1000	10	A	
1001	10	A	
1010	10	B	
1011			
1012			
1020	10	B	
1021			
1030	10	B	

Entry Sources

Link	Cruise time (seconds)	Cruise speed (kph)
700	18.41	39.10
701	18.41	39.10
800	24.83	29.00
801	24.83	29.00
900	24.91	28.90
901	24.91	28.90
1000	48.00	15.00
1001	48.00	15.00

Sources

Link	Source	Source type	Source link	Destination link	Cruise time (seconds)	Cruise speed (kph)	Total flow (PCU/hr)
710	1	Link	1000	710	12.36	32.00	233
711	1	Link	1021	711	12.36	32.00	19
712	1	Link	1020	712	12.36	32.00	321
720	1	Link	1001	720	12.04	32.00	90
721	1	Link	1030	721	12.04	32.00	266
730	1	Link	1001	730	11.73	32.00	406
731	1	Link	1030	731	11.73	32.00	268
790	1	Link	710	790	11.94	32.00	324
791	1	Link	720	791	9.24	32.00	90
792	1	Link	731	792	9.32	32.00	266
810	1	Link	701	810	9.34	32.00	4
811	1	Link	731	811	9.35	32.00	2
812	1	Link	730	812	9.35	32.00	401
820	1	Link	701	820	9.03	32.00	187
821	1	Link	730	821	9.03	32.00	5
890	1	Link	810	890	22.50	32.00	4
891	1	Link	800	891	22.50	32.00	543
910	1	Link	800	910	18.33	32.00	153
911	1	Link	820	911	18.33	32.00	187
912	1	Link	821	912	18.33	32.00	5
920	1	Link	801	920	17.86	32.00	712
990	1	Link	910	990	22.50	32.00	246
1010	1	Link	900	1010	10.76	32.00	0
1011	1	Link	911	1011	10.76	32.00	1
1012	1	Link	920	1012	10.76	32.00	347
1020	1	Link	900	1020	10.21	32.00	321
1021	1	Link	920	1021	10.21	32.00	366
1030	1	Link	901	1030	9.56	32.00	535
1090	1	Link	1000	1090	7.12	32.00	308
1091	1	Link	1021	1091	7.10	32.00	347
710	2	Link	1001	710	12.36	32.00	90
790	2	Link	711	790	11.94	32.00	19
791	2	Link	721	791	9.24	32.00	266
890	2	Link	800	890	22.50	32.00	543
910	2	Link	801	910	18.33	32.00	593
990	2	Link	900	990	22.50	32.00	183
1012	2	Link	910	1012	10.76	32.00	500
1090	2	Link	1010	1090	7.12	32.00	0
790	3	Link	700	790	11.94	32.00	504
791	3	Link	701	791	9.24	32.00	349
890	3	Link	812	890	22.50	32.00	401
990	3	Link	911	990	22.50	32.00	186
1090	3	Link	1011	1090	7.12	32.00	1
790	4	Link	712	790	11.94	32.00	321
890	4	Link	811	890	22.50	32.00	2
990	4	Link	912	990	22.50	32.00	5
1090	4	Link	1012	1090	7.12	32.00	846

Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on	Allow looped paths on traffic	Copy flows	Matrix to copy flows	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				
From		A	B	C	D
	A	1	853	4	186
	B	1193	19	1085	246
	C	0	854	2	183
	D	308	414	401	5

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	A	(untitled)	701, 700	1090, 1091	#0000FF
	B	(untitled)	801, 800	792, 791, 790	#FF0000
	C	(untitled)	900, 901	891, 890	#00FF00
	D	(untitled)	1000, 1001	990	#FFFF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
1	1		A	A	701, 820, 911, 1011, 1090	Normal	1
	2		B	A	801, 910, 1012, 1090	Normal	347
	3		B	A	801, 920, 1021, 1091	Normal	347
	4		B	A	801, 920, 1012, 1090	Normal	347
	5		B	A	800, 910, 1012, 1090	Normal	153
	6		A	B	701, 791	Normal	349
	7		A	B	700, 790	Normal	504
	8		B	B	801, 920, 1021, 711, 790	Normal	19
	9		C	A	900, 1010, 1090	Normal	0
	10		C	B	900, 1020, 712, 790	Normal	321
	11		C	B	901, 1030, 721, 791	Normal	266
	12		C	B	901, 1030, 731, 792	Normal	266
	13		B	C	800, 891	Normal	543
	14		A	C	701, 810, 890	Normal	4
	15		B	C	800, 890	Normal	543
	16		C	C	901, 1030, 731, 811, 890	Normal	2
	17		D	B	1000, 710, 790	Normal	233
	18		D	A	1000, 1090	Normal	308
	19		D	B	1001, 710, 790	Normal	90
	20		D	B	1001, 720, 791	Normal	90
	21		D	C	1001, 730, 812, 890	Normal	401
	22		A	D	701, 820, 911, 990	Normal	186
	23		B	D	801, 910, 990	Normal	246
	24		B	D	800, 910, 990	Normal	0
	25		C	D	900, 990	Normal	183
	26		D	D	1001, 730, 821, 912, 990	Normal	5

Link Results

Link Results: Vehicle summary

Time Segment	Link	Major link	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	700		64	40	504	1954	27	23.43	8.74	23.80	9.31	0.00	9.31
	701		64	40	540	2097	27	22.96	9.30	23.58	9.78	0.00	9.78
	710		70	29	324	2088	31	11.97	9.05	69.59	15.28	21.76	37.04
	711	710			19			20.03			1.50	0.89	2.40
	712	710			321			16.43			20.81	8.73	29.54
	720		35	157	90	2231	31	5.14	2.43	18.70	1.83	2.96	4.79
	721	720			266			11.27			11.85	5.47	17.31
	730		64	40	406	2299	31	10.56	9.46	67.59	16.92	27.42	44.33
	731	730			269			11.67			12.36	5.14	17.50
	790		58	55	1168	2010	70	2.13	1.25	6.25	9.83	0.51	10.33
	791		33	171	706	2124	70	1.27	0.25	1.52	3.53	0.00	3.53
	792		13	614	266	2115	70	0.97	0.07	0.44	1.02	0.00	1.02
	800		96	-6	1238	2001	44	38.63	31.61	84.02	37.72	0.00	37.72
	801		96	-6	1305	2110	44	37.40	32.88	82.87	0.00	3.70	3.70
	810		87	3	4	2182	14	49.05	6.72	95.94	0.77	0.38	2093.13
	811	810			2			62.96			0.50	0.17	0.67
	812	810			401			51.10			80.89	22.85	103.73
	820		39	131	187	2295	14	25.44	3.98	44.19	18.75	14.31	33.06
	821	820			5			28.63			0.57	0.19	0.75
	890		50	81	950	1911	70	1.87	0.49	1.37	7.01	0.00	7.01
	891		27	239	543	2042	70	1.20	0.18	0.47	2.57	0.00	2.57
	900		86	5	504	2158	18	44.82	12.12	29.87	17.82	0.00	17.82
	901		86	4	535	2287	18	43.91	12.73	29.60	18.53	0.00	18.53
	910		80	12	745	1995	40	21.79	14.91	74.55	64.08	38.94	103.02
	911	910			187			19.67			14.50	14.30	28.79
	912	910			5			17.47			0.34	0.36	0.71
	920		56	62	712	2187	40	16.15	8.66	41.24	45.39	31.70	77.10
	990		29	210	620	2133	70	1.19	0.20	0.51	2.91	0.00	2.91
	1000		89	2	541	2139	19	47.23	13.42	33.38	20.16	0.00	20.16
	1001		89	1	587	2317	19	45.83	14.33	32.91	21.22	0.00	21.22
	1010		72	26	0	2071	39	0.00	8.84	98.17	0.00	0.00	496.80
	1011	1010			1			28.02			0.11	0.07	0.18
	1012	1010			846			15.37			51.31	40.15	91.47
	1020		53	68	321	2247	39	5.41	8.35	83.50	6.85	13.93	25.79
	1021	1020			366			10.94			15.79	12.55	28.33
	1030		42	117	535	2253	39	3.05	9.23	83.92	6.43	13.34	51.23
	1090		56	60	1155	2051	70	2.01	1.79	14.65	9.14	0.94	10.08
	1091		16	462	347	2164	70	0.99	0.10	0.74	1.35	0.00	1.35

Link Results: Flows and signals

Time Segment	Link	Major link	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))	Effective green (s (per cycle))
08:00-09:00	700		504	504	0		1954	782	64		40	0.00	27	28
	701		540	540	0		2097	839	64		40	0.00	27	28
	710		324	324	0		2088	955	70		29	1.24	31	32
	711	710	19	19	0						29	0.96		
	712	710	321	321	0						29	1.34		
	720		90	90	0		2231	1020	35		157	1.24	31	32
	721	720	266	266	0						157	1.23		
	730		406	406	0		2299	1051	64		40	1.25	31	32
	731	730	269	269	0	✓					40	1.23		
	790		1168	1168	0		2010	2010	58		55	0.42	70	70
	791		706	706	0		2124	2124	33		171	0.49	70	70
	792		266	266	0		2115	2115	13		614	1.13	70	70
	800		1238	1238	0		2001	1286	96	✓	-6	0.00	44	45
	801		1305	1305	0		2110	1356	96	✓	-6	0.00	44	45
	810		4	4	0		2182	468	87		3	1.12	14	15
	811	810	2	2	0						3	1.12		
	812	810	401	401	0						3	1.39		
	820		187	187	0		2295	492	39		131	1.13	14	15
	821	820	5	5	0						131	1.39		
	890		950	950	0		1911	1911	50		81	0.21	70	70
	891		543	543	0	✓	2042	2042	27		239	0.55	70	70
	900		504	504	0		2158	586	86		5	0.00	18	19
	901		535	535	0		2287	621	86		4	0.00	18	19
	910		745	745	0	✓	1995	1169	80		12	0.58	40	41
	911	910	187	187	0						12	1.36		
	912	910	5	5	0						12	1.19		
	920		712	712	0		2187	1281	56		62	0.58	40	41
	990		620	620	0		2133	2133	29		210	0.33	70	70
	1000		541	541	0		2139	611	89		2	0.00	19	20
	1001		587	587	0		2317	662	89		1	0.00	19	20
	1010		0	0	0		2071	1183	72		26	0.00	39	40
	1011	1010	1	1	0						26	1.46		
	1012	1010	846	846	0						26	0.74		
	1020		321	321	0		2247	1284	53		68	1.30	39	40
	1021	1020	366	366	0						68	0.78		
	1030		535	535	0		2253	1287	42		117	1.31	39	40
	1090		1155	1155	0		2051	2051	56		60	0.48	70	70
	1091		347	347	0		2164	2164	16		462	1.10	70	70

Link Results: Stops and delays

Time Segment	Link	Major link	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	700		18.41	23.43	2.38	0.90	46.57	9.31	85.89	387.55	45.33	9.22	0.00
	701		18.41	22.96	2.55	0.90	48.91	9.78	85.24	415.08	45.22	9.80	0.00
	710		12.36	11.97	0.52	0.55	15.28	15.28	94.27	277.29	27.78	4.35	21.76
	711	710	12.36	20.03	0.07	0.03	1.50	1.50	65.98	10.90	1.63	0.18	0.89
	712	710	12.36	16.43	0.92	0.55	20.81	20.81	38.12	94.84	27.57	1.75	8.73
	720		12.04	5.14	0.06	0.07	1.83	1.83	45.87	37.97	3.47	0.59	2.96
	721	720	12.04	11.27	0.63	0.20	11.85	11.85	28.76	66.41	10.23	1.09	5.47
	730		11.73	10.56	0.65	0.54	16.92	16.92	94.59	357.16	27.18	5.48	27.42
	731	730	11.73	11.67	0.52	0.36	12.36	12.36	26.82	54.04	17.96	1.03	5.14
	790		11.94	2.13	0.00	0.69	9.83	9.83	3.03	0.10	35.32	0.51	0.51
	791		9.24	1.27	0.00	0.25	3.53	3.53	0.00	0.00	0.00	0.00	0.00
	792		9.32	0.97	0.00	0.07	1.02	1.02	0.00	0.00	0.00	0.00	0.00
	800		24.83	38.63	4.03	9.26	188.62	37.72	122.54	1084.01	433.09	17.78	0.00
	801		24.83	37.40	4.24	9.31	192.50	0.00	121.04	1142.01	437.62	18.51	3.70
	810		9.34	49.05	0.02	0.03	0.77	0.77	134.16	3.95	1.41	0.08	0.38
	811	810	9.35	62.96	0.02	0.02	0.50	0.50	117.99	1.66	0.70	0.03	0.17
	812	810	9.35	51.10	2.67	3.02	80.89	80.89	79.81	178.97	141.32	4.57	22.85
	820		9.03	25.44	1.01	0.31	18.75	18.75	107.39	185.01	15.65	2.86	14.31
	821	820	9.03	28.63	0.03	0.01	0.57	0.57	52.28	2.20	0.42	0.04	0.19
	890		22.50	1.87	0.00	0.49	7.01	7.01	0.00	0.00	0.00	0.00	0.00
	891		22.50	1.20	0.00	0.18	2.57	2.57	0.00	0.00	0.00	0.00	0.00
	900		24.91	44.82	3.39	2.88	89.09	17.82	119.45	464.28	137.74	7.01	0.00
	901		24.91	43.91	3.60	2.92	92.66	18.53	118.34	492.99	140.13	7.37	0.00
	910		18.33	21.79	2.93	1.58	64.08	64.08	73.22	466.54	79.32	7.79	38.94
	911	910	18.33	19.67	0.62	0.40	14.50	14.50	107.26	180.54	19.88	2.86	14.30
	912	910	18.33	17.47	0.01	0.01	0.34	0.34	101.34	4.54	0.53	0.07	0.36
	920		17.86	16.15	2.57	0.63	45.39	45.39	62.39	412.68	31.79	6.34	31.70
	990		22.50	1.19	0.00	0.20	2.91	2.91	0.00	0.00	0.00	0.00	0.00
	1000		48.00	47.23	3.59	3.51	100.79	20.16	124.12	505.40	166.08	2.10	0.00
	1001		48.00	45.83	3.90	3.57	106.11	21.22	122.41	548.44	170.09	2.25	0.00
	1010		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1011	1010	10.76	28.02	0.01	0.00	0.11	0.11	99.89	0.85	0.15	0.01	0.07
	1012	1010	10.76	15.37	2.36	1.25	51.31	51.31	66.53	439.23	123.70	8.03	40.15
	1020		10.21	5.41	0.21	0.27	6.85	6.85	60.82	181.68	13.66	2.79	13.93
	1021	1020	10.21	10.94	0.81	0.31	15.79	15.79	48.10	160.36	15.55	2.51	12.55
	1030		9.56	3.05	0.10	0.36	6.43	6.43	34.96	168.93	18.11	2.67	13.34
	1090		7.12	2.01	0.00	0.64	9.14	9.14	5.68	0.33	65.25	0.94	0.94
	1091		7.10	0.99	0.00	0.10	1.35	1.35	0.00	0.00	0.00	0.00	0.00

Link Results: Queues and blocking

Time Segment	Link	Major link	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	700		0.00	8.74	36.74	23.80	0.00	0.00	0.00	0.90	6.78	0.00	0.00	0.00	
	701		0.00	9.30	39.43	23.58	0.00	0.00	0.00	0.90	7.20	0.00	0.00	0.00	
	710		0.00	9.05	13.00	69.59	0.00	0.00	0.00	1.13	5.28	0.00	0.00	0.00	
	711	710							0.00						
	712	710							0.00						
	720		0.00	2.43	13.00	18.70	0.00	0.00	0.00	0.27	2.15	1.00	0.00	1.00	
	721	720							0.00						
	730		0.00	9.46	14.00	67.59	0.00	0.00	0.00	0.89	5.04	0.00	0.00	0.00	
	731	730							0.00						
	790		0.00	1.25	20.06	6.25	0.00	0.00	0.00			0.00	0.00	0.00	
	791		0.00	0.25	16.41	1.52	0.00	0.00	0.00			0.00	0.00	0.00	
	792		0.00	0.07	16.48	0.44	0.00	0.00	0.00			35.00	0.00	35.00	
	800		0.00	31.61	37.62	84.02	0.00	0.00	0.00	9.26	17.85	0.00	0.00	0.00	
	801		0.00	32.88	39.67	82.87	0.00	0.00	0.00	9.31	18.38	0.00	0.00	0.00	
	810		0.00	6.72	7.00	95.94	0.00	2.09	2091.98	3.07	6.65	0.00	0.00	0.00	
	811	810							0.00						
	812	810							0.00						
	820		0.00	3.98	9.00	44.19	0.00	0.00	0.00	0.32	3.90	9.00	0.00	9.00	
	821	820							0.00						
	890		0.00	0.49	35.93	1.37	0.00	0.00	0.00			0.00	0.00	0.00	
	891		0.00	0.18	38.39	0.47	0.00	0.00	0.00			9.00	0.00	9.00	
	900		0.00	12.12	40.57	29.87	0.00	0.00	0.00	2.88	10.02	0.00	0.00	0.00	
	901		0.00	12.73	43.00	29.60	0.00	0.00	0.00	2.92	10.50	0.00	0.00	0.00	
	910		0.00	14.91	20.00	74.55	0.00	0.00	0.00	1.99	10.45	0.00	0.00	0.00	
	911	910							0.00						
	912	910							0.00						
	920		0.00	8.66	21.00	41.24	0.00	0.00	0.00	0.63	8.34	4.00	0.00	4.00	
	990		0.00	0.20	40.10	0.51	0.00	0.00	0.00			0.00	0.00	0.00	
	1000		0.00	13.42	40.22	33.38	0.00	0.00	0.00	3.51	11.02	0.00	0.00	0.00	
	1001		0.00	14.33	43.56	32.91	0.00	0.00	0.00	3.57	11.73	0.00	0.00	0.00	
	1010		0.00	8.84	9.00	98.17	0.00	0.50	496.80	1.25	8.69	8.00	0.00	8.00	
	1011	1010							0.00						
	1012	1010							0.00						
	1020		0.00	8.35	10.00	83.50	0.00	0.01	5.00	0.57	4.16	0.00	0.00	0.00	
	1021	1020							0.00						
	1030		0.00	9.23	11.00	83.92	0.00	0.03	31.46	0.36	1.22	15.00	0.00	15.00	
	1090		0.00	1.79	12.20	14.65	0.00	0.00	0.00			1.00	0.00	1.00	
	1091		0.00	0.10	12.83	0.74	0.00	0.00	0.00			34.00	0.00	34.00	

Link Results: Journey times

Time Segment	Link	Major link	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	700		100.80	5.86	17.21	41.84
	701		108.00	6.21	17.40	41.38
	710		35.56	2.19	16.26	24.33
	711	710	2.09	0.17	12.21	32.39
	712	710	35.29	2.57	13.74	28.79
	720		9.67	0.43	22.43	17.17
	721	720	28.52	1.73	16.53	23.31
	730		42.38	2.52	16.85	22.29
	731	730	28.01	1.75	16.04	23.41
	790		123.95	4.57	27.15	14.07
	791		58.01	2.06	28.14	10.51
	792		22.08	0.76	28.97	10.30
	800		247.60	21.82	11.35	63.45
	801		261.00	22.56	11.57	62.22
	810		0.33	0.06	5.12	58.39
	811	810	0.17	0.04	4.14	72.32
	812	810	33.37	6.74	4.95	60.45
	820		14.99	1.79	8.38	34.46
	821	820	0.40	0.05	7.67	37.65
	890		189.98	6.43	29.54	24.37
	891		108.52	3.57	30.38	23.70
	900		100.80	9.76	10.33	69.73
	901		107.00	10.23	10.46	68.82
	910		121.43	8.31	14.62	40.12
	911	910	30.44	1.97	15.43	38.00
	912	910	0.82	0.05	16.38	35.79
	920		113.09	6.73	16.80	34.02
	990		123.94	4.08	30.39	23.69
	1000		108.20	14.31	7.56	95.23
	1001		117.40	15.30	7.67	93.83
	1010		0.00	0.00	0.00	0.00
	1011	1010	0.10	0.01	8.88	38.79
	1012	1010	80.96	6.14	13.18	26.14
	1020		29.14	1.39	20.92	15.61
	1021	1020	33.18	2.15	15.44	21.15
	1030		45.48	1.87	24.27	12.61
	1090		73.08	2.93	24.96	9.13
	1091		21.87	0.78	28.08	8.09

Link Results: Advanced

Time Segment	Link	Major link	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Mean Max Queue EoTS (PCU)	Max End of Green Queue EoTS (PCU)	Max End of Red Queue EoTS (PCU)	PCU Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	700		0.00	0.00	✓	8.74	0.90	6.78	1.00	0.00	55.79	9.31
	701		0.00	0.00	✓	9.30	0.90	7.20	1.00	0.00	58.72	9.78
	710		0.00	0.00	✓	9.05	1.14	5.29	1.00	0.00	19.63	37.04
	711	710	0.00	0.00					1.00	0.00	1.68	2.40
	712	710	0.00	0.00					1.00	0.00	22.56	29.54
	720		0.00	0.00	✓	2.43	0.27	2.15	1.00	0.00	2.42	4.79
	721	720	0.00	0.00					1.00	0.00	12.94	17.31
	730		0.00	0.00	✓	9.46	0.89	5.04	1.00	0.00	22.40	44.33
	731	730	0.00	0.00					1.00	0.00	13.39	17.50
	790		0.00	0.00	✓	1.25			1.00	0.00	10.33	10.33
	791		0.00	0.00	✓	0.25			1.00	0.00	3.53	3.53
	792		0.00	0.00	✓	0.07			1.00	0.00	1.02	1.02
	800		0.00	0.00	✓	32.87	10.51	19.11	1.00	0.00	206.40	37.72
	801		0.00	0.00	✓	34.09	10.53	19.59	1.00	0.00	211.00	3.70
	810		0.00	0.00	✓	6.86	3.21	6.79	1.00	2091.98	0.85	2093.13
	811	810	0.00	0.00					1.00	0.00	0.53	0.67
	812	810	0.00	0.00					1.00	0.00	85.46	103.73
	820		0.00	0.00	✓	3.98	0.32	3.90	1.00	0.00	21.61	33.06
	821	820	0.00	0.00					1.00	0.00	0.60	0.75
	890		0.00	0.00	✓	0.49			1.00	0.00	7.01	7.01
	891		0.00	0.00	✓	0.18			1.00	0.00	2.57	2.57
	900		0.00	0.00	✓	12.21	2.97	10.11	1.00	0.00	96.10	17.82
	901		0.00	0.00	✓	12.82	3.01	10.59	1.00	0.00	100.03	18.53
	910		0.00	0.00	✓	14.93	2.01	10.46	1.00	0.00	71.87	103.02
	911	910	0.00	0.00					1.00	0.00	17.36	28.79
	912	910	0.00	0.00					1.00	0.00	0.42	0.71
	920		0.00	0.00	✓	8.66	0.63	8.34	1.00	0.00	51.73	77.10
	990		0.00	0.00	✓	0.20			1.00	0.00	2.91	2.91
	1000		0.00	0.00	✓	13.58	3.66	11.18	1.00	0.00	102.90	20.16
	1001		0.00	0.00	✓	14.49	3.73	11.88	1.00	0.00	108.36	21.22
	1010		0.00	0.00	✓	8.84	1.25	8.70	1.00	496.80	0.00	496.80
	1011	1010	0.00	0.00					1.00	0.00	0.12	0.18
	1012	1010	0.00	0.00					1.00	0.00	59.34	91.47
	1020		0.00	0.00	✓	8.35	0.57	4.16	1.00	5.00	9.64	25.79
	1021	1020	0.00	0.00					1.00	0.00	18.29	28.33
	1030		0.00	0.00	✓	9.23	0.36	1.22	1.00	31.46	9.10	51.23
	1090		0.00	0.00	✓	1.79			1.00	0.00	10.08	10.08
	1091		0.00	0.00	✓	0.10			1.00	0.00	1.35	1.35

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	Item with worst over PR
5	29/05/2019 18:15:01	29/05/2019 18:15:02	08:00	70	3464.72	90.81	96.24	800	2	5	800	790	80

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	96	-6	17521	1457	18.66	558.74	280.75	3464.72

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	17521	17521	0	✓	96	✓	-6	1457	1487

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	18.30	18.66	44.45	46.36	1289.45	558.74	60.38	8325.95	2253.88	130.60	280.75

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))
08:00-09:00	98.17	2625.23	142.00	0.00	142.00

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
08:00-09:00	2557.63	179.88	14.22

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	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	✓	1.00	2625.23	0.00	1420.05	3464.72

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

	To				
From		A	B	C	D
	A	161.7	54.3	124.1	137.5
	B	132.5	163.9	87.5	126.0
	C	0.0	120.1	201.5	93.4
	D	104.4	130.7	200.9	213.3

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	A	A	1	161.75	1	161.75
2	B	A	347	137.61	347	137.61
3	B	A	347	125.48	347	125.48
4	B	A	347	131.50	347	131.50
5	B	A	153	138.84	153	138.84
6	A	B	349	51.89	349	51.89
7	A	B	504	55.92	504	55.92
8	B	B	19	163.86	19	163.86
9	C	A	0	78.86	0	0.00
10	C	B	321	128.21	321	128.21
11	C	B	266	115.25	266	115.25
12	C	B	266	115.14	266	115.14
13	B	C	543	87.15	543	87.15
14	A	C	4	124.14	4	124.14
15	B	C	543	87.83	543	87.83
16	C	C	2	201.53	2	201.53
17	D	B	233	133.64	233	133.64
18	D	A	308	104.36	308	104.36
19	D	B	90	132.24	90	132.24
20	D	B	90	121.52	90	121.52
21	D	C	401	200.94	401	200.94
22	A	D	186	137.53	186	137.53
23	B	D	246	126.03	246	126.03
24	B	D	0	127.26	0	0.00
25	C	D	183	93.42	183	93.42
26	D	D	5	213.26	5	213.26

Final Prediction Table

Link Results

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QUEUES	
Link	Name	Major link	Traffic node	Controller stream	Phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s per cycle)	Wasted time total (s per cycle)	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (PCU)	Max end of red queue (PCU)
700			7	7	C	504	1954	27	0.00	64	40	41.84	23.43	85.89	8.74	6.78
701			7	7	C	540	2097	27	0.00	64	40	41.38	22.96	85.24	9.30	7.20
710		(710)	7	7	D	324	2088	31	0.00	70	29	24.33	11.97	94.27	9.05	5.28
711		710				19						32.39	20.03	65.98		
712		710				321						28.79	16.43	38.12		
720		(720)	7	7	D	90	2231	31	1.00	35	157	17.17	5.14	45.87	2.43	2.15
721		720				266						23.31	11.27	28.76		
730		(730)	7	7	D	406	2299	31	0.00	64	40	22.29	10.56	94.59	9.46	5.04
731		730				269						23.41	11.67	26.82		
790			7			1168	2010	70	0.00	58	55	14.07	2.13	3.03	1.25	
791			7			706	2124	70	0.00	33	171	10.51	1.27	0.00	0.25	
792			7			266	2115	70	35.00	13	614	10.30	0.97	0.00	0.07	
800			8	8	A	1238	2001	44	0.00	96	-6	63.45	38.63	122.54	31.61	17.85
801			8	8	A	1305	2110	44	0.00	96	-6	62.22	37.40	121.04	32.88	18.38
810		(810)	8	8	B	4	2182	14	0.00	87	3	58.39	49.05	134.16	6.72	6.65
811		810				2						72.32	62.96	117.99		
812		810				401						60.45	51.10	79.81		
820		(820)	8	8	B	187	2295	14	9.00	39	131	34.46	25.44	107.39	3.98	3.90
821		820				5						37.65	28.63	52.28		
890			8			950	1911	70	0.00	50	81	24.37	1.87	0.00	0.49	
891			8			543	2042	70	9.00	27	239	23.70	1.20	0.00	0.18	
900			9	9	A	504	2158	18	0.00	86	5	69.73	44.82	119.45	12.12	10.02
901			9	9	A	535	2287	18	0.00	86	4	68.82	43.91	118.34	12.73	10.50
910		(910)	9	9	B	745	1995	40	0.00	80	12	40.12	21.79	73.22	14.91	10.45
911		910				187						38.00	19.67	107.26		
912		910				5						35.79	17.47	101.34		
920			9	9	B	712	2187	40	4.00	56	62	34.02	16.15	62.39	8.66	8.34
990			9			620	2133	70	0.00	29	210	23.69	1.19	0.00	0.20	
1000			10	10	A	541	2139	19	0.00	89	2	95.23	47.23	124.12	13.42	11.02
1001			10	10	A	587	2317	19	0.00	89	1	93.83	45.83	122.41	14.33	11.73
1010		(1010)	10	10	B	0	2071	39	8.00	72	26	0.00	0.00	0.00	8.84	8.69
1011		1010				1						38.79	28.02	99.89		
1012		1010				846						26.14	15.37	66.53		
1020		(1020)	10	10	B	321	2247	39	0.00	53	68	15.61	5.41	60.82	8.35	4.16
1021		1020				366						21.15	10.94	48.10		
1030			10	10	B	535	2253	39	15.00	42	117	12.61	3.05	34.96	9.23	1.22
1090			10			1155	2051	70	1.00	56	60	9.13	2.01	5.68	1.79	
1091			10			347	2164	70	34.00	16	462	8.09	0.99	0.00	0.10	

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	2557.63	179.88	14.22	44.45	46.36	558.74	280.75	2625.23	3464.72
Bus									
Tram									
Pedestrians									
TOTAL	2557.63	179.88	14.22	44.45	46.36	558.74	280.75	2625.23	3464.72

- | < = 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 - Phase 1A - PM 2025 inc. 1250 D D6 - 2025 inc. 1250 D 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	Item with worst over PR
6	29/05/2019 18:15:02	29/05/2019 18:15:02	17:00	70	808.73	81.74	89.61	901	0	0	901	790	90

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
Phase 1A - PM 2025 inc. 1250 D		D6	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2025 inc. 1250 D 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)
70		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	PCU Length (m)	Calculate results for Path Segments	Generate PDM Profile Data
1	90	100	✓	✓		Simplified (TRANSYT 12)	5.75		✓

Normal Traffic parameters

Dispersion type	Dispersion coefficient	Travel time coefficient
Default	35	80

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion type	Acceleration (ms ⁻²)	Stationary time coefficient	Cruise time coefficient
Bus	1.00	Default	0.94	30	85

Tram parameters

Name	PCU Factor	Dispersion type	Acceleration (ms ⁻²)	Stationary time coefficient	Cruise time coefficient
Tram	1.00	Default	0.94	100	100

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

Optimisation type	OUTProfile accuracy	SASart temperature	SACooling factor	Random seed	Use enhanced optimisation	Auto optimisation order	Optimisation order	Master controller	Offsets relative to master controller	Master controller offset after each run
Simulated Annealing (Slow)	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05	300.00	100.00	1	✓	✓	7, 8, 9, 10			Do nothing

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
(ALL)		

Links

Links

Link	Name	Description	Traffic node	Length (m)	Has Saturation Flow	Use RR67	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Is minor shared	Major link	Allow Nearside Turn On Red
700			7	200.00	✓		1954	✓		Normal			
701			7	200.00	✓		2097	✓		Normal			
710			7	109.89	✓		2088	✓		Normal			
711				109.89						Normal	✓	710	
712				109.89						Normal	✓	710	
720			7	107.01	✓		2231	✓		Normal			
721				107.01						Normal	✓	720	
730			7	104.31	✓		2299	✓		Normal			
731				104.31						Normal	✓	730	
790			7	106.14	✓		2010			Normal			
791			7	82.17	✓		2124			Normal			
792			7	82.87	✓		2115			Normal			
800			8	200.00	✓		2001	✓		Normal			
801			8	200.00	✓		2110	✓		Normal			
810			8	83.00	✓		2182	✓		Normal			
811				83.14						Normal	✓	810	
812				83.14						Normal	✓	810	
820			8	80.23	✓		2295	✓		Normal			
821				80.23						Normal	✓	820	
890			8	200.00	✓		1911			Normal			
891			8	200.00	✓		2042			Normal			
900			9	200.00	✓		2158	✓		Normal			
901			9	200.00	✓		2287	✓		Normal			
910			9	162.90	✓		1995	✓		Normal			
911				162.90						Normal	✓	910	
912				162.90						Normal	✓	910	
920			9	158.76	✓		2187	✓		Normal			
990			9	200.00	✓		2133			Normal			
1000			10	200.00	✓		2139	✓		Normal			
1001			10	200.00	✓		2317	✓		Normal			
1010			10	95.68	✓		2071	✓		Normal			
1011				95.68						Normal	✓	1010	
1012				95.68						Normal	✓	1010	
1020			10	90.73	✓		2247	✓		Normal			
1021				90.73						Normal	✓	1020	
1030			10	85.01	✓		2253	✓		Normal			
1090			10	63.28	✓		2051			Normal			
1091			10	63.07	✓		2164			Normal			

Modelling

Link	Traffic model	Stop weighting (%)	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Queue limit (PCU)	Excess queue penalty (£)	Has degree of saturation limit
700	NetworkDefault	0	20	100		0.00				
701	NetworkDefault	0	20	100		0.00				
710	NetworkDefault	500	100	100		13.00	✓	10.00	1000.00	
711	NetworkDefault	500	100	100					0.00	
712	NetworkDefault	500	100	100					0.00	
720	NetworkDefault	500	100	100		13.00	✓	10.00	1000.00	
721	NetworkDefault	500	100	100					0.00	
730	NetworkDefault	500	100	100		14.00	✓	11.00	1000.00	
731	NetworkDefault	500	100	100					0.00	
790	NetworkDefault	100	100	100		0.00				
791	NetworkDefault	100	100	100		0.00				
792	NetworkDefault	100	100	100		0.00				
800	NetworkDefault	0	20	100		0.00				
801	NetworkDefault	20	0	100		0.00				
810	NetworkDefault	500	100	100		7.00	✓	4.00	1000.00	
811	NetworkDefault	500	100	100					0.00	
812	NetworkDefault	500	100	100					0.00	
820	NetworkDefault	500	100	100		9.00	✓	5.00	1000.00	
821	NetworkDefault	500	100	100					0.00	
890	NetworkDefault	100	100	100		0.00				
891	NetworkDefault	100	100	100		0.00				
900	NetworkDefault	0	20	100		0.00				
901	NetworkDefault	0	20	100		0.00				
910	NetworkDefault	500	100	100		20.00				
911	NetworkDefault	500	100	100						
912	NetworkDefault	500	100	100						
920	NetworkDefault	500	100	100		21.00				
990	NetworkDefault	100	100	100		0.00				
1000	NetworkDefault	0	20	100		0.00				
1001	NetworkDefault	0	20	100		0.00				
1010	NetworkDefault	500	100	100		9.00	✓	7.00	1000.00	
1011	NetworkDefault	500	100	100					0.00	
1012	NetworkDefault	500	100	100					0.00	
1020	NetworkDefault	500	100	100		10.00	✓	8.00	1000.00	
1021	NetworkDefault	500	100	100					0.00	
1030	NetworkDefault	500	100	100		11.00	✓	8.00	1000.00	
1090	NetworkDefault	100	100	100		0.00				
1091	NetworkDefault	100	100	100		0.00				

Modelling - Normal traffic - Advanced

Link	Dispersion type for Normal Traffic	Initial queue (PCU)	Auto cycle time	Cycle time
700	NetworkDefault	0.00	✓	70
701	NetworkDefault	0.00	✓	70
710	NetworkDefault	0.00	✓	70
711	NetworkDefault			
712	NetworkDefault			
720	NetworkDefault	0.00	✓	70
721	NetworkDefault			
730	NetworkDefault	0.00	✓	70
731	NetworkDefault			
790	NetworkDefault	0.00	✓	70
791	NetworkDefault	0.00	✓	70
792	NetworkDefault	0.00	✓	70
800	NetworkDefault	0.00	✓	70
801	NetworkDefault	0.00	✓	70
810	NetworkDefault	0.00	✓	70
811	NetworkDefault			
812	NetworkDefault			
820	NetworkDefault	0.00	✓	70
821	NetworkDefault			
890	NetworkDefault	0.00	✓	70
891	NetworkDefault	0.00	✓	70
900	NetworkDefault	0.00	✓	70
901	NetworkDefault	0.00	✓	70
910	NetworkDefault	0.00	✓	70
911	NetworkDefault			
912	NetworkDefault			
920	NetworkDefault	0.00	✓	70
990	NetworkDefault	0.00	✓	70
1000	NetworkDefault	0.00	✓	70
1001	NetworkDefault	0.00	✓	70
1010	NetworkDefault	0.00	✓	70
1011	NetworkDefault			
1012	NetworkDefault			
1020	NetworkDefault	0.00	✓	70
1021	NetworkDefault			
1030	NetworkDefault	0.00	✓	70
1090	NetworkDefault	0.00	✓	70
1091	NetworkDefault	0.00	✓	70

Flows

Link	Total flow (PCU/hr)	PCU Factor
700	618	1.00
701	663	1.00
710	261	1.00
711	21	1.00
712	386	1.00
720	95	1.00
721	424	1.00
730	214	1.00
731	425	1.00
790	1286	1.00
791	939	1.00
792	424	1.00
800	971	1.00
801	1023	1.00
810	2	1.00
811	1	1.00
812	212	1.00
820	241	1.00
821	2	1.00
890	586	1.00
891	371	1.00
900	801	1.00
901	849	1.00
910	494	1.00
911	241	1.00
912	2	1.00
920	759	1.00
990	965	1.00
1000	373	1.00
1001	404	1.00
1010	0	1.00
1011	3	1.00
1012	553	1.00
1020	386	1.00
1021	390	1.00
1030	849	1.00
1090	763	1.00
1091	369	1.00

Flows - Advanced

Link	Detectors
(ALL)	

Signals

Link	Controller stream	Phase	Second phase enabled
700	7	C	
701	7	C	
710	7	D	
711			
712			
720	7	D	
721			
730	7	D	
731			
800	8	A	
801	8	A	
810	8	B	
811			
812			
820	8	B	
821			
900	9	A	
901	9	A	
910	9	B	
911			
912			
920	9	B	
1000	10	A	
1001	10	A	
1010	10	B	
1011			
1012			
1020	10	B	
1021			
1030	10	B	

Entry Sources

Link	Cruise time (seconds)	Cruise speed (kph)
700	18.41	39.10
701	18.41	39.10
800	24.83	29.00
801	24.83	29.00
900	24.91	28.90
901	24.91	28.90
1000	48.00	15.00
1001	48.00	15.00

Sources

Link	Source	Source type	Source link	Destination link	Cruise time (seconds)	Cruise speed (kph)	Total flow (PCU/hr)
710	1	Link	1000	710	12.36	32.00	166
711	1	Link	1021	711	12.36	32.00	21
712	1	Link	1020	712	12.36	32.00	386
720	1	Link	1001	720	12.04	32.00	95
721	1	Link	1030	721	12.04	32.00	424
730	1	Link	1001	730	11.73	32.00	214
731	1	Link	1030	731	11.73	32.00	425
790	1	Link	710	790	11.94	32.00	261
791	1	Link	720	791	9.24	32.00	95
792	1	Link	731	792	9.32	32.00	424
810	1	Link	701	810	9.34	32.00	2
811	1	Link	731	811	9.35	32.00	1
812	1	Link	730	812	9.35	32.00	212
820	1	Link	701	820	9.03	32.00	241
821	1	Link	730	821	9.03	32.00	2
890	1	Link	810	890	22.50	32.00	2
891	1	Link	800	891	22.50	32.00	371
910	1	Link	800	910	18.33	32.00	230
911	1	Link	820	911	18.33	32.00	241
912	1	Link	821	912	18.33	32.00	2
920	1	Link	801	920	17.86	32.00	759
990	1	Link	910	990	22.50	32.00	310
1010	1	Link	900	1010	10.76	32.00	0
1011	1	Link	911	1011	10.76	32.00	3
1012	1	Link	920	1012	10.76	32.00	369
1020	1	Link	900	1020	10.21	32.00	386
1021	1	Link	920	1021	10.21	32.00	390
1030	1	Link	901	1030	9.56	32.00	849
1090	1	Link	1000	1090	7.12	32.00	207
1091	1	Link	1021	1091	7.10	32.00	369
710	2	Link	1001	710	12.36	32.00	95
790	2	Link	711	790	11.94	32.00	21
791	2	Link	721	791	9.24	32.00	424
890	2	Link	800	890	22.50	32.00	371
910	2	Link	801	910	18.33	32.00	265
990	2	Link	900	990	22.50	32.00	415
1012	2	Link	910	1012	10.76	32.00	184
1090	2	Link	1010	1090	7.12	32.00	0
790	3	Link	700	790	11.94	32.00	618
791	3	Link	701	791	9.24	32.00	420
890	3	Link	812	890	22.50	32.00	212
990	3	Link	911	990	22.50	32.00	238
1090	3	Link	1011	1090	7.12	32.00	3
790	4	Link	712	790	11.94	32.00	386
890	4	Link	811	890	22.50	32.00	1
990	4	Link	912	990	22.50	32.00	2
1090	4	Link	1012	1090	7.12	32.00	553

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				
		A	B	C	D
From	A	3	1038	2	238
	B	922	21	741	310
	C	0	1234	1	415
	D	207	356	212	2

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	A	(untitled)	701, 700	1090, 1091	#0000FF
	B	(untitled)	801, 800	792, 791, 790	#FF0000
	C	(untitled)	900, 901	891, 890	#00FF00
	D	(untitled)	1000, 1001	990	#FFFF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
1	1		A	A	701, 820, 911, 1011, 1090	Normal	3
	2		B	A	801, 910, 1012, 1090	Percentage	92
	3		B	A	801, 920, 1021, 1091	Normal	369
	4		B	A	801, 920, 1012, 1090	Percentage	369
	5		B	A	800, 910, 1012, 1090	Percentage	92
	6		A	B	701, 791	Normal	420
	7		A	B	700, 790	Normal	618
	8		B	B	801, 920, 1021, 711, 790	Normal	21
	9		C	A	900, 1010, 1090	Normal	0
	10		C	B	900, 1020, 712, 790	Normal	386
	11		C	B	901, 1030, 721, 791	Normal	424
	12		C	B	901, 1030, 731, 792	Normal	424
	13		B	C	800, 891	Normal	371
	14		A	C	701, 810, 890	Normal	2
	15		B	C	800, 890	Normal	371
	16		C	C	901, 1030, 731, 811, 890	Normal	1
	17		D	B	1000, 710, 790	Normal	166
	18		D	A	1000, 1090	Normal	207
	19		D	B	1001, 710, 790	Normal	95
	20		D	B	1001, 720, 791	Normal	95
	21		D	C	1001, 730, 812, 890	Normal	212
	22		A	D	701, 820, 911, 990	Normal	238
	23		B	D	801, 910, 990	Normal	173
	24		B	D	800, 910, 990	Normal	137
	25		C	D	900, 990	Normal	415
	26		D	D	1001, 730, 821, 912, 990	Normal	2

Link Results

Link Results: Vehicle summary

Time Segment	Link	Major link	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (PCU)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	700		85	6	618	1954	25	36.13	13.72	37.33	17.61	0.00	17.61
	701		85	6	663	2097	25	35.06	14.52	36.82	18.34	0.00	18.34
	710		66	37	261	2088	33	11.43	10.26	78.96	11.77	18.07	34.60
	711	710			21			15.64			1.29	0.63	1.92
	712	710			386			14.64			22.29	17.22	39.51
	720		48	88	95	2231	33	7.27	6.68	51.38	2.72	4.95	7.67
	721	720			424			13.22			22.10	18.53	40.63
	730		57	57	214	2299	33	10.03	9.25	66.08	8.46	14.28	22.75
	731	730			425			14.13			23.69	18.69	42.38
	790		64	41	1286	2010	70	2.48	3.16	15.75	12.60	0.68	13.27
	791		44	104	939	2124	70	1.52	0.99	6.05	5.62	0.29	5.92
	792		20	349	424	2115	70	1.06	0.13	0.76	1.78	0.00	1.78
	800		87	3	971	2001	38	25.31	19.41	51.60	19.39	0.00	19.39
	801		87	3	1023	2110	38	24.65	20.27	51.09	0.00	2.32	2.32
	810		33	174	2	2182	20	33.75	3.97	56.74	0.27	0.15	0.42
	811	810			1			9.58			0.04	0.04	0.08
	812	810			212			6.69			5.59	11.14	16.73
	820		35	155	241	2295	20	36.97	4.99	55.48	35.14	18.16	53.30
	821	820			2			10.62			0.08	0.13	0.22
	890		31	194	586	1911	70	1.36	0.22	0.61	3.14	0.00	3.14
	891		18	396	371	2042	70	1.08	0.11	0.29	1.57	0.00	1.57
	900		90	0	801	2158	28	36.93	18.43	45.42	23.33	0.00	23.33
	901		90	0	849	2287	28	36.01	19.32	44.92	24.12	0.00	24.12
	910		83	8	494	1995	30	22.43	13.76	68.78	43.74	27.40	71.14
	911	910			241			37.41			35.56	19.98	55.54
	912	910			2			35.54			0.28	0.17	0.45
	920		78	15	758	2187	30	16.34	7.86	37.44	48.87	24.27	73.14
	990		45	99	965	2133	70	1.54	0.41	1.03	5.86	0.00	5.86
	1000		87	3	373	2139	13	56.68	10.00	24.87	16.68	0.00	16.68
	1001		87	3	404	2317	13	54.59	10.60	24.33	17.40	0.00	17.40
	1010		41	120	0	2071	45	0.00	3.53	39.22	0.00	0.00	0.00
	1011	1010			3			3.22			0.04	0.08	0.12
	1012	1010			553			3.09			6.74	10.02	16.76
	1020		53	71	386	2247	45	11.74	8.36	83.59	17.87	13.52	38.51
	1021	1020			390			6.08			9.34	15.43	24.77
	1030		57	57	849	2253	45	13.39	8.09	73.55	44.84	29.69	91.70
	1090		37	142	763	2051	70	1.40	0.30	2.43	4.20	0.00	4.20
	1091		17	428	369	2164	70	1.00	0.10	0.80	1.46	0.00	1.46

Link Results: Flows and signals

Time Segment	Link	Major link	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))	Effective green (s (per cycle))
17:00-18:00	700		618	618	0		1954	726	85		6	0.00	25	26
	701		663	663	0		2097	779	85		6	0.00	25	26
	710		261	261	0		2088	1014	66		37	1.36	33	34
	711	710	21	21	0						37	1.18		
	712	710	386	386	0						37	0.94		
	720		95	95	0		2231	1084	48		88	1.36	33	34
	721	720	424	424	0						88	0.84		
	730		214	214	0		2299	1117	57		57	1.37	33	34
	731	730	425	425	0						57	0.85		
	790		1286	1286	0		2010	2010	64		41	0.43	70	70
	791		939	939	0		2124	2124	44		104	0.45	70	70
	792		424	424	0		2115	2115	20		349	1.02	70	70
	800		971	971	0		2001	1115	87		3	0.00	38	39
	801		1023	1023	0		2110	1176	87		3	0.00	38	39
	810		2	2	0		2182	655	33		174	1.16	20	21
	811	810	1	1	0						174	1.02		
	812	810	212	212	0						174	1.50		
	820		241	241	0		2295	689	35		155	1.16	20	21
	821	820	2	2	0						155	1.51		
	890		586	586	0		1911	1911	31		194	0.37	70	70
	891		371	371	0	✓	2042	2042	18		396	0.71	70	70
	900		801	801	0		2158	894	90		0	0.00	28	29
	901		849	849	0		2287	947	90		0	0.00	28	29
	910		494	494	0		1995	884	83		8	0.75	30	31
	911	910	241	241	0						8	1.33		
	912	910	2	2	0						8	1.42		
	920		758	758	0	✓	2187	969	78		15	0.75	30	31
	990		965	965	0		2133	2133	45		99	0.27	70	70
	1000		373	373	0		2139	428	87		3	0.00	13	14
	1001		404	404	0		2317	463	87		3	0.00	13	14
	1010		0	0	0		2071	1361	41		120	0.00	45	46
	1011	1010	3	3	0						120	1.45		
	1012	1010	553	553	0						120	0.97		
	1020		386	386	0		2247	1477	53		71	1.07	45	46
	1021	1020	390	390	0						71	0.98		
	1030		849	849	0		2253	1481	57		57	1.07	45	46
	1090		763	763	0		2051	2051	37		142	0.68	70	70
	1091		369	369	0		2164	2164	17		428	1.24	70	70

Link Results: Stops and delays

Time Segment	Link	Major link	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	700		18.41	36.13	3.47	2.73	88.06	17.61	109.12	541.66	132.67	14.36	0.00
	701		18.41	35.06	3.72	2.73	91.68	18.34	107.73	580.97	133.31	15.21	0.00
	710		12.36	11.43	0.45	0.37	11.77	11.77	97.08	234.44	18.93	3.61	18.07
	711	710	12.36	15.64	0.06	0.03	1.29	1.29	41.93	7.28	1.52	0.13	0.63
	712	710	12.36	14.64	1.02	0.55	22.29	22.29	62.52	213.35	28.00	3.44	17.22
	720		12.04	7.27	0.11	0.08	2.72	2.72	73.02	65.10	4.27	0.99	4.95
	721	720	12.04	13.22	1.18	0.37	22.10	22.10	61.25	240.65	19.06	3.71	18.53
	730		11.73	10.03	0.37	0.22	8.46	8.46	93.58	188.91	11.33	2.86	14.28
	731	730	11.73	14.13	1.22	0.44	23.69	23.69	61.66	239.55	22.51	3.74	18.69
	790		11.94	2.48	0.00	0.89	12.60	12.60	3.69	2.24	45.16	0.68	0.68
	791		9.24	1.52	0.00	0.40	5.62	5.62	2.18	0.20	20.25	0.29	0.29
	792		9.32	1.06	0.00	0.13	1.78	1.78	0.00	0.00	0.00	0.00	0.00
	800		24.83	25.31	3.60	3.23	96.95	19.39	97.87	791.10	159.21	11.13	0.00
	801		24.83	24.65	3.79	3.22	99.45	0.00	96.94	832.73	158.93	11.62	2.32
	810		9.34	33.75	0.02	0.00	0.27	0.27	105.73	2.00	0.12	0.03	0.15
	811	810	9.35	9.58	0.00	0.00	0.04	0.04	62.95	0.57	0.06	0.01	0.04
	812	810	9.35	6.69	0.15	0.24	5.59	5.59	73.67	143.98	12.21	2.23	11.14
	820		9.03	36.97	2.20	0.27	35.14	35.14	105.68	240.95	13.69	3.63	18.16
	821	820	9.03	10.62	0.00	0.00	0.08	0.08	92.25	1.73	0.11	0.03	0.13
	890		22.50	1.36	0.00	0.22	3.14	3.14	0.00	0.00	0.00	0.00	0.00
	891		22.50	1.08	0.00	0.11	1.57	1.57	0.00	0.00	0.00	0.00	0.00
	900		24.91	36.93	4.25	3.97	116.66	23.33	113.32	716.13	191.55	10.56	0.00
	901		24.91	36.01	4.50	3.99	120.58	24.12	112.17	759.12	193.19	11.08	0.00
	910		18.33	22.43	1.44	1.64	43.74	43.74	77.68	303.37	80.69	5.48	27.40
	911	910	18.33	37.41	1.71	0.80	35.56	35.56	116.22	240.71	39.33	4.00	19.98
	912	910	18.33	35.54	0.01	0.01	0.28	0.28	116.10	2.00	0.33	0.03	0.17
	920		17.86	16.34	1.67	1.77	48.87	48.87	44.87	251.76	88.51	4.85	24.27
	990		22.50	1.54	0.00	0.41	5.86	5.86	0.00	0.00	0.00	0.00	0.00
	1000		48.00	56.68	2.81	3.06	83.39	16.68	132.99	354.11	141.93	1.55	0.00
	1001		48.00	54.59	3.05	3.08	86.99	17.40	130.55	383.54	143.88	1.65	0.00
	1010		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1011	1010	10.76	3.22	0.00	0.00	0.04	0.04	37.10	1.02	0.09	0.02	0.08
	1012	1010	10.76	3.09	0.13	0.34	6.74	6.74	25.39	122.92	17.51	2.00	10.02
	1020		10.21	11.74	0.98	0.27	17.87	17.87	49.12	175.60	14.01	2.70	13.52
	1021	1020	10.21	6.08	0.38	0.28	9.34	9.34	55.50	202.12	14.14	3.09	15.43
	1030		9.56	13.39	2.49	0.67	44.84	44.84	49.03	382.08	34.15	5.94	29.69
	1090		7.12	1.40	0.00	0.30	4.20	4.20	0.00	0.00	0.00	0.00	0.00
	1091		7.10	1.00	0.00	0.10	1.46	1.46	0.00	0.00	0.00	0.00	0.00

Link Results: Queues and blocking

Time Segment	Link	Major link	Initial queue (PCU)	Mean max queue (PCU)	Max queue storage (PCU)	Utilised storage (%)	Average storage excess queue (PCU)	Average limit excess queue (PCU)	Excess queue penalty (£ per hr)	Max end of green queue (PCU)	Max end of red queue (PCU)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))	Estimated blocking
17:00-18:00	700		0.00	13.72	36.74	37.33	0.00	0.00	0.00	2.73	10.28	0.00	0.00	0.00	
	701		0.00	14.52	39.43	36.82	0.00	0.00	0.00	2.73	10.84	0.00	0.00	0.00	
	710		0.00	10.26	13.00	78.96	0.00	0.00	4.76	0.96	5.90	0.00	0.00	0.00	
	711	710							0.00						
	712	710							0.00						
	720		0.00	6.68	13.00	51.38	0.00	0.00	0.00	0.46	5.33	0.00	0.00	0.00	
	721	720							0.00						
	730		0.00	9.25	14.00	66.08	0.00	0.00	0.00	0.67	6.14	0.00	0.00	0.00	
	731	730							0.00						
	790		0.00	3.16	20.06	15.75	0.00	0.00	0.00			0.00	0.00	0.00	
	791		0.00	0.99	16.41	6.05	0.00	0.00	0.00			0.00	0.00	0.00	
	792		0.00	0.13	16.48	0.76	0.00	0.00	0.00			32.00	0.00	32.00	
	800		0.00	19.41	37.62	51.60	0.00	0.00	0.00	3.23	11.59	0.00	0.00	0.00	
	801		0.00	20.27	39.67	51.09	0.00	0.00	0.00	3.22	12.03	0.00	0.00	0.00	
	810		0.00	3.97	7.00	56.74	0.00	0.00	0.00	0.24	2.01	8.00	0.00	8.00	
	811	810							0.00						
	812	810							0.00						
	820		0.00	4.99	9.00	55.48	0.00	0.00	0.00	0.27	4.97	13.00	0.00	13.00	
	821	820							0.00						
	890		0.00	0.22	35.93	0.61	0.00	0.00	0.00			0.00	0.00	0.00	
	891		0.00	0.11	38.39	0.29	0.00	0.00	0.00			18.00	0.00	18.00	
	900		0.00	18.43	40.57	45.42	0.00	0.00	0.00	3.97	13.09	0.00	0.00	0.00	
	901		0.00	19.32	43.00	44.92	0.00	0.00	0.00	3.99	13.66	0.00	0.00	0.00	
	910		0.00	13.76	20.00	68.78	0.00	0.00	0.00	2.44	9.42	0.00	0.00	0.00	
	911	910							0.00						
	912	910							0.00						
	920		0.00	7.86	21.00	37.44	0.00	0.00	0.00	1.77	5.03	0.00	0.00	0.00	
	990		0.00	0.41	40.10	1.03	0.00	0.00	0.00			0.00	0.00	0.00	
	1000		0.00	10.00	40.22	24.87	0.00	0.00	0.00	3.06	8.86	0.00	0.00	0.00	
	1001		0.00	10.60	43.56	24.33	0.00	0.00	0.00	3.08	9.37	0.00	0.00	0.00	
	1010		0.00	3.53	9.00	39.22	0.00	0.00	0.00	0.35	1.96	11.00	0.00	11.00	
	1011	1010							0.00						
	1012	1010							0.00						
	1020		0.00	8.36	10.00	83.59	0.00	0.01	7.11	0.55	5.36	0.00	0.00	0.00	
	1021	1020							0.00						
	1030		0.00	8.09	11.00	73.55	0.00	0.02	17.18	0.69	8.07	17.00	0.00	17.00	
	1090		0.00	0.30	12.20	2.43	0.00	0.00	0.00			13.00	0.00	13.00	
	1091		0.00	0.10	12.83	0.80	0.00	0.00	0.00			40.00	0.00	40.00	

Link Results: Journey times

Time Segment	Link	Major link	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
17:00-18:00	700		123.60	9.36	13.20	54.54
	701		132.60	9.85	13.46	53.47
	710		28.68	1.73	16.63	23.80
	711	710	2.31	0.16	14.13	28.00
	712	710	42.42	2.90	14.65	27.00
	720		10.17	0.51	19.95	19.31
	721	720	45.37	2.97	15.25	25.25
	730		22.32	1.29	17.26	21.76
	731	730	44.33	3.05	14.52	25.87
	790		136.50	5.15	26.49	14.42
	791		77.16	2.81	27.49	10.76
	792		35.14	1.22	28.72	10.39
	800		194.20	13.52	14.36	50.14
	801		204.60	14.06	14.55	49.47
	810		0.17	0.02	6.93	43.09
	811	810	0.08	0.01	15.81	18.93
	812	810	17.62	0.94	18.66	16.04
	820		19.33	3.08	6.28	46.00
	821	820	0.16	0.01	14.70	19.65
	890		117.13	3.88	30.18	23.86
	891		74.13	2.43	30.54	23.58
	900		160.20	13.76	11.64	61.84
	901		169.80	14.37	11.82	60.92
	910		80.54	5.60	14.39	40.76
	911	910	39.25	3.73	10.52	55.74
	912	910	0.33	0.03	10.89	53.87
	920		120.38	7.20	16.71	34.20
	990		192.98	6.44	29.95	24.04
	1000		74.60	10.85	6.88	104.68
	1001		80.80	11.51	7.02	102.59
	1010		0.00	0.00	0.00	0.00
	1011	1010	0.29	0.01	24.64	13.98
	1012	1010	52.91	2.13	24.86	13.86
	1020		35.02	2.35	14.88	21.95
	1021	1020	35.35	1.76	20.06	16.28
	1030		72.17	5.41	13.33	22.95
	1090		48.29	1.81	26.75	8.52
	1091		23.25	0.83	28.04	8.10

Link Results: Advanced

Time Segment	Link	Major link	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Mean Max Queue EoTS (PCU)	Max End of Green Queue EoTS (PCU)	Max End of Red Queue EoTS (PCU)	PCU Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
17:00-18:00	700		0.00	0.00	✓	13.78	2.79	10.35	1.00	0.00	102.43	17.61
	701		0.00	0.00	✓	14.58	2.79	10.90	1.00	0.00	106.90	18.34
	710		0.00	0.00	✓	10.27	0.96	5.90	1.00	4.76	15.38	34.60
	711	710	0.00	0.00					1.00	0.00	1.42	1.92
	712	710	0.00	0.00					1.00	0.00	25.73	39.51
	720		0.00	0.00	✓	6.68	0.46	5.33	1.00	0.00	3.71	7.67
	721	720	0.00	0.00					1.00	0.00	25.81	40.63
	730		0.00	0.00	✓	9.25	0.67	6.14	1.00	0.00	11.32	22.75
	731	730	0.00	0.00					1.00	0.00	27.43	42.38
	790		0.00	0.00	✓	3.16			1.00	0.00	13.27	13.27
	791		0.00	0.00	✓	0.99			1.00	0.00	5.92	5.92
	792		0.00	0.00	✓	0.13			1.00	0.00	1.78	1.78
	800		0.00	0.00	✓	19.48	3.30	11.66	1.00	0.00	108.08	19.39
	801		0.00	0.00	✓	20.33	3.28	12.09	1.00	0.00	111.07	2.32
	810		0.00	0.00	✓	3.97	0.24	2.01	1.00	0.00	0.30	0.42
	811	810	0.00	0.00					1.00	0.00	0.05	0.08
	812	810	0.00	0.00					1.00	0.00	7.82	16.73
	820		0.00	0.00	✓	4.99	0.27	4.97	1.00	0.00	38.77	53.30
	821	820	0.00	0.00					1.00	0.00	0.11	0.22
	890		0.00	0.00	✓	0.22			1.00	0.00	3.14	3.14
	891		0.00	0.00	✓	0.11			1.00	0.00	1.57	1.57
	900		0.00	0.00	✓	18.58	4.12	13.24	1.00	0.00	127.23	23.33
	901		0.00	0.00	✓	19.47	4.14	13.81	1.00	0.00	131.67	24.12
	910		0.00	0.00	✓	13.80	2.48	9.46	1.00	0.00	49.22	71.14
	911	910	0.00	0.00					1.00	0.00	39.56	55.54
	912	910	0.00	0.00					1.00	0.00	0.31	0.45
	920		0.00	0.00	✓	7.88	1.79	5.05	1.00	0.00	53.73	73.14
	990		0.00	0.00	✓	0.41			1.00	0.00	5.86	5.86
	1000		0.00	0.00	✓	10.16	3.21	9.02	1.00	0.00	84.95	16.68
	1001		0.00	0.00	✓	10.74	3.23	9.51	1.00	0.00	88.65	17.40
	1010		0.00	0.00	✓	3.53	0.35	1.96	1.00	0.00	0.00	0.00
	1011	1010	0.00	0.00					1.00	0.00	0.05	0.12
	1012	1010	0.00	0.00					1.00	0.00	8.75	16.76
	1020		0.00	0.00	✓	8.36	0.55	5.36	1.00	7.11	20.58	38.51
	1021	1020	0.00	0.00					1.00	0.00	12.42	24.77
	1030		0.00	0.00	✓	8.09	0.69	8.07	1.00	17.18	50.78	91.70
	1090		0.00	0.00	✓	0.30			1.00	0.00	4.20	4.20
	1091		0.00	0.00	✓	0.10			1.00	0.00	1.46	1.46

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	Item with worst over PR
6	29/05/2019 18:15:02	29/05/2019 18:15:02	17:00	70	808.73	81.74	89.61	901	0	0	901	790	90

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	90	0	17364	1489	16.95	513.85	265.84	808.73

Network Results: Flows and signals

Time Segment	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))	Effective green (s (per cycle))
17:00-18:00	17364	17364	1	✓	90		0	1489	1519

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	17.63	16.95	44.80	36.94	1160.77	513.85	57.37	8221.88	1740.68	130.66	265.84

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))
17:00-18:00	83.59	29.05	203.00	0.00	203.00

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
17:00-18:00	2514.20	166.76	15.08

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	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	✓	1.00	29.05	0.00	1291.42	808.73

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

	To				
From		A	B	C	D
	A	177.7	67.1	120.4	179.3
	B	108.2	142.4	73.9	114.6
	C	0.0	121.6	152.5	85.9
	D	113.2	139.6	164.3	221.9

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	A	A	3	177.71	3	177.71
2	B	A	92	112.60	92	112.60
3	B	A	369	108.06	369	108.06
4	B	A	369	106.04	369	106.04
5	B	A	92	113.27	92	113.27
6	A	B	420	64.24	420	64.24
7	A	B	618	68.96	618	68.96
8	B	B	21	142.38	21	142.38
9	C	A	0	70.35	0	0.00
10	C	B	386	125.21	386	125.21
11	C	B	424	119.89	424	119.89
12	C	B	424	120.13	424	120.13
13	B	C	371	73.72	371	73.72
14	A	C	2	120.42	2	120.42
15	B	C	371	74.00	371	74.00
16	C	C	1	152.53	1	152.53
17	D	B	166	142.90	166	142.90
18	D	A	207	113.20	207	113.20
19	D	B	95	140.81	95	140.81
20	D	B	95	132.66	95	132.66
21	D	C	212	164.25	212	164.25
22	A	D	238	179.25	238	179.25
23	B	D	173	114.27	173	114.27
24	B	D	137	114.94	137	114.94
25	C	D	415	85.88	415	85.88
26	D	D	2	221.91	2	221.91

Final Prediction Table

Link Results

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QUEUES	
Link	Name	Major link	Traffic node	Controller stream	Phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s per cycle)	Wasted time total (s per cycle)	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (PCU)	Max end of red queue (PCU)
700			7	7	C	618	1954	25	0.00	85	6	54.54	36.13	109.12	13.72	10.28
701			7	7	C	663	2097	25	0.00	85	6	53.47	35.06	107.73	14.52	10.84
710		(710)	7	7	D	261	2088	33	0.00	66	37	23.80	11.43	97.08	10.26	5.90
711		710				21						28.00	15.64	41.93		
712		710				386						27.00	14.64	62.52		
720		(720)	7	7	D	95	2231	33	0.00	48	88	19.31	7.27	73.02	6.68	5.33
721		720				424						25.25	13.22	61.25		
730		(730)	7	7	D	214	2299	33	0.00	57	57	21.76	10.03	93.58	9.25	6.14
731		730				425						25.87	14.13	61.66		
790			7			1286	2010	70	0.00	64	41	14.42	2.48	3.69	3.16	
791			7			939	2124	70	0.00	44	104	10.76	1.52	2.18	0.99	
792			7			424	2115	70	32.00	20	349	10.39	1.06	0.00	0.13	
800			8	8	A	971	2001	38	0.00	87	3	50.14	25.31	97.87	19.41	11.59
801			8	8	A	1023	2110	38	0.00	87	3	49.47	24.65	96.94	20.27	12.03
810		(810)	8	8	B	2	2182	20	8.00	33	174	43.09	33.75	105.73	3.97	2.01
811		810				1						18.93	9.58	62.95		
812		810				212						16.04	6.69	73.67		
820		(820)	8	8	B	241	2295	20	13.00	35	155	46.00	36.97	105.68	4.99	4.97
821		820				2						19.65	10.62	92.25		
890			8			586	1911	70	0.00	31	194	23.86	1.36	0.00	0.22	
891			8			371	2042	70	18.00	18	396	23.58	1.08	0.00	0.11	
900			9	9	A	801	2158	28	0.00	90	0	61.84	36.93	113.32	18.43	13.09
901			9	9	A	849	2287	28	0.00	90	0	60.92	36.01	112.17	19.32	13.66
910		(910)	9	9	B	494	1995	30	0.00	83	8	40.76	22.43	77.68	13.76	9.42
911		910				241						55.74	37.41	116.22		
912		910				2						53.87	35.54	116.10		
920			9	9	B	758	2187	30	0.00	78	15	34.20	16.34	44.87	7.86	5.03
990			9			965	2133	70	0.00	45	99	24.04	1.54	0.00	0.41	
1000			10	10	A	373	2139	13	0.00	87	3	104.68	56.68	132.99	10.00	8.86
1001			10	10	A	404	2317	13	0.00	87	3	102.59	54.59	130.55	10.60	9.37
1010		(1010)	10	10	B	0	2071	45	11.00	41	120	0.00	0.00	0.00	3.53	1.96
1011		1010				3						13.98	3.22	37.10		
1012		1010				553						13.86	3.09	25.39		
1020		(1020)	10	10	B	386	2247	45	0.00	53	71	21.95	11.74	49.12	8.36	5.36
1021		1020				390						16.28	6.08	55.50		
1030			10	10	B	849	2253	45	17.00	57	57	22.95	13.39	49.03	8.09	8.07
1090			10			763	2051	70	13.00	37	142	8.52	1.40	0.00	0.30	
1091			10			369	2164	70	40.00	17	428	8.10	1.00	0.00	0.10	

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	2514.20	166.76	15.08	44.80	36.94	513.85	265.84	29.05	808.73
Bus									
Tram									
Pedestrians									
TOTAL	2514.20	166.76	15.08	44.80	36.94	513.85	265.84	29.05	808.73

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



Appendix D. TRANSYT Output Reports – Phase IB

TRANSYT 15	
Version: 15.5.2.7994 © Copyright TRL Limited, 2018	
For sales and distribution information, program advice and maintenance, contact TRL: +44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk	
The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution	

Results are NOT up to date. You should run the file and then refresh this report.

Filename: Coed Darcy - M4 J43 Phase IB v0.4.t15

Path: \\wsatkins.com\Project\INGUA\H & T\TP\Projects\5122307 - Coed Darcy\Technical\M4 J43 Models\M4 J43 new tests\M4 J43 TRANSYT report

Report generation date: 29/05/2019 18:34:01

»A1 - Phase 1B - AM 2025 inc. 1250 D : D1 - 2025 inc. 1250 D AM* :
 »A2 - Phase 1B - PM 2025 inc. 1250 D : D2 - 2025 inc. 1250 D PM* :
 »A3 - Phase 1B - AM 2026 inc. 1500 D : D3 - 2026 inc. 1500 D AM* :
 »A4 - Phase 1B - PM 2026 inc. 1500 D : D4 - 2026 inc. 1500 D PM* :
 »A5 - Phase 1B - AM 2027 inc. 1750 D : D5 - 2027 inc. 1750 D AM* :
 »A6 - Phase 1B - PM 2027 inc. 1750 D : D6 - 2027 inc. 1750 D PM* :

File summary

File description

File title	Coed Darcy Off Site Highways Mitigation
Location	M4 J43
Site number	
UTCRegion	
Driving side	Left
Date	29/05/2019
Version	v1
Status	Updated Phasing Strategy (May 2019)
Identifier	
Client	St. Modwen Developments
Jobnumber	5104234.175
Enumerator	Hitav Patel / Liam Hartas
Description	Assess revised phasing strategy.

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
			✓		✓	✓	✓	✓	✓	✓	✓		

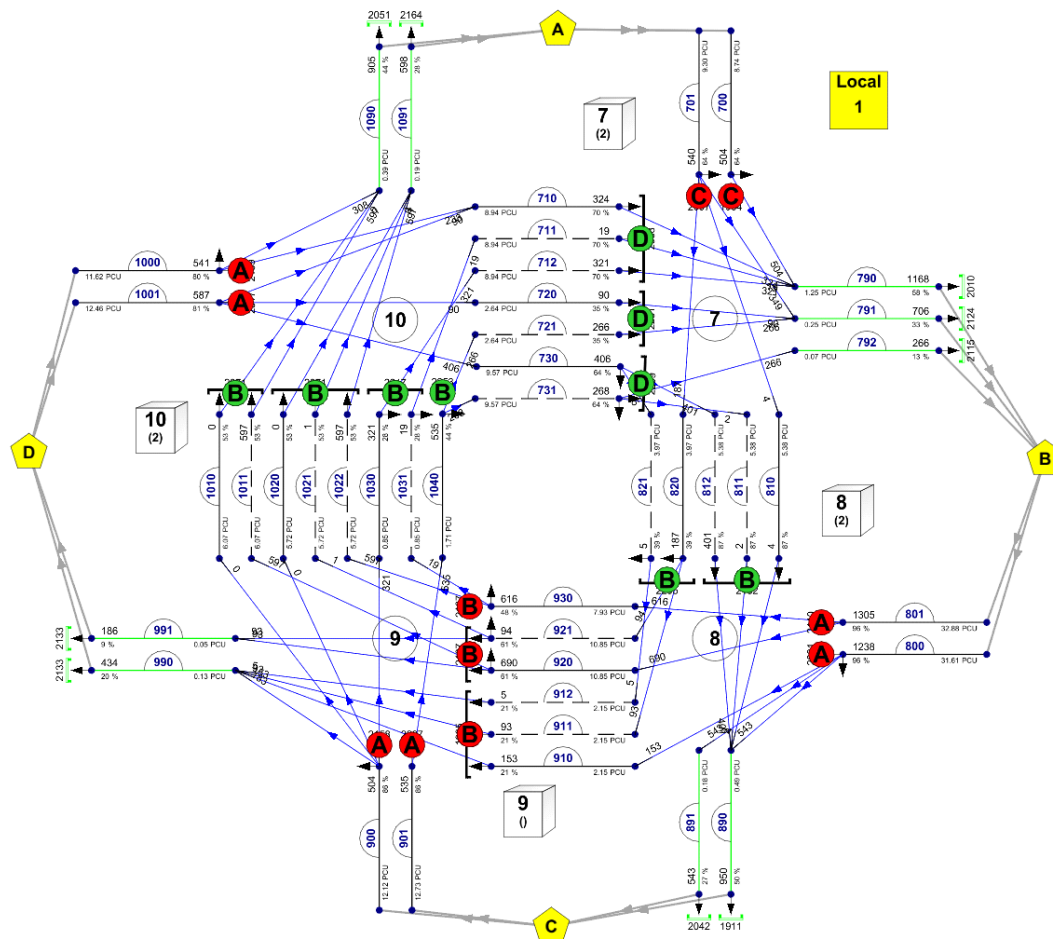
Units

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	✓

Network Diagrams



Coed Darcy Off Site Highways Mitigation
Cycletime 0s / 70s , Timesteps 69 / 70
1, 1
Diagram produced using TRANSYT 15.5.2.7994

A1 - Phase 1B - AM 2025 inc. 1250 D

D1 - 2025 inc. 1250 D 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	Item with worst over PR
1	29/05/2019 18:33:23	29/05/2019 18:33:24	08:00	70	1705.54	83.63	96.24	800	2	5	800	790	80

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
Phase 1B - AM 2025 inc. 1250 D		D1	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2025 inc. 1250 D 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)
70		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	PCU Length (m)	Calculate results for Path Segments	Generate PDM Profile Data
1	90	100	✓	✓		Simplified (TRANSYT 12)	5.75		✓

Normal Traffic parameters

Dispersion type	Dispersion coefficient	Travel time coefficient
Default	35	80

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion type	Acceleration (ms ⁻²)	Stationary time coefficient	Cruise time coefficient
Bus	1.00	Default	0.94	30	85

Tram parameters

Name	PCU Factor	Dispersion type	Acceleration (ms ⁻²)	Stationary time coefficient	Cruise time coefficient
Tram	1.00	Default	0.94	100	100

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

Optimisation type	OUTProfile accuracy	SASart temperature	SACooling factor	Random seed	Use enhanced optimisation	Auto optimisation order	Optimisation order	Master controller	Offsets relative to master controller	Master controller offset after each run
Simulated Annealing (Slow)	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05	300.00	100.00	1	✓	✓	7, 8, 9, 10			Do nothing

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
(ALL)		

Links

Links

Link	Name	Description	Traffic node	Length (m)	Has Saturation Flow	Use RR67	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Is minor shared	Major link	Allow Nearside Turn On Red
700			7	200.00	✓		1954	✓		Normal			
701			7	200.00	✓		2097	✓		Normal			
710			7	109.89	✓		2088	✓		Normal			
711				109.89						Normal	✓	710	
712				109.89						Normal	✓	710	
720			7	107.01	✓		2231	✓		Normal			
721				107.01						Normal	✓	720	
730			7	104.31	✓		2299	✓		Normal			
731				104.31						Normal	✓	730	
790			7	106.14	✓		2010			Normal			
791			7	82.17	✓		2124			Normal			
792			7	82.87	✓		2115			Normal			
800			8	200.00	✓		2001	✓		Normal			
801			8	200.00	✓		2110	✓		Normal			
810			8	83.00	✓		2182	✓		Normal			
811				83.14						Normal	✓	810	
812				83.14						Normal	✓	810	
820			8	80.23	✓		2295	✓		Normal			
821				80.23						Normal	✓	820	
890			8	200.00	✓		1911			Normal			
891			8	200.00	✓		2042			Normal			
900			9	200.00	✓		2158	✓		Normal			
901			9	200.00	✓		2287	✓		Normal			
910			9	162.90	✓		1995	✓		Normal			
911				162.90						Normal	✓	910	
912				162.90						Normal	✓	910	
920			9	158.76	✓		2187	✓		Normal			
921	(untitled)			158.76						Normal	✓	920	
930	(untitled)		9	158.76	✓		2187	✓		Normal			
990			9	200.00	✓		2133			Normal			
991	(untitled)		9	200.00	✓		2133			Normal			
1000			10	200.00	✓		2139	✓		Normal			
1001			10	200.00	✓		2317	✓		Normal			
1010	(untitled)		10	95.68	✓		2071	✓		Normal			
1011	(untitled)			95.68						Normal	✓	1010	
1020			10	95.68	✓		2071	✓		Normal			
1021				95.68						Normal	✓	1020	
1022				95.68						Normal	✓	1020	
1030			10	90.73	✓		2247	✓		Normal			
1031				90.73						Normal	✓	1030	
1040			10	85.01	✓		2253	✓		Normal			
1090			10	63.28	✓		2051			Normal			
1091			10	63.07	✓		2164			Normal			

Modelling

Link	Traffic model	Stop weighting (%)	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Queue limit (PCU)	Excess queue penalty (£)	Has degree of saturation limit
700	NetworkDefault	0	20	100		0.00				
701	NetworkDefault	0	20	100		0.00				
710	NetworkDefault	500	100	100		13.00	✓	10.00	1000.00	
711	NetworkDefault	500	100	100					0.00	
712	NetworkDefault	500	100	100					0.00	
720	NetworkDefault	500	100	100		13.00	✓	10.00	1000.00	
721	NetworkDefault	500	100	100					0.00	
730	NetworkDefault	500	100	100		14.00	✓	11.00	1000.00	
731	NetworkDefault	500	100	100					0.00	
790	NetworkDefault	100	100	100		0.00				
791	NetworkDefault	100	100	100		0.00				
792	NetworkDefault	100	100	100		0.00				
800	NetworkDefault	0	20	100		0.00				
801	NetworkDefault	20	0	100		0.00				
810	NetworkDefault	500	100	100		7.00	✓	4.00	1000.00	
811	NetworkDefault	500	100	100					0.00	
812	NetworkDefault	500	100	100					0.00	
820	NetworkDefault	500	100	100		9.00	✓	5.00	1000.00	
821	NetworkDefault	500	100	100					0.00	
890	NetworkDefault	100	100	100		0.00				
891	NetworkDefault	100	100	100		0.00				
900	NetworkDefault	0	20	100		0.00				
901	NetworkDefault	0	20	100		0.00				
910	NetworkDefault	500	100	100		20.00				
911	NetworkDefault	500	100	100						
912	NetworkDefault	500	100	100						
920	NetworkDefault	500	100	100		21.00				
921	NetworkDefault	100	100	100						
930	NetworkDefault	100	100	100		0.00				
990	NetworkDefault	100	100	100		0.00				
991	NetworkDefault	100	100	100		0.00				
1000	NetworkDefault	0	20	100		0.00				
1001	NetworkDefault	0	20	100		0.00				
1010	NetworkDefault	500	100	100		0.00	✓	7.00	1000.00	
1011	NetworkDefault	100	100	100					0.00	
1020	NetworkDefault	500	100	100		9.00	✓	7.00	1000.00	
1021	NetworkDefault	500	100	100					0.00	
1022	NetworkDefault	500	100	100					0.00	
1030	NetworkDefault	500	100	100		10.00	✓	8.00	1000.00	
1031	NetworkDefault	500	100	100					0.00	
1040	NetworkDefault	500	100	100		11.00	✓	8.00	1000.00	
1090	NetworkDefault	100	100	100		0.00				
1091	NetworkDefault	100	100	100		0.00				

Modelling - Normal traffic - Advanced

Link	Dispersion type for Normal Traffic	Initial queue (PCU)	Auto cycle time	Cycle time
700	NetworkDefault	0.00	✓	70
701	NetworkDefault	0.00	✓	70
710	NetworkDefault	0.00	✓	70
711	NetworkDefault			
712	NetworkDefault			
720	NetworkDefault	0.00	✓	70
721	NetworkDefault			
730	NetworkDefault	0.00	✓	70
731	NetworkDefault			
790	NetworkDefault	0.00	✓	70
791	NetworkDefault	0.00	✓	70
792	NetworkDefault	0.00	✓	70
800	NetworkDefault	0.00	✓	70
801	NetworkDefault	0.00	✓	70
810	NetworkDefault	0.00	✓	70
811	NetworkDefault			
812	NetworkDefault			
820	NetworkDefault	0.00	✓	70
821	NetworkDefault			
890	NetworkDefault	0.00	✓	70
891	NetworkDefault	0.00	✓	70
900	NetworkDefault	0.00	✓	70
901	NetworkDefault	0.00	✓	70
910	NetworkDefault	0.00	✓	70
911	NetworkDefault			
912	NetworkDefault			
920	NetworkDefault	0.00	✓	70
921	NetworkDefault			
930	NetworkDefault	0.00	✓	70
990	NetworkDefault	0.00	✓	70
991	NetworkDefault	0.00	✓	70
1000	NetworkDefault	0.00	✓	70
1001	NetworkDefault	0.00	✓	70
1010	NetworkDefault	0.00	✓	70
1011	NetworkDefault			
1020	NetworkDefault	0.00	✓	70
1021	NetworkDefault			
1022	NetworkDefault			
1030	NetworkDefault	0.00	✓	70
1031	NetworkDefault			
1040	NetworkDefault	0.00	✓	70
1090	NetworkDefault	0.00	✓	70
1091	NetworkDefault	0.00	✓	70

Flows

Link	Total flow (PCU/hr)	PCU Factor
700	504	1.00
701	540	1.00
710	324	1.00
711	19	1.00
712	321	1.00
720	90	1.00
721	266	1.00
730	406	1.00
731	268	1.00
790	1168	1.00
791	706	1.00
792	266	1.00
800	1238	1.00
801	1305	1.00
810	4	1.00
811	2	1.00
812	401	1.00
820	187	1.00
821	5	1.00
890	950	1.00
891	543	1.00
900	504	1.00
901	535	1.00
910	153	1.00
911	93	1.00
912	5	1.00
920	690	1.00
921	94	1.00
930	616	1.00
990	434	1.00
991	186	1.00
1000	541	1.00
1001	587	1.00
1010	0	1.00
1011	597	1.00
1020	0	1.00
1021	1	1.00
1022	597	1.00
1030	321	1.00
1031	19	1.00
1040	535	1.00
1090	905	1.00
1091	598	1.00

Flows - Advanced

Link	Detectors
(ALL)	

Signals

Link	Controller stream	Phase	Second phase enabled
700	7	C	
701	7	C	
710	7	D	
711			
712			
720	7	D	
721			
730	7	D	
731			
800	8	A	
801	8	A	
810	8	B	
811			
812			
820	8	B	
821			
900	9	A	
901	9	A	
910	9	B	
911			
912			
920	9	B	
921			
930	9	B	
1000	10	A	
1001	10	A	
1010	10	B	
1011			
1020	10	B	
1021			
1022			
1030	10	B	
1031			
1040	10	B	

Entry Sources

Link	Cruise time (seconds)	Cruise speed (kph)
700	18.41	39.10
701	18.41	39.10
800	24.83	29.00
801	24.83	29.00
900	24.91	28.90
901	24.91	28.90
1000	48.00	15.00
1001	48.00	15.00

Sources

Link	Source	Source type	Source link	Destination link	Cruise time (seconds)	Cruise speed (kph)	Total flow (PCU/hr)
710	1	Link	1000	710	12.36	32.00	233
711	1	Link	1031	711	12.36	32.00	19
712	1	Link	1030	712	12.36	32.00	321
720	1	Link	1001	720	12.04	32.00	90
721	1	Link	1040	721	12.04	32.00	266
730	1	Link	1001	730	11.73	32.00	406
731	1	Link	1040	731	11.73	32.00	268
790	1	Link	710	790	11.94	32.00	324
791	1	Link	720	791	9.24	32.00	90
792	1	Link	731	792	9.32	32.00	266
810	1	Link	701	810	9.34	32.00	4
811	1	Link	731	811	9.35	32.00	2
812	1	Link	730	812	9.35	32.00	401
820	1	Link	701	820	9.03	32.00	187
821	1	Link	730	821	9.03	32.00	5
890	1	Link	810	890	22.50	32.00	4
891	1	Link	800	891	22.50	32.00	543
910	1	Link	800	910	18.33	32.00	153
911	1	Link	820	911	18.33	32.00	93
912	1	Link	821	912	18.33	32.00	5
920	1	Link	801	920	17.86	32.00	690
921	1	Link	820	921	17.86	32.00	94
930	1	Link	801	930	17.86	32.00	616
990	1	Link	910	990	22.50	32.00	153
991	1	Link	921	991	22.50	32.00	93
1010	1	Link	900	1010	10.76	32.00	0
1011	1	Link	920	1011	10.76	32.00	597
1020	1	Link	900	1020	10.76	32.00	0
1021	1	Link	921	1021	10.76	32.00	1
1022	1	Link	930	1022	10.76	32.00	597
1030	1	Link	900	1030	10.21	32.00	321
1031	1	Link	930	1031	10.21	32.00	19
1040	1	Link	901	1040	9.56	32.00	535
1090	1	Link	1000	1090	7.12	32.00	308
1091	1	Link	1020	1091	7.10	32.00	0
710	2	Link	1001	710	12.36	32.00	90
790	2	Link	711	790	11.94	32.00	19
791	2	Link	721	791	9.24	32.00	266
890	2	Link	800	890	22.50	32.00	543
990	2	Link	900	990	22.50	32.00	183
991	2	Link	920	991	22.50	32.00	93
1090	2	Link	1010	1090	7.12	32.00	0
1091	2	Link	1021	1091	7.10	32.00	1
790	3	Link	700	790	11.94	32.00	504
791	3	Link	701	791	9.24	32.00	349
890	3	Link	812	890	22.50	32.00	401
990	3	Link	911	990	22.50	32.00	93
1090	3	Link	1011	1090	7.59	30.00	597
1091	3	Link	1022	1091	7.10	32.00	597
790	4	Link	712	790	11.94	32.00	321
890	4	Link	811	890	22.50	32.00	2
990	4	Link	912	990	22.50	32.00	5

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				
From		A	B	C	D
	A	1	853	4	186
	B	1193	19	1085	246
	C	0	854	2	183
	D	308	414	401	5

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	A	(untitled)	701, 700	1090, 1091	#0000FF
	B	(untitled)	801, 800	792, 791, 790	#FF0000
	C	(untitled)	900, 901	891, 890	#00FF00
	D	(untitled)	1000, 1001	990, 991	#FFFF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
1	6		A	B	701, 791	Normal	349
	7		A	B	700, 790	Normal	504
	13		B	C	800, 891	Normal	543
	14		A	C	701, 810, 890	Normal	4
	15		B	C	800, 890	Normal	543
	17		D	B	1000, 710, 790	Normal	233
	18		D	A	1000, 1090	Normal	308
	19		D	B	1001, 710, 790	Normal	90
	20		D	B	1001, 720, 791	Normal	90
	21		D	C	1001, 730, 812, 890	Normal	401
	22		A	D	701, 820, 911, 990	Normal	93
	23		C	A	900, 1020, 1091	Normal	0
	24		B	D	800, 910, 990	Normal	153
	25		C	D	900, 990	Normal	183
	26		D	D	1001, 730, 821, 912, 990	Normal	5
	27		A	D	701, 820, 921, 991	Normal	93
	28		B	D	801, 920, 991	Normal	93
	32		B	B	801, 930, 1031, 711, 790	Normal	19
	34		C	B	900, 1030, 712, 790	Normal	321
	35		C	B	901, 1040, 721, 791	Normal	266
	36		C	C	901, 1040, 731, 811, 890	Normal	2
	37		C	B	901, 1040, 731, 792	Normal	266
	41		C	A	900, 1010, 1090	Normal	0
	42		A	A	701, 820, 921, 1021, 1091	Normal	1
	45		B	A	801, 930, 1022, 1091	Normal	597
	46		B	A	801, 920, 1011, 1090	Normal	597

Link Results

Link Results: Vehicle summary

Time Segment	Link	Major link	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	700		64	40	504	1954	27	23.43	8.74	23.80	9.31	0.00	9.31
	701		64	40	540	2097	27	22.96	9.30	23.58	9.78	0.00	9.78
	710		70	29	324	2088	31	14.24	8.94	68.73	18.18	23.37	41.54
	711	710			19			20.19			1.51	0.91	2.42
	712	710			321			14.61			18.50	7.60	26.11
	720		35	157	90	2231	31	6.88	2.64	20.28	2.45	4.03	6.48
	721	720			266			10.69			11.24	5.16	16.40
	730		64	40	406	2299	31	13.25	9.57	68.38	21.24	29.42	50.66
	731	730			269			11.25			11.91	4.91	16.82
	790		58	55	1168	2010	70	2.13	1.25	6.25	9.83	0.51	10.33
	791		33	171	706	2124	70	1.27	0.25	1.52	3.53	0.00	3.53
	792		13	614	266	2115	70	0.97	0.07	0.44	1.02	0.00	1.02
	800		96	-6	1238	2001	44	38.63	31.61	84.02	37.72	0.00	37.72
	801		96	-6	1305	2110	44	37.40	32.88	82.87	0.00	3.70	3.70
	810		87	3	4	2182	14	49.04	5.38	76.86	0.77	0.38	1016.13
	811	810			2			63.70			0.50	0.17	0.67
	812	810			401			42.20			66.80	18.17	84.97
	820		39	131	187	2295	14	27.40	3.97	44.16	20.20	14.38	34.57
	821	820			5			20.33			0.40	0.14	0.54
	890		50	81	950	1911	70	1.87	0.49	1.37	7.01	0.00	7.01
	891		27	239	543	2042	70	1.20	0.18	0.47	2.57	0.00	2.57
	900		86	5	504	2158	18	44.82	12.12	29.87	17.82	0.00	17.82
	901		86	4	535	2287	18	43.91	12.73	29.60	18.53	0.00	18.53
	910		21	319	153	1995	40	12.48	2.15	10.76	7.52	7.03	14.55
	911	910			93			2.10			0.77	0.50	1.27
	912	910			5			2.18			0.04	0.03	0.07
	920		61	47	690	2187	40	17.23	10.85	51.65	46.86	33.26	80.12
	921	920			94			11.25			4.17	1.24	5.41
	930		48	87	615	2187	40	15.83	7.93	24.29	38.42	5.80	44.22
	990		20	343	434	2133	70	1.06	0.13	0.32	1.81	0.00	1.81
	991		9	931	186	2133	70	0.92	0.05	0.12	0.68	0.00	0.68
	1000		80	12	541	2139	21	35.34	11.62	28.89	15.08	0.00	15.08
	1001		81	12	587	2317	21	34.44	12.46	28.59	15.95	0.00	15.95
	1010		53	70	0	2071	37	0.00	6.07	32.60	0.00	0.00	0.00
	1011	1010			596			13.04			30.67	4.44	35.11
	1020		53	69	0	2071	37	0.00	5.72	63.56	0.00	0.00	0.00
	1021	1020			1			27.76			0.11	0.06	0.17
	1022	1020			596			11.86			27.90	20.86	48.76
	1030		28	223	321	2247	37	2.11	0.85	8.46	2.68	1.32	3.99
	1031	1030			19			8.53			0.64	0.59	1.23
	1040		44	106	535	2253	37	2.71	1.71	15.51	5.71	4.44	10.15
	1090		44	104	904	2051	70	1.57	0.39	3.23	5.59	0.00	5.59
	1091		28	226	597	2164	70	1.15	0.19	1.49	2.71	0.00	2.71

Link Results: Flows and signals

Time Segment	Link	Major link	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))	Effective green (s (per cycle))
08:00-09:00	700		504	504	0		1954	782	64		40	0.00	27	28
	701		540	540	0		2097	839	64		40	0.00	27	28
	710		324	324	0		2088	955	70		29	1.22	31	32
	711	710	19	19	0						29	1.05		
	712	710	321	321	0						29	1.19		
	720		90	90	0		2231	1020	35		157	1.22	31	32
	721	720	266	266	0						157	1.21		
	730		406	406	0		2299	1051	64		40	1.23	31	32
	731	730	269	269	0	✓					40	1.21		
	790		1168	1168	0		2010	2010	58		55	0.37	70	70
	791		706	706	0		2124	2124	33		171	0.50	70	70
	792		266	266	0		2115	2115	13		614	1.11	70	70
	800		1238	1238	0		2001	1286	96	✓	-6	0.00	44	45
	801		1305	1305	0		2110	1356	96	✓	-6	0.00	44	45
	810		4	4	0		2182	468	87		3	1.12	14	15
	811	810	2	2	0						3	1.11		
	812	810	401	401	0						3	1.40		
	820		187	187	0		2295	492	39		131	1.13	14	15
	821	820	5	5	0						131	1.40		
	890		950	950	0		1911	1911	50		81	0.20	70	70
	891		543	543	0	✓	2042	2042	27		239	0.55	70	70
	900		504	504	0		2158	586	86		5	0.00	18	19
	901		535	535	0		2287	621	86		4	0.00	18	19
	910		153	153	0		1995	1169	21		319	0.58	40	41
	911	910	93	93	0						319	1.36		
	912	910	5	5	0						319	1.18		
	920		690	690	0		2187	1281	61		47	0.58	40	41
	921	920	94	94	0						47	1.37		
	930		615	615	0	✓	2187	1281	48		87	0.58	40	41
	990		434	434	0		2133	2133	20		343	0.48	70	70
	991		186	186	0		2133	2133	9		931	0.76	70	70
	1000		541	541	0		2139	672	80		12	0.00	21	22
	1001		587	587	0		2317	728	81		12	0.00	21	22
	1010		0	0	0		2071	1124	53		70	0.00	37	38
	1011	1010	596	596	0						70	0.79		
	1020		0	0	0		2071	1124	53		69	0.00	37	38
	1021	1020	1	1	0						69	1.50		
	1022	1020	596	596	0						69	0.83		
	1030		321	321	0		2247	1220	28		223	1.30	37	38
	1031	1030	19	19	0						223	0.84		
	1040		535	535	0		2253	1223	44		106	1.31	37	38
	1090		904	904	0		2051	2051	44		104	0.57	70	70
	1091		597	597	0	✓	2164	2164	28		226	1.08	70	70

Link Results: Stops and delays

Time Segment	Link	Major link	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	700		18.41	23.43	2.38	0.90	46.57	9.31	85.89	387.55	45.33	9.22	0.00
	701		18.41	22.96	2.55	0.90	48.91	9.78	85.24	415.08	45.22	9.80	0.00
	710		12.36	14.24	0.73	0.55	18.18	18.18	101.23	299.79	27.78	4.67	23.37
	711	710	12.36	20.19	0.07	0.03	1.51	1.51	66.97	11.09	1.63	0.18	0.91
	712	710	12.36	14.61	0.76	0.55	18.50	18.50	33.19	79.00	27.57	1.52	7.60
	720		12.04	6.88	0.10	0.07	2.45	2.45	62.53	53.02	3.47	0.81	4.03
	721	720	12.04	10.69	0.59	0.20	11.24	11.24	27.17	62.17	10.23	1.03	5.16
	730		11.73	13.25	0.96	0.54	21.24	21.24	101.51	385.26	27.18	5.88	29.42
	731	730	11.73	11.25	0.48	0.36	11.91	11.91	25.61	50.81	17.96	0.98	4.91
	790		11.94	2.13	0.00	0.69	9.83	9.83	3.03	0.10	35.32	0.51	0.51
	791		9.24	1.27	0.00	0.25	3.53	3.53	0.00	0.00	0.00	0.00	0.00
	792		9.32	0.97	0.00	0.07	1.02	1.02	0.00	0.00	0.00	0.00	0.00
	800		24.83	38.63	4.03	9.26	188.62	37.72	122.54	1084.01	433.09	17.78	0.00
	801		24.83	37.40	4.24	9.31	192.50	0.00	121.04	1142.01	437.62	18.51	3.70
	810		9.34	49.04	0.02	0.03	0.77	0.77	134.14	3.95	1.41	0.08	0.38
	811	810	9.35	63.70	0.02	0.02	0.50	0.50	118.42	1.67	0.70	0.03	0.17
	812	810	9.35	42.20	1.68	3.02	66.80	66.80	63.46	113.34	141.32	3.63	18.17
	820		9.03	27.40	1.11	0.31	20.20	20.20	107.87	185.90	15.65	2.88	14.38
	821	820	9.03	20.33	0.02	0.01	0.40	0.40	38.12	1.49	0.42	0.03	0.14
	890		22.50	1.87	0.00	0.49	7.01	7.01	0.00	0.00	0.00	0.00	0.00
	891		22.50	1.20	0.00	0.18	2.57	2.57	0.00	0.00	0.00	0.00	0.00
	900		24.91	44.82	3.39	2.88	89.09	17.82	119.45	464.28	137.74	7.01	0.00
	901		24.91	43.91	3.60	2.92	92.66	18.53	118.34	492.99	140.13	7.37	0.00
	910		18.33	12.48	0.45	0.08	7.52	7.52	64.45	94.24	4.25	1.41	7.03
	911	910	18.33	2.10	0.00	0.05	0.77	0.77	7.58	4.46	2.58	0.10	0.50
	912	910	18.33	2.18	0.00	0.00	0.04	0.04	8.29	0.28	0.14	0.01	0.03
	920		17.86	17.23	2.61	0.69	46.86	46.86	67.61	431.14	35.08	6.65	33.26
	921	920	17.86	11.25	0.20	0.09	4.17	4.17	92.90	82.48	4.78	1.24	1.24
	930		17.86	15.83	2.24	0.46	38.42	38.42	66.06	383.01	23.52	5.80	5.80
	990		22.50	1.06	0.00	0.13	1.81	1.81	0.00	0.00	0.00	0.00	0.00
	991		22.50	0.92	0.00	0.05	0.68	0.68	0.00	0.00	0.00	0.00	0.00
	1000		48.00	35.34	3.31	2.00	75.41	15.08	108.07	486.53	98.11	1.83	0.00
	1001		48.00	34.44	3.59	2.02	79.74	15.95	106.98	528.54	99.46	1.97	0.00
	1010		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1011	1010	10.76	13.04	1.60	0.56	30.67	30.67	52.24	282.90	28.64	4.44	4.44
	1020		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1021	1020	10.76	27.76	0.01	0.00	0.11	0.11	89.54	0.85	0.05	0.01	0.06
	1022	1020	10.76	11.86	1.40	0.56	27.90	27.90	49.03	263.72	28.70	4.17	20.86
	1030		10.21	2.11	0.01	0.18	2.68	2.68	5.74	9.13	9.32	0.26	1.32
	1031	1030	10.21	8.53	0.03	0.01	0.64	0.64	43.71	7.75	0.55	0.12	0.59
	1040		9.56	2.71	0.01	0.39	5.71	5.71	11.63	23.04	39.21	0.89	4.44
	1090		7.43	1.57	0.00	0.39	5.59	5.59	0.00	0.00	0.00	0.00	0.00
	1091		7.10	1.15	0.00	0.19	2.71	2.71	0.00	0.00	0.00	0.00	0.00

Link Results: Queues and blocking

Time Segment	Link	Major link	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	700		0.00	8.74	36.74	23.80	0.00	0.00	0.00	0.90	6.78	0.00	0.00	0.00	
	701		0.00	9.30	39.43	23.58	0.00	0.00	0.00	0.90	7.20	0.00	0.00	0.00	
	710		0.00	8.94	13.00	68.73	0.00	0.00	0.00	1.13	5.98	0.00	0.00	0.00	
	711	710							0.00						
	712	710							0.00						
	720		0.00	2.64	13.00	20.28	0.00	0.00	0.00	0.27	2.35	2.00	0.00	2.00	
	721	720							0.00						
	730		0.00	9.57	14.00	68.38	0.00	0.00	0.00	0.89	6.26	0.00	0.00	0.00	
	731	730							0.00						
	790		0.00	1.25	20.06	6.25	0.00	0.00	0.00			0.00	0.00	0.00	
	791		0.00	0.25	16.41	1.52	0.00	0.00	0.00			0.00	0.00	0.00	
	792		0.00	0.07	16.48	0.44	0.00	0.00	0.00			34.00	0.00	34.00	
	800		0.00	31.61	37.62	84.02	0.00	0.00	0.00	9.26	17.85	0.00	0.00	0.00	
	801		0.00	32.88	39.67	82.87	0.00	0.00	0.00	9.31	18.38	0.00	0.00	0.00	
	810		0.00	5.38	7.00	76.86	0.00	1.01	1014.97	3.08	5.38	0.00	0.00	0.00	
	811	810							0.00						
	812	810							0.00						
	820		0.00	3.97	9.00	44.16	0.00	0.00	0.00	0.32	3.93	9.00	0.00	9.00	
	821	820							0.00						
	890		0.00	0.49	35.93	1.37	0.00	0.00	0.00			0.00	0.00	0.00	
	891		0.00	0.18	38.39	0.47	0.00	0.00	0.00			9.00	0.00	9.00	
	900		0.00	12.12	40.57	29.87	0.00	0.00	0.00	2.88	10.02	0.00	0.00	0.00	
	901		0.00	12.73	43.00	29.60	0.00	0.00	0.00	2.92	10.50	0.00	0.00	0.00	
	910		0.00	2.15	20.00	10.76	0.00	0.00	0.00	0.14	1.94	0.00	0.00	0.00	
	911	910							0.00						
	912	910							0.00						
	920		0.00	10.85	21.00	51.65	0.00	0.00	0.00	0.79	8.72	0.00	0.00	0.00	
	921	920							0.00						
	930		0.00	7.93	32.64	24.29	0.00	0.00	0.00	0.46	7.54	7.00	0.00	7.00	
	990		0.00	0.13	40.10	0.32	0.00	0.00	0.00			0.00	0.00	0.00	
	991		0.00	0.05	40.10	0.12	0.00	0.00	0.00			24.00	0.00	24.00	
	1000		0.00	11.62	40.22	28.89	0.00	0.00	0.00	2.00	9.21	0.00	0.00	0.00	
	1001		0.00	12.46	43.56	28.59	0.00	0.00	0.00	2.02	9.85	0.00	0.00	0.00	
	1010		0.00	6.07	18.63	32.60	0.00	0.00	0.00	0.56	5.95	13.00	0.00	13.00	
	1011	1010							0.00						
	1020		0.00	5.72	9.00	63.56	0.00	0.00	0.00	0.57	5.60	14.00	0.00	14.00	
	1021	1020							0.00						
	1022	1020							0.00						
	1030		0.00	0.85	10.00	8.46	0.00	0.00	0.00	0.19	0.62	4.00	0.00	4.00	
	1031	1030							0.00						
	1040		0.00	1.71	11.00	15.51	0.00	0.00	0.00	0.39	0.86	12.00	0.00	12.00	
	1090		0.00	0.39	12.20	3.23	0.00	0.00	0.00			6.00	0.00	6.00	
	1091		0.00	0.19	12.83	1.49	0.00	0.00	0.00			31.00	0.00	31.00	

Link Results: Journey times

Time Segment	Link	Major link	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	700		100.80	5.86	17.21	41.84
	701		108.00	6.21	17.40	41.38
	710		35.56	2.39	14.87	26.60
	711	710	2.09	0.17	12.15	32.56
	712	710	35.29	2.41	14.67	26.97
	720		9.67	0.47	20.37	18.92
	721	720	28.52	1.68	16.95	22.73
	730		42.38	2.82	15.03	24.99
	731	730	28.01	1.71	16.34	22.98
	790		123.95	4.57	27.15	14.07
	791		58.01	2.06	28.14	10.51
	792		22.08	0.76	28.97	10.30
	800		247.60	21.82	11.35	63.45
	801		261.00	22.56	11.57	62.22
	810		0.33	0.06	5.12	58.38
	811	810	0.17	0.04	4.10	73.05
	812	810	33.37	5.75	5.81	51.55
	820		14.99	1.89	7.93	36.43
	821	820	0.40	0.04	9.84	29.36
	890		189.98	6.43	29.54	24.37
	891		108.52	3.57	30.38	23.70
	900		100.80	9.76	10.33	69.73
	901		107.00	10.23	10.46	68.82
	910		24.89	1.31	19.04	30.81
	911	910	15.14	0.53	28.71	20.42
	912	910	0.82	0.03	28.59	20.51
	920		109.48	6.72	16.29	35.09
	921	920	14.91	0.76	19.63	29.11
	930		97.70	5.76	16.96	33.69
	990		86.72	2.84	30.56	23.56
	991		37.22	1.21	30.74	23.42
	1000		108.20	12.52	8.64	83.34
	1001		117.40	13.44	8.73	82.44
	1010		0.00	0.00	0.00	0.00
	1011	1010	57.06	3.94	14.47	23.80
	1020		0.00	0.00	0.00	0.00
	1021	1020	0.10	0.01	8.94	38.53
	1022	1020	57.06	3.75	15.23	22.62
	1030		29.14	1.10	26.51	12.32
	1031	1030	1.72	0.10	17.43	18.73
	1040		45.48	1.82	24.94	12.27
	1090		57.21	2.26	25.31	9.00
	1091		37.68	1.37	27.54	8.24

Link Results: Advanced

Time Segment	Link	Major link	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Mean Max Queue EoTS (PCU)	Max End of Green Queue EoTS (PCU)	Max End of Red Queue EoTS (PCU)	PCU Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	700		0.00	0.00	✓	8.74	0.90	6.78	1.00	0.00	55.79	9.31
	701		0.00	0.00	✓	9.30	0.90	7.20	1.00	0.00	58.72	9.78
	710		0.00	0.00	✓	8.94	1.14	5.98	1.00	0.00	22.85	41.54
	711	710	0.00	0.00					1.00	0.00	1.69	2.42
	712	710	0.00	0.00					1.00	0.00	20.02	26.11
	720		0.00	0.00	✓	2.64	0.27	2.35	1.00	0.00	3.26	6.48
	721	720	0.00	0.00					1.00	0.00	12.27	16.40
	730		0.00	0.00	✓	9.58	0.89	6.26	1.00	0.00	27.12	50.66
	731	730	0.00	0.00					1.00	0.00	12.89	16.82
	790		0.00	0.00	✓	1.25			1.00	0.00	10.33	10.33
	791		0.00	0.00	✓	0.25			1.00	0.00	3.53	3.53
	792		0.00	0.00	✓	0.07			1.00	0.00	1.02	1.02
	800		0.00	0.00	✓	32.87	10.51	19.11	1.00	0.00	206.40	37.72
	801		0.00	0.00	✓	34.09	10.53	19.59	1.00	0.00	211.00	3.70
	810		0.00	0.00	✓	5.52	3.22	5.52	1.00	1014.97	0.85	1016.13
	811	810	0.00	0.00					1.00	0.00	0.54	0.67
	812	810	0.00	0.00					1.00	0.00	70.43	84.97
	820		0.00	0.00	✓	3.97	0.32	3.93	1.00	0.00	23.07	34.57
	821	820	0.00	0.00					1.00	0.00	0.43	0.54
	890		0.00	0.00	✓	0.49			1.00	0.00	7.01	7.01
	891		0.00	0.00	✓	0.18			1.00	0.00	2.57	2.57
	900		0.00	0.00	✓	12.21	2.97	10.11	1.00	0.00	96.10	17.82
	901		0.00	0.00	✓	12.82	3.01	10.59	1.00	0.00	100.03	18.53
	910		0.00	0.00	✓	2.15	0.14	1.94	1.00	0.00	8.93	14.55
	911	910	0.00	0.00					1.00	0.00	0.87	1.27
	912	910	0.00	0.00					1.00	0.00	0.05	0.07
	920		0.00	0.00	✓	10.85	0.79	8.72	1.00	0.00	53.52	80.12
	921	920	0.00	0.00					1.00	0.00	5.41	5.41
	930		0.00	0.00	✓	7.93	0.46	7.54	1.00	0.00	44.22	44.22
	990		0.00	0.00	✓	0.13			1.00	0.00	1.81	1.81
	991		0.00	0.00	✓	0.05			1.00	0.00	0.68	0.68
	1000		0.00	0.00	✓	11.65	2.03	9.24	1.00	0.00	77.25	15.08
	1001		0.00	0.00	✓	12.48	2.05	9.88	1.00	0.00	81.71	15.95
	1010		0.00	0.00	✓	6.07	0.56	5.95	1.00	0.00	0.00	0.00
	1011	1010	0.00	0.00					1.00	0.00	35.11	35.11
	1020		0.00	0.00	✓	5.72	0.57	5.60	1.00	0.00	0.00	0.00
	1021	1020	0.00	0.00					1.00	0.00	0.12	0.17
	1022	1020	0.00	0.00					1.00	0.00	32.07	48.76
	1030		0.00	0.00	✓	0.85	0.19	0.62	1.00	0.00	2.94	3.99
	1031	1030	0.00	0.00					1.00	0.00	0.76	1.23
	1040		0.00	0.00	✓	1.71	0.39	0.86	1.00	0.00	6.60	10.15
	1090		0.00	0.00	✓	0.39			1.00	0.00	5.59	5.59
	1091		0.00	0.00	✓	0.19			1.00	0.00	2.71	2.71

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	Item with worst over PR
1	29/05/2019 18:33:23	29/05/2019 18:33:24	08:00	70	1705.54	83.63	96.24	800	2	5	800	790	80

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	96	-6	17521	1673	17.18	498.17	192.40	1705.54

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	17521	17521	0	✓	96	✓	-6	1673	1707

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	18.31	17.18	42.21	41.41	1187.48	498.17	55.68	7831.59	1924.16	120.82	192.40

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	84.02	1014.97	221.00	0.00	221.00

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
08:00-09:00	2556.46	172.74	14.80

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	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	✓	1.00	1014.97	0.00	1308.29	1705.54

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

	To				
From		A	B	C	D
	A	153.7	54.3	124.1	126.1
	B	128.4	161.3	87.5	118.9
	C	0.0	117.6	201.5	93.3
	D	92.3	121.2	183.3	180.9

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)
6	A	B	349	51.89	349	51.89
7	A	B	504	55.92	504	55.92
13	B	C	543	87.15	543	87.15
14	A	C	4	124.13	4	124.13
15	B	C	543	87.83	543	87.83
17	D	B	233	124.02	233	124.02
18	D	A	308	92.34	308	92.34
19	D	B	90	123.12	90	123.12
20	D	B	90	111.87	90	111.87
21	D	C	401	183.35	401	183.35
22	A	D	93	121.79	93	121.79
23	C	A	0	77.97	0	0.00
24	B	D	153	117.82	153	117.82
25	C	D	183	93.29	183	93.29
26	D	D	5	180.85	5	180.85
27	A	D	93	130.34	93	130.34
28	B	D	93	120.74	93	120.74
32	B	B	19	161.28	19	161.28
34	C	B	321	123.10	321	123.10
35	C	B	266	114.34	266	114.34
36	C	C	2	201.50	2	201.50
37	C	B	266	114.37	266	114.37
41	C	A	0	78.73	0	0.00
42	A	A	1	153.69	1	153.69
45	B	A	597	126.78	597	126.78
46	B	A	597	130.11	597	130.11

Final Prediction Table

Link Results

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QUEUES	
Link	Name	Major link	Traffic node	Controller stream	Phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (PCU)	Max end of red queue (PCU)
700			7	7	C	504	1954	27	0.00	64	40	41.84	23.43	85.89	8.74	6.78
701			7	7	C	540	2097	27	0.00	64	40	41.38	22.96	85.24	9.30	7.20
710		(710)	7	7	D	324	2088	31	0.00	70	29	26.60	14.24	101.23	8.94	5.98
711		710				19						32.56	20.19	66.97		
712		710				321						26.97	14.61	33.19		
720		(720)	7	7	D	90	2231	31	2.00	35	157	18.92	6.88	62.53	2.64	2.35
721		720				266						22.73	10.69	27.17		
730		(730)	7	7	D	406	2299	31	0.00	64	40	24.99	13.25	101.51	9.57	6.26
731		730				269						22.98	11.25	25.61		
790			7			1168	2010	70	0.00	58	55	14.07	2.13	3.03	1.25	
791			7			706	2124	70	0.00	33	171	10.51	1.27	0.00	0.25	
792			7			266	2115	70	34.00	13	614	10.30	0.97	0.00	0.07	
800			8	8	A	1238	2001	44	0.00	96	-6	63.45	38.63	122.54	31.61	17.85
801			8	8	A	1305	2110	44	0.00	96	-6	62.22	37.40	121.04	32.88	18.38
810		(810)	8	8	B	4	2182	14	0.00	87	3	58.38	49.04	134.14	5.38	5.38
811		810				2						73.05	63.70	118.42		
812		810				401						51.55	42.20	63.46		
820		(820)	8	8	B	187	2295	14	9.00	39	131	36.43	27.40	107.87	3.97	3.93
821		820				5						29.36	20.33	38.12		
890			8			950	1911	70	0.00	50	81	24.37	1.87	0.00	0.49	
891			8			543	2042	70	9.00	27	239	23.70	1.20	0.00	0.18	
900			9	9	A	504	2158	18	0.00	86	5	69.73	44.82	119.45	12.12	10.02
901			9	9	A	535	2287	18	0.00	86	4	68.82	43.91	118.34	12.73	10.50
910		(910)	9	9	B	153	1995	40	0.00	21	319	30.81	12.48	64.45	2.15	1.94
911		910				93						20.42	2.10	7.58		
912		910				5						20.51	2.18	8.29		
920		(920)	9	9	B	690	2187	40	0.00	61	47	35.09	17.23	67.61	10.85	8.72
921	(untitled)	920				94						29.11	11.25	92.90		
930	(untitled)		9	9	B	615	2187	40	7.00	48	87	33.69	15.83	66.06	7.93	7.54
990			9			434	2133	70	0.00	20	343	23.56	1.06	0.00	0.13	
991	(untitled)		9			186	2133	70	24.00	9	931	23.42	0.92	0.00	0.05	
1000			10	10	A	541	2139	21	0.00	80	12	83.34	35.34	108.07	11.62	9.21
1001			10	10	A	587	2317	21	0.00	81	12	82.44	34.44	106.98	12.46	9.85
1010	(untitled)	(1010)	10	10	B	0	2071	37	13.00	53	70	0.00	0.00	0.00	6.07	5.95
1011	(untitled)	1010				596						23.80	13.04	52.24		
1020		(1020)	10	10	B	0	2071	37	14.00	53	69	0.00	0.00	0.00	5.72	5.60
1021		1020				1						38.53	27.76	89.54		
1022		1020				596						22.62	11.86	49.03		
1030		(1030)	10	10	B	321	2247	37	4.00	28	223	12.32	2.11	5.74	0.85	0.62
1031		1030				19						18.73	8.53	43.71		
1040			10	10	B	535	2253	37	12.00	44	106	12.27	2.71	11.63	1.71	0.86
1090			10			904	2051	70	6.00	44	104	9.00	1.57	0.00	0.39	
1091			10			597	2164	70	31.00	28	226	8.24	1.15	0.00	0.19	

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	2556.46	172.74	14.80	42.21	41.41	498.17	192.40	1014.97	1705.54
Bus									
Tram									
Pedestrians									
TOTAL	2556.46	172.74	14.80	42.21	41.41	498.17	192.40	1014.97	1705.54

- | < = 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 - Phase 1B - PM 2025 inc. 1250 D D2 - 2025 inc. 1250 D 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	Item with worst over PR
2	29/05/2019 18:33:24	29/05/2019 18:33:25	17:00	70	669.23	69.95	84.92	800	0	0	800	790	80

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
Phase 1B - PM 2025 inc. 1250 D		D2	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2025 inc. 1250 D 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)
70		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	PCU Length (m)	Calculate results for Path Segments	Generate PDM Profile Data
1	90	100	✓	✓		Simplified (TRANSYT 12)	5.75		✓

Normal Traffic parameters

Dispersion type	Dispersion coefficient	Travel time coefficient
Default	35	80

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion type	Acceleration (ms ⁻²)	Stationary time coefficient	Cruise time coefficient
Bus	1.00	Default	0.94	30	85

Tram parameters

Name	PCU Factor	Dispersion type	Acceleration (ms ⁻²)	Stationary time coefficient	Cruise time coefficient
Tram	1.00	Default	0.94	100	100

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

Optimisation type	OUTProfile accuracy	SASart temperature	SACooling factor	Random seed	Use enhanced optimisation	Auto optimisation order	Optimisation order	Master controller	Offsets relative to master controller	Master controller offset after each run
Simulated Annealing (Slow)	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05	300.00	100.00	1	✓	✓	7, 8, 9, 10			Do nothing

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
(ALL)		

Links

Links

Link	Name	Description	Traffic node	Length (m)	Has Saturation Flow	Use RR67	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Is minor shared	Major link	Allow Nearside Turn On Red
700			7	200.00	✓		1954	✓		Normal			
701			7	200.00	✓		2097	✓		Normal			
710			7	109.89	✓		2088	✓		Normal			
711				109.89						Normal	✓	710	
712				109.89						Normal	✓	710	
720			7	107.01	✓		2231	✓		Normal			
721				107.01						Normal	✓	720	
730			7	104.31	✓		2299	✓		Normal			
731				104.31						Normal	✓	730	
790			7	106.14	✓		2010			Normal			
791			7	82.17	✓		2124			Normal			
792			7	82.87	✓		2115			Normal			
800			8	200.00	✓		2001	✓		Normal			
801			8	200.00	✓		2110	✓		Normal			
810			8	83.00	✓		2182	✓		Normal			
811				83.14						Normal	✓	810	
812				83.14						Normal	✓	810	
820			8	80.23	✓		2295	✓		Normal			
821				80.23						Normal	✓	820	
890			8	200.00	✓		1911			Normal			
891			8	200.00	✓		2042			Normal			
900			9	200.00	✓		2158	✓		Normal			
901			9	200.00	✓		2287	✓		Normal			
910			9	162.90	✓		1995	✓		Normal			
911				162.90						Normal	✓	910	
912				162.90						Normal	✓	910	
920			9	158.76	✓		2187	✓		Normal			
921	(untitled)			158.76						Normal	✓	920	
930	(untitled)		9	158.76	✓		2187	✓		Normal			
990			9	200.00	✓		2133			Normal			
991	(untitled)		9	200.00	✓		2133			Normal			
1000			10	200.00	✓		2139	✓		Normal			
1001			10	200.00	✓		2317	✓		Normal			
1010	(untitled)		10	95.68	✓		2071	✓		Normal			
1011	(untitled)			95.68						Normal	✓	1010	
1020			10	95.68	✓		2071	✓		Normal			
1021				95.68						Normal	✓	1020	
1022				95.68						Normal	✓	1020	
1030			10	90.73	✓		2247	✓		Normal			
1031				90.73						Normal	✓	1030	
1040			10	85.01	✓		2253	✓		Normal			
1090			10	63.28	✓		2051			Normal			
1091			10	63.07	✓		2164			Normal			

Modelling

Link	Traffic model	Stop weighting (%)	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Queue limit (PCU)	Excess queue penalty (£)	Has degree of saturation limit
700	NetworkDefault	0	20	100		0.00				
701	NetworkDefault	0	20	100		0.00				
710	NetworkDefault	500	100	100		13.00	✓	10.00	1000.00	
711	NetworkDefault	500	100	100					0.00	
712	NetworkDefault	500	100	100					0.00	
720	NetworkDefault	500	100	100		13.00	✓	10.00	1000.00	
721	NetworkDefault	500	100	100					0.00	
730	NetworkDefault	500	100	100		14.00	✓	11.00	1000.00	
731	NetworkDefault	500	100	100					0.00	
790	NetworkDefault	100	100	100		0.00				
791	NetworkDefault	100	100	100		0.00				
792	NetworkDefault	100	100	100		0.00				
800	NetworkDefault	0	20	100		0.00				
801	NetworkDefault	20	0	100		0.00				
810	NetworkDefault	500	100	100		7.00	✓	4.00	1000.00	
811	NetworkDefault	500	100	100					0.00	
812	NetworkDefault	500	100	100					0.00	
820	NetworkDefault	500	100	100		9.00	✓	5.00	1000.00	
821	NetworkDefault	500	100	100					0.00	
890	NetworkDefault	100	100	100		0.00				
891	NetworkDefault	100	100	100		0.00				
900	NetworkDefault	0	20	100		0.00				
901	NetworkDefault	0	20	100		0.00				
910	NetworkDefault	500	100	100		20.00				
911	NetworkDefault	500	100	100						
912	NetworkDefault	500	100	100						
920	NetworkDefault	500	100	100		21.00				
921	NetworkDefault	100	100	100						
930	NetworkDefault	100	100	100		0.00				
990	NetworkDefault	100	100	100		0.00				
991	NetworkDefault	100	100	100		0.00				
1000	NetworkDefault	0	20	100		0.00				
1001	NetworkDefault	0	20	100		0.00				
1010	NetworkDefault	500	100	100		0.00	✓	7.00	1000.00	
1011	NetworkDefault	100	100	100					0.00	
1020	NetworkDefault	500	100	100		9.00	✓	7.00	1000.00	
1021	NetworkDefault	500	100	100					0.00	
1022	NetworkDefault	500	100	100					0.00	
1030	NetworkDefault	500	100	100		10.00	✓	8.00	1000.00	
1031	NetworkDefault	500	100	100					0.00	
1040	NetworkDefault	500	100	100		11.00	✓	8.00	1000.00	
1090	NetworkDefault	100	100	100		0.00				
1091	NetworkDefault	100	100	100		0.00				

Modelling - Normal traffic - Advanced

Link	Dispersion type for Normal Traffic	Initial queue (PCU)	Auto cycle time	Cycle time
700	NetworkDefault	0.00	✓	70
701	NetworkDefault	0.00	✓	70
710	NetworkDefault	0.00	✓	70
711	NetworkDefault			
712	NetworkDefault			
720	NetworkDefault	0.00	✓	70
721	NetworkDefault			
730	NetworkDefault	0.00	✓	70
731	NetworkDefault			
790	NetworkDefault	0.00	✓	70
791	NetworkDefault	0.00	✓	70
792	NetworkDefault	0.00	✓	70
800	NetworkDefault	0.00	✓	70
801	NetworkDefault	0.00	✓	70
810	NetworkDefault	0.00	✓	70
811	NetworkDefault			
812	NetworkDefault			
820	NetworkDefault	0.00	✓	70
821	NetworkDefault			
890	NetworkDefault	0.00	✓	70
891	NetworkDefault	0.00	✓	70
900	NetworkDefault	0.00	✓	70
901	NetworkDefault	0.00	✓	70
910	NetworkDefault	0.00	✓	70
911	NetworkDefault			
912	NetworkDefault			
920	NetworkDefault	0.00	✓	70
921	NetworkDefault			
930	NetworkDefault	0.00	✓	70
990	NetworkDefault	0.00	✓	70
991	NetworkDefault	0.00	✓	70
1000	NetworkDefault	0.00	✓	70
1001	NetworkDefault	0.00	✓	70
1010	NetworkDefault	0.00	✓	70
1011	NetworkDefault			
1020	NetworkDefault	0.00	✓	70
1021	NetworkDefault			
1022	NetworkDefault			
1030	NetworkDefault	0.00	✓	70
1031	NetworkDefault			
1040	NetworkDefault	0.00	✓	70
1090	NetworkDefault	0.00	✓	70
1091	NetworkDefault	0.00	✓	70

Flows

Link	Total flow (PCU/hr)	PCU Factor
700	618	1.00
701	663	1.00
710	261	1.00
711	21	1.00
712	386	1.00
720	95	1.00
721	424	1.00
730	214	1.00
731	425	1.00
790	1286	1.00
791	939	1.00
792	424	1.00
800	971	1.00
801	1023	1.00
810	2	1.00
811	1	1.00
812	212	1.00
820	241	1.00
821	2	1.00
890	586	1.00
891	371	1.00
900	801	1.00
901	849	1.00
910	230	1.00
911	119	1.00
912	2	1.00
920	541	1.00
921	122	1.00
930	482	1.00
990	766	1.00
991	199	1.00
1000	373	1.00
1001	404	1.00
1010	0	1.00
1011	461	1.00
1020	0	1.00
1021	3	1.00
1022	461	1.00
1030	386	1.00
1031	21	1.00
1040	849	1.00
1090	668	1.00
1091	464	1.00

Flows - Advanced

Link	Detectors
(ALL)	

Signals

Link	Controller stream	Phase	Second phase enabled
700	7	C	
701	7	C	
710	7	D	
711			
712			
720	7	D	
721			
730	7	D	
731			
800	8	A	
801	8	A	
810	8	B	
811			
812			
820	8	B	
821			
900	9	A	
901	9	A	
910	9	B	
911			
912			
920	9	B	
921			
930	9	B	
1000	10	A	
1001	10	A	
1010	10	B	
1011			
1020	10	B	
1021			
1022			
1030	10	B	
1031			
1040	10	B	

Entry Sources

Link	Cruise time (seconds)	Cruise speed (kph)
700	18.41	39.10
701	18.41	39.10
800	24.83	29.00
801	24.83	29.00
900	24.91	28.90
901	24.91	28.90
1000	48.00	15.00
1001	48.00	15.00

Sources

Link	Source	Source type	Source link	Destination link	Cruise time (seconds)	Cruise speed (kph)	Total flow (PCU/hr)
710	1	Link	1000	710	12.36	32.00	166
711	1	Link	1031	711	12.36	32.00	21
712	1	Link	1030	712	12.36	32.00	386
720	1	Link	1001	720	12.04	32.00	95
721	1	Link	1040	721	12.04	32.00	424
730	1	Link	1001	730	11.73	32.00	214
731	1	Link	1040	731	11.73	32.00	425
790	1	Link	710	790	11.94	32.00	261
791	1	Link	720	791	9.24	32.00	95
792	1	Link	731	792	9.32	32.00	424
810	1	Link	701	810	9.34	32.00	2
811	1	Link	731	811	9.35	32.00	1
812	1	Link	730	812	9.35	32.00	212
820	1	Link	701	820	9.03	32.00	241
821	1	Link	730	821	9.03	32.00	2
890	1	Link	810	890	22.50	32.00	2
891	1	Link	800	891	22.50	32.00	371
910	1	Link	800	910	18.33	32.00	230
911	1	Link	820	911	18.33	32.00	119
912	1	Link	821	912	18.33	32.00	2
920	1	Link	801	920	17.86	32.00	541
921	1	Link	820	921	17.86	32.00	122
930	1	Link	801	930	17.86	32.00	482
990	1	Link	910	990	22.50	32.00	230
991	1	Link	921	991	22.50	32.00	119
1010	1	Link	900	1010	10.76	32.00	0
1011	1	Link	920	1011	10.76	32.00	461
1020	1	Link	900	1020	10.76	32.00	0
1021	1	Link	921	1021	10.76	32.00	3
1022	1	Link	930	1022	10.76	32.00	461
1030	1	Link	900	1030	10.21	32.00	386
1031	1	Link	930	1031	10.21	32.00	21
1040	1	Link	901	1040	9.56	32.00	849
1090	1	Link	1000	1090	7.12	32.00	207
1091	1	Link	1020	1091	7.10	32.00	0
710	2	Link	1001	710	12.36	32.00	95
790	2	Link	711	790	11.94	32.00	21
791	2	Link	721	791	9.24	32.00	424
890	2	Link	800	890	22.50	32.00	371
990	2	Link	900	990	22.50	32.00	415
991	2	Link	920	991	22.50	32.00	80
1090	2	Link	1010	1090	7.12	32.00	0
1091	2	Link	1021	1091	7.10	32.00	3
790	3	Link	700	790	11.94	32.00	618
791	3	Link	701	791	9.24	32.00	420
890	3	Link	812	890	22.50	32.00	212
990	3	Link	911	990	22.50	32.00	119
1090	3	Link	1011	1090	7.59	30.00	461
1091	3	Link	1022	1091	7.10	32.00	461
790	4	Link	712	790	11.94	32.00	386
890	4	Link	811	890	22.50	32.00	1
990	4	Link	912	990	22.50	32.00	2

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				
		A	B	C	D
From	A	3	1038	2	238
	B	922	21	741	310
	C	0	1234	1	415
	D	207	356	212	2

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	A	(untitled)	701, 700	1090, 1091	#0000FF
	B	(untitled)	801, 800	792, 791, 790	#FF0000
	C	(untitled)	900, 901	891, 890	#00FF00
	D	(untitled)	1000, 1001	990, 991	#FFFF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
1	6		A	B	701, 791	Normal	420
	7		A	B	700, 790	Normal	618
	13		B	C	800, 891	Normal	371
	14		A	C	701, 810, 890	Normal	2
	15		B	C	800, 890	Normal	371
	17		D	B	1000, 710, 790	Normal	166
	18		D	A	1000, 1090	Normal	207
	19		D	B	1001, 710, 790	Normal	95
	20		D	B	1001, 720, 791	Normal	95
	21		D	C	1001, 730, 812, 890	Normal	212
	22		A	D	701, 820, 911, 990	Normal	119
	23		C	A	900, 1020, 1091	Normal	0
	24		B	D	800, 910, 990	Normal	230
	25		C	D	900, 990	Normal	415
	26		D	D	1001, 730, 821, 912, 990	Normal	2
	27		A	D	701, 820, 921, 991	Normal	119
	28		B	D	801, 920, 991	Normal	80
	32		B	B	801, 930, 1031, 711, 790	Normal	21
	34		C	B	900, 1030, 712, 790	Normal	386
	35		C	B	901, 1040, 721, 791	Normal	424
	36		C	C	901, 1040, 731, 811, 890	Normal	1
	37		C	B	901, 1040, 731, 792	Normal	424
	41		C	A	900, 1010, 1090	Normal	0
	42		A	A	701, 820, 921, 1021, 1091	Normal	3
	45		B	A	801, 930, 1022, 1091	Normal	461
	46		B	A	801, 920, 1011, 1090	Normal	461

Link Results

Link Results: Vehicle summary

Time Segment	Link	Major link	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (PCU)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	700		82	10	618	1954	26	32.17	12.85	34.97	15.68	0.00	15.68
	701		82	10	663	2097	26	31.29	13.62	34.56	16.37	0.00	16.37
	710		68	33	261	2088	32	6.73	9.92	76.34	6.93	7.04	13.97
	711	710			21			22.85			1.89	0.98	2.87
	712	710			386			16.65			25.35	24.46	49.81
	720		49	82	95	2231	32	4.11	7.97	61.32	1.54	1.46	3.00
	721	720			424			15.46			25.85	26.72	52.57
	730		59	53	214	2299	32	5.14	9.33	66.67	4.34	5.39	9.73
	731	730			425			16.03			26.87	26.68	53.54
	790		64	41	1286	2010	70	2.48	3.68	18.36	12.60	0.68	13.27
	791		44	104	939	2124	70	1.52	2.20	13.44	5.64	0.31	5.95
	792		20	349	424	2115	70	1.07	1.93	11.71	1.79	0.11	1.91
	800		85	6	971	2001	39	22.61	18.37	48.84	17.32	0.00	17.32
	801		85	6	1023	2110	39	22.05	19.20	48.40	0.00	2.20	2.20
	810		34	161	2	2182	19	39.97	3.67	52.36	0.32	0.15	0.47
	811	810			1			13.20			0.05	0.06	0.12
	812	810			212			7.72			6.46	11.20	17.65
	820		37	143	241	2295	19	43.20	5.01	55.71	41.06	18.24	60.16
	821	820			2			11.58			0.09	0.13	0.22
	890		31	194	586	1911	70	1.36	0.22	0.61	3.14	0.00	3.14
	891		18	396	371	2042	70	1.08	0.11	0.29	1.57	0.00	1.57
	900		84	7	801	2158	30	28.55	16.08	39.63	18.04	0.00	18.04
	901		84	7	849	2287	30	27.94	16.90	39.30	18.71	0.00	18.71
	910		42	112	230	1995	28	12.88	4.47	22.34	11.66	6.79	18.46
	911	910			119			26.02			12.21	8.88	21.10
	912	910			2			22.97			0.18	0.15	0.33
	920		73	23	541	2187	28	16.74	9.57	45.56	35.74	23.06	58.80
	921	920			122			32.33			15.56	1.91	17.47
	930		53	69	482	2187	28	12.47	3.81	11.67	23.71	2.54	26.25
	990		36	151	766	2133	70	1.32	0.28	0.70	3.97	0.00	3.97
	991		9	863	199	2133	70	0.93	0.05	0.13	0.73	0.00	0.73
	1000		81	11	373	2139	14	46.29	8.92	22.18	13.62	0.00	13.62
	1001		81	11	404	2317	14	44.80	9.50	21.80	14.28	0.00	14.28
	1010		35	160	0	2071	44	0.00	6.72	36.08	0.00	0.00	0.00
	1011	1010			461			5.44			9.88	4.13	14.01
	1020		35	158	0	2071	44	0.00	6.84	75.98	0.00	0.00	0.00
	1021	1020			3			9.38			0.11	0.21	0.32
	1022	1020			461			6.64			12.06	22.49	34.55
	1030		28	219	386	2247	44	6.51	2.10	20.98	9.91	6.86	16.77
	1031	1030			21			5.62			0.47	0.76	1.22
	1040		59	54	849	2253	44	8.12	7.03	63.94	27.20	16.49	43.69
	1090		33	176	668	2051	70	1.30	0.24	1.98	3.43	0.00	3.43
	1091		21	320	464	2164	70	1.06	0.14	1.06	1.94	0.00	1.94

Link Results: Flows and signals

Time Segment	Link	Major link	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))	Effective green (s (per cycle))
17:00-18:00	700		618	618	0		1954	754	82		10	0.00	26	27
	701		663	663	0		2097	809	82		10	0.00	26	27
	710		261	261	0		2088	984	68		33	1.35	32	33
	711	710	21	21	0						33	1.29		
	712	710	386	386	0						33	0.89		
	720		95	95	0		2231	1052	49		82	1.36	32	33
	721	720	424	424	0						82	0.86		
	730		214	214	0		2299	1084	59		53	1.37	32	33
	731	730	425	425	0						53	0.87		
	790		1286	1286	0		2010	2010	64		41	0.41	70	70
	791		939	939	0		2124	2124	44		104	0.53	70	70
	792		424	424	0		2115	2115	20		349	1.18	70	70
	800		971	971	0		2001	1143	85		6	0.00	39	40
	801		1023	1023	0		2110	1206	85		6	0.00	39	40
	810		2	2	0		2182	623	34		161	1.14	19	20
	811	810	1	1	0						161	1.18		
	812	810	212	212	0						161	1.39		
	820		241	241	0		2295	656	37		143	1.14	19	20
	821	820	2	2	0						143	1.39		
	890		586	586	0		1911	1911	31		194	0.35	70	70
	891		371	371	0	✓	2042	2042	18		396	0.69	70	70
	900		801	801	0		2158	956	84		7	0.00	30	31
	901		849	849	0		2287	1013	84		7	0.00	30	31
	910		230	230	0		1995	827	42		112	0.73	28	29
	911	910	119	119	0						112	1.33		
	912	910	2	2	0						112	1.41		
	920		541	541	0		2187	906	73		23	0.73	28	29
	921	920	122	122	0						23	1.34		
	930		482	482	0		2187	906	53		69	0.73	28	29
	990		766	766	0		2133	2133	36		151	0.31	70	70
	991		199	199	0		2133	2133	9		863	1.04	70	70
	1000		373	373	0		2139	458	81		11	0.00	14	15
	1001		404	404	0		2317	497	81		11	0.00	14	15
	1010		0	0	0		2071	1331	35		160	0.00	44	45
	1011	1010	461	461	0						160	1.03		
	1020		0	0	0		2071	1331	35		158	0.00	44	45
	1021	1020	3	3	0						158	1.53		
	1022	1020	461	461	0						158	1.03		
	1030		386	386	0		2247	1445	28		219	1.03	44	45
	1031	1030	21	21	0						219	1.04		
	1040		849	849	0		2253	1448	59		54	1.04	44	45
	1090		668	668	0		2051	2051	33		176	0.86	70	70
	1091		464	464	0		2164	2164	21		320	1.26	70	70

Link Results: Stops and delays

Time Segment	Link	Major link	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	700		18.41	32.17	3.32	2.21	78.41	15.68	102.93	527.72	108.38	13.55	0.00
	701		18.41	31.29	3.56	2.21	81.84	16.37	101.79	566.10	108.75	14.37	0.00
	710		12.36	6.73	0.08	0.41	6.93	6.93	37.81	78.02	20.66	1.41	7.04
	711	710	12.36	22.85	0.10	0.03	1.89	1.89	65.26	12.04	1.66	0.20	0.98
	712	710	12.36	16.65	1.18	0.61	25.35	25.35	88.83	312.37	30.55	4.89	24.46
	720		12.04	4.11	0.02	0.09	1.54	1.54	21.57	15.97	4.52	0.29	1.46
	721	720	12.04	15.46	1.42	0.40	25.85	25.85	88.35	354.44	20.18	5.34	26.72
	730		11.73	5.14	0.07	0.24	4.34	4.34	35.34	63.48	12.15	1.08	5.39
	731	730	11.73	16.03	1.42	0.48	26.87	26.87	87.99	349.83	24.14	5.34	26.68
	790		11.94	2.48	0.00	0.89	12.60	12.60	3.68	2.21	45.16	0.68	0.68
	791		9.24	1.52	0.00	0.40	5.64	5.64	2.35	1.82	20.25	0.31	0.31
	792		9.32	1.07	0.00	0.13	1.79	1.79	1.90	1.62	6.42	0.11	0.11
	800		24.83	22.61	3.37	2.73	86.59	17.32	92.65	764.20	135.41	10.54	0.00
	801		24.83	22.05	3.55	2.72	88.96	0.00	91.84	804.42	135.14	11.01	2.20
	810		9.34	39.97	0.02	0.00	0.32	0.32	106.19	2.00	0.12	0.03	0.15
	811	810	9.35	13.20	0.00	0.00	0.05	0.05	88.22	0.82	0.06	0.01	0.06
	812	810	9.35	7.72	0.20	0.26	6.46	6.46	74.04	143.84	13.12	2.24	11.20
	820		9.03	43.20	2.60	0.29	41.06	41.06	106.12	240.96	14.76	3.65	18.24
	821	820	9.03	11.58	0.00	0.00	0.09	0.09	89.30	1.66	0.12	0.03	0.13
	890		22.50	1.36	0.00	0.22	3.14	3.14	0.00	0.00	0.00	0.00	0.00
	891		22.50	1.08	0.00	0.11	1.57	1.57	0.00	0.00	0.00	0.00	0.00
	900		24.91	28.55	3.84	2.51	90.20	18.04	100.23	678.89	123.92	9.34	0.00
	901		24.91	27.94	4.07	2.51	93.57	18.71	99.43	719.66	124.50	9.82	0.00
	910		18.33	12.88	0.58	0.24	11.66	11.66	41.47	83.01	12.23	1.36	6.79
	911	910	18.33	26.02	0.74	0.12	12.21	12.21	104.68	118.22	6.33	1.78	8.88
	912	910	18.33	22.97	0.01	0.00	0.18	0.18	103.99	1.97	0.11	0.03	0.15
	920		17.86	16.74	1.42	1.10	35.74	35.74	59.72	268.00	55.22	4.61	23.06
	921	920	17.86	32.33	0.85	0.25	15.56	15.56	110.00	121.73	12.44	1.91	1.91
	930		17.86	12.47	1.10	0.57	23.71	23.71	37.01	149.63	28.69	2.54	2.54
	990		22.50	1.32	0.00	0.28	3.97	3.97	0.00	0.00	0.00	0.00	0.00
	991		22.50	0.93	0.00	0.05	0.73	0.73	0.00	0.00	0.00	0.00	0.00
	1000		48.00	46.29	2.71	2.08	68.10	13.62	120.20	348.53	99.80	1.41	0.00
	1001		48.00	44.80	2.94	2.09	71.39	14.28	118.35	377.50	100.62	1.50	0.00
	1010		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1011	1010	10.76	5.44	0.43	0.26	9.88	9.88	62.79	275.82	13.50	4.13	4.13
	1020		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1021	1020	10.76	9.38	0.01	0.00	0.11	0.11	98.84	2.88	0.09	0.04	0.21
	1022	1020	10.76	6.64	0.58	0.27	12.06	12.06	68.42	301.72	13.55	4.50	22.49
	1030		10.21	6.51	0.51	0.19	9.91	9.91	24.90	86.63	9.51	1.37	6.86
	1031	1030	10.21	5.62	0.02	0.01	0.47	0.47	50.69	10.12	0.52	0.15	0.76
	1040		9.56	8.12	1.21	0.71	27.20	27.20	27.23	195.22	35.95	3.30	16.49
	1090		7.45	1.30	0.00	0.24	3.43	3.43	0.00	0.00	0.00	0.00	0.00
	1091		7.10	1.06	0.00	0.14	1.94	1.94	0.00	0.00	0.00	0.00	0.00

Link Results: Queues and blocking

Time Segment	Link	Major link	Initial queue (PCU)	Mean max queue (PCU)	Max queue storage (PCU)	Utilised storage (%)	Average storage excess queue (PCU)	Average limit excess queue (PCU)	Excess queue penalty (£ per hr)	Max end of green queue (PCU)	Max end of red queue (PCU)	Wasted time starvation (s per cycle)	Wasted time blocking back (s per cycle)	Wasted time total (s per cycle)	Estimated blocking
17:00-18:00	700		0.00	12.85	36.74	34.97	0.00	0.00	0.00	2.21	9.59	0.00	0.00	0.00	
	701		0.00	13.62	39.43	34.56	0.00	0.00	0.00	2.21	10.13	0.00	0.00	0.00	
	710		0.00	9.92	13.00	76.34	0.00	0.00	0.00	1.05	6.23	0.00	0.00	0.00	
	711	710							0.00						
	712	710							0.00						
	720		0.00	7.97	13.00	61.32	0.00	0.00	0.00	0.49	6.17	0.00	0.00	0.00	
	721	720							0.00						
	730		0.00	9.33	14.00	66.67	0.00	0.00	0.00	0.72	6.60	0.00	0.00	0.00	
	731	730							0.00						
	790		0.00	3.68	20.06	18.36	0.00	0.00	0.00			0.00	0.00	0.00	
	791		0.00	2.20	16.41	13.44	0.00	0.00	0.00			0.00	0.00	0.00	
	792		0.00	1.93	16.48	11.71	0.00	0.00	0.00			33.00	0.00	33.00	
	800		0.00	18.37	37.62	48.84	0.00	0.00	0.00	2.73	10.82	0.00	0.00	0.00	
	801		0.00	19.20	39.67	48.40	0.00	0.00	0.00	2.72	11.24	0.00	0.00	0.00	
	810		0.00	3.67	7.00	52.36	0.00	0.00	0.00	0.26	2.41	4.00	0.00	4.00	
	811	810							0.00						
	812	810							0.00						
	820		0.00	5.01	9.00	55.71	0.00	0.00	0.86	0.29	5.00	12.00	0.00	12.00	
	821	820							0.00						
	890		0.00	0.22	35.93	0.61	0.00	0.00	0.00			0.00	0.00	0.00	
	891		0.00	0.11	38.39	0.29	0.00	0.00	0.00			17.00	0.00	17.00	
	900		0.00	16.08	40.57	39.63	0.00	0.00	0.00	2.51	11.19	0.00	0.00	0.00	
	901		0.00	16.90	43.00	39.30	0.00	0.00	0.00	2.51	11.71	0.00	0.00	0.00	
	910		0.00	4.47	20.00	22.34	0.00	0.00	0.00	0.37	3.86	0.00	0.00	0.00	
	911	910							0.00						
	912	910							0.00						
	920		0.00	9.57	21.00	45.56	0.00	0.00	0.00	1.35	6.32	0.00	0.00	0.00	
	921	920							0.00						
	930		0.00	3.81	32.64	11.67	0.00	0.00	0.00	0.57	2.91	0.00	0.00	0.00	
	990		0.00	0.28	40.10	0.70	0.00	0.00	0.00			0.00	0.00	0.00	
	991		0.00	0.05	40.10	0.13	0.00	0.00	0.00			34.00	0.00	34.00	
	1000		0.00	8.92	40.22	22.18	0.00	0.00	0.00	2.08	7.78	0.00	0.00	0.00	
	1001		0.00	9.50	43.56	21.80	0.00	0.00	0.00	2.09	8.26	0.00	0.00	0.00	
	1010		0.00	6.72	18.63	36.08	0.00	0.00	0.00	0.26	2.85	18.00	0.00	18.00	
	1011	1010							0.00						
	1020		0.00	6.84	9.00	75.98	0.00	0.00	0.00	0.27	3.94	18.00	0.00	18.00	
	1021	1020							0.00						
	1022	1020							0.00						
	1030		0.00	2.10	10.00	20.98	0.00	0.00	0.00	0.20	2.06	18.00	0.00	18.00	
	1031	1030							0.00						
	1040		0.00	7.03	11.00	63.94	0.00	0.00	0.00	0.77	4.37	16.00	0.00	16.00	
	1090		0.00	0.24	12.20	1.98	0.00	0.00	0.00			21.00	0.00	21.00	
	1091		0.00	0.14	12.83	1.06	0.00	0.00	0.00			40.00	0.00	40.00	

Link Results: Journey times

Time Segment	Link	Major link	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
17:00-18:00	700		123.60	8.68	14.23	50.58
	701		132.60	9.15	14.48	49.71
	710		28.68	1.38	20.72	19.10
	711	710	2.31	0.21	11.24	35.21
	712	710	42.42	3.11	13.64	29.01
	720		10.17	0.43	23.85	16.15
	721	720	45.37	3.24	14.01	27.50
	730		22.32	1.00	22.25	16.88
	731	730	44.33	3.28	13.53	27.76
	790		136.50	5.15	26.49	14.42
	791		77.16	2.81	27.48	10.77
	792		35.14	1.22	28.70	10.39
	800		194.20	12.79	15.18	47.44
	801		204.60	13.32	15.36	46.87
	810		0.17	0.03	6.06	49.31
	811	810	0.08	0.01	13.27	22.55
	812	810	17.62	1.01	17.53	17.08
	820		19.33	3.50	5.53	52.23
	821	820	0.16	0.01	14.02	20.60
	890		117.13	3.88	30.18	23.86
	891		74.13	2.43	30.54	23.58
	900		160.20	11.90	13.47	53.46
	901		169.80	12.46	13.62	52.85
	910		37.41	1.99	18.80	31.20
	911	910	19.38	1.47	13.22	44.35
	912	910	0.33	0.02	14.20	41.30
	920		85.92	5.20	16.52	34.60
	921	920	19.37	1.70	11.39	50.19
	930		76.49	4.06	18.84	30.34
	990		153.12	5.06	30.23	23.82
	991		39.88	1.30	30.73	23.43
	1000		74.60	9.77	7.64	94.29
	1001		80.80	10.41	7.76	92.80
	1010		0.00	0.00	0.00	0.00
	1011	1010	44.09	2.07	21.26	16.20
	1020		0.00	0.00	0.00	0.00
	1021	1020	0.29	0.02	17.10	20.14
	1022	1020	44.09	2.23	19.80	17.40
	1030		35.02	1.79	19.54	16.72
	1031	1030	1.90	0.09	20.64	15.83
	1040		72.17	4.17	17.30	17.69
	1090		42.26	1.62	26.04	8.75
	1091		29.25	1.05	27.85	8.15

Link Results: Advanced

Time Segment	Link	Major link	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Mean Max Queue EoTS (PCU)	Max End of Green Queue EoTS (PCU)	Max End of Red Queue EoTS (PCU)	PCU Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
17:00-18:00	700		0.00	0.00	✓	12.88	2.24	9.62	1.00	0.00	91.96	15.68
	701		0.00	0.00	✓	13.66	2.24	10.16	1.00	0.00	96.21	16.37
	710		0.00	0.00	✓	9.93	1.05	6.23	1.00	0.00	8.34	13.97
	711	710	0.00	0.00					1.00	0.00	2.09	2.87
	712	710	0.00	0.00					1.00	0.00	30.24	49.81
	720		0.00	0.00	✓	7.97	0.49	6.17	1.00	0.00	1.83	3.00
	721	720	0.00	0.00					1.00	0.00	31.20	52.57
	730		0.00	0.00	✓	9.33	0.72	6.60	1.00	0.00	5.42	9.73
	731	730	0.00	0.00					1.00	0.00	32.20	53.54
	790		0.00	0.00	✓	3.68			1.00	0.00	13.27	13.27
	791		0.00	0.00	✓	2.20			1.00	0.00	5.95	5.95
	792		0.00	0.00	✓	1.93			1.00	0.00	1.91	1.91
	800		0.00	0.00	✓	18.42	2.77	10.86	1.00	0.00	97.13	17.32
	801		0.00	0.00	✓	19.24	2.76	11.28	1.00	0.00	99.97	2.20
	810		0.00	0.00	✓	3.67	0.26	2.42	1.00	0.00	0.35	0.47
	811	810	0.00	0.00					1.00	0.00	0.06	0.12
	812	810	0.00	0.00					1.00	0.00	8.70	17.65
	820		0.00	0.00	✓	5.01	0.29	5.00	1.00	0.86	44.71	60.16
	821	820	0.00	0.00					1.00	0.00	0.12	0.22
	890		0.00	0.00	✓	0.22			1.00	0.00	3.14	3.14
	891		0.00	0.00	✓	0.11			1.00	0.00	1.57	1.57
	900		0.00	0.00	✓	16.12	2.55	11.22	1.00	0.00	99.54	18.04
	901		0.00	0.00	✓	16.94	2.55	11.75	1.00	0.00	103.39	18.71
	910		0.00	0.00	✓	4.47	0.37	3.86	1.00	0.00	13.02	18.46
	911	910	0.00	0.00					1.00	0.00	13.99	21.10
	912	910	0.00	0.00					1.00	0.00	0.21	0.33
	920		0.00	0.00	✓	9.57	1.36	6.33	1.00	0.00	40.35	58.80
	921	920	0.00	0.00					1.00	0.00	17.47	17.47
	930		0.00	0.00	✓	3.81	0.57	2.91	1.00	0.00	26.25	26.25
	990		0.00	0.00	✓	0.28			1.00	0.00	3.97	3.97
	991		0.00	0.00	✓	0.05			1.00	0.00	0.73	0.73
	1000		0.00	0.00	✓	8.97	2.13	7.83	1.00	0.00	69.50	13.62
	1001		0.00	0.00	✓	9.54	2.13	8.31	1.00	0.00	72.88	14.28
	1010		0.00	0.00	✓	6.72	0.26	2.85	1.00	0.00	0.00	0.00
	1011	1010	0.00	0.00					1.00	0.00	14.01	14.01
	1020		0.00	0.00	✓	6.84	0.27	3.94	1.00	0.00	0.00	0.00
	1021	1020	0.00	0.00					1.00	0.00	0.15	0.32
	1022	1020	0.00	0.00					1.00	0.00	16.56	34.55
	1030		0.00	0.00	✓	2.10	0.20	2.06	1.00	0.00	11.28	16.77
	1031	1030	0.00	0.00					1.00	0.00	0.62	1.22
	1040		0.00	0.00	✓	7.03	0.78	4.37	1.00	0.00	30.50	43.69
	1090		0.00	0.00	✓	0.24			1.00	0.00	3.43	3.43
	1091		0.00	0.00	✓	0.14			1.00	0.00	1.94	1.94

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	Item with worst over PR
2	29/05/2019 18:33:24	29/05/2019 18:33:25	17:00	70	669.23	69.95	84.92	800	0	0	800	790	80

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Actual green (s per cycle)	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	85	6	17364	1687	14.50	448.28	220.09	669.23

Network Results: Flows and signals

Time Segment	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s per cycle)	Effective green (s per cycle)
17:00-18:00	17364	17364	1	✓	85		6	1687	1721

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	17.64	14.50	41.92	28.03	993.32	448.28	53.68	7983.03	1338.54	122.87	220.09

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	76.34	0.86	323.00	0.00	323.00

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
17:00-18:00	2514.40	155.03	16.22

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	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	✓	1.00	0.86	0.00	1116.19	669.23

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

	To				
From		A	B	C	D
	A	180.4	63.2	122.9	172.8
	B	104.6	142.7	71.2	103.1
	C	0.0	110.3	144.7	77.3
	D	103.0	125.3	150.6	195.4

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)
6	A	B	420	60.47	420	60.47
7	A	B	618	65.00	618	65.00
13	B	C	371	71.01	371	71.01
14	A	C	2	122.88	2	122.88
15	B	C	371	71.29	371	71.29
17	D	B	166	127.81	166	127.81
18	D	A	207	103.03	207	103.03
19	D	B	95	126.32	95	126.32
20	D	B	95	119.72	95	119.72
21	D	C	212	150.61	212	150.61
22	A	D	119	170.10	119	170.10
23	C	A	0	61.62	0	0.00
24	B	D	230	102.45	230	102.45
25	C	D	415	77.28	415	77.28
26	D	D	2	195.39	2	195.39
27	A	D	119	175.56	119	175.56
28	B	D	80	104.91	80	104.91
32	B	B	21	142.67	21	142.67
34	C	B	386	113.62	386	113.62
35	C	B	424	108.80	424	108.80
36	C	C	1	144.71	1	144.71
37	C	B	424	108.70	424	108.70
41	C	A	0	62.21	0	0.00
42	A	A	3	180.43	3	180.43
45	B	A	461	102.76	461	102.76
46	B	A	461	106.43	461	106.43

Final Prediction Table

Link Results

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QUEUES	
Link	Name	Major link	Traffic node	Controller stream	Phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (PCU)	Max end of red queue (PCU)
700			7	7	C	618	1954	26	0.00	82	10	50.58	32.17	102.93	12.85	9.59
701			7	7	C	663	2097	26	0.00	82	10	49.71	31.29	101.79	13.62	10.13
710		(710)	7	7	D	261	2088	32	0.00	68	33	19.10	6.73	37.81	9.92	6.23
711		710				21						35.21	22.85	65.26		
712		710				386						29.01	16.65	88.83		
720		(720)	7	7	D	95	2231	32	0.00	49	82	16.15	4.11	21.57	7.97	6.17
721		720				424						27.50	15.46	88.35		
730		(730)	7	7	D	214	2299	32	0.00	59	53	16.88	5.14	35.34	9.33	6.60
731		730				425						27.76	16.03	87.99		
790			7			1286	2010	70	0.00	64	41	14.42	2.48	3.68	3.68	
791			7			939	2124	70	0.00	44	104	10.77	1.52	2.35	2.20	
792			7			424	2115	70	33.00	20	349	10.39	1.07	1.90	1.93	
800			8	8	A	971	2001	39	0.00	85	6	47.44	22.61	92.65	18.37	10.82
801			8	8	A	1023	2110	39	0.00	85	6	46.87	22.05	91.84	19.20	11.24
810		(810)	8	8	B	2	2182	19	4.00	34	161	49.31	39.97	106.19	3.67	2.41
811		810				1						22.55	13.20	88.22		
812		810				212						17.08	7.72	74.04		
820		(820)	8	8	B	241	2295	19	12.00	37	143	52.23	43.20	106.12	5.01	5.00
821		820				2						20.60	11.58	89.30		
890			8			586	1911	70	0.00	31	194	23.86	1.36	0.00	0.22	
891			8			371	2042	70	17.00	18	396	23.58	1.08	0.00	0.11	
900			9	9	A	801	2158	30	0.00	84	7	53.46	28.55	100.23	16.08	11.19
901			9	9	A	849	2287	30	0.00	84	7	52.85	27.94	99.43	16.90	11.71
910		(910)	9	9	B	230	1995	28	0.00	42	112	31.20	12.88	41.47	4.47	3.86
911		910				119						44.35	26.02	104.68		
912		910				2						41.30	22.97	103.99		
920		(920)	9	9	B	541	2187	28	0.00	73	23	34.60	16.74	59.72	9.57	6.32
921	(untitled)	920				122						50.19	32.33	110.00		
930	(untitled)		9	9	B	482	2187	28	0.00	53	69	30.34	12.47	37.01	3.81	2.91
990			9			766	2133	70	0.00	36	151	23.82	1.32	0.00	0.28	
991	(untitled)		9			199	2133	70	34.00	9	863	23.43	0.93	0.00	0.05	
1000			10	10	A	373	2139	14	0.00	81	11	94.29	46.29	120.20	8.92	7.78
1001			10	10	A	404	2317	14	0.00	81	11	92.80	44.80	118.35	9.50	8.26
1010	(untitled)	(1010)	10	10	B	0	2071	44	18.00	35	160	0.00	0.00	0.00	6.72	2.85
1011	(untitled)	1010				461						16.20	5.44	62.79		
1020		(1020)	10	10	B	0	2071	44	18.00	35	158	0.00	0.00	0.00	6.84	3.94
1021		1020				3						20.14	9.38	98.84		
1022		1020				461						17.40	6.64	68.42		
1030		(1030)	10	10	B	386	2247	44	18.00	28	219	16.72	6.51	24.90	2.10	2.06
1031		1030				21						15.83	5.62	50.69		
1040			10	10	B	849	2253	44	16.00	59	54	17.69	8.12	27.23	7.03	4.37
1090			10			668	2051	70	21.00	33	176	8.75	1.30	0.00	0.24	
1091			10			464	2164	70	40.00	21	320	8.15	1.06	0.00	0.14	

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	2514.40	155.03	16.22	41.92	28.03	448.28	220.09	0.86	669.23
Bus									
Tram									
Pedestrians									
TOTAL	2514.40	155.03	16.22	41.92	28.03	448.28	220.09	0.86	669.23

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

A3 - Phase 1B - AM 2026 inc. 1500 D D3 - 2026 inc. 1500 D 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	Item with worst overall PRC
3	29/05/2019 18:33:25	29/05/2019 18:33:25	08:00	70	1854.96	101.16	99.22	801	2	5	801	790	80

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
Phase 1B - AM 2026 inc. 1500 D		D3	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2026 inc. 1500 D 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)
70		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	PCU Length (m)	Calculate results for Path Segments	Generate PDM Profile Data
1	90	100	✓	✓		Simplified (TRANSYT 12)	5.75		✓

Normal Traffic parameters

Dispersion type	Dispersion coefficient	Travel time coefficient
Default	35	80

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion type	Acceleration (ms ⁻²)	Stationary time coefficient	Cruise time coefficient
Bus	1.00	Default	0.94	30	85

Tram parameters

Name	PCU Factor	Dispersion type	Acceleration (ms ⁻²)	Stationary time coefficient	Cruise time coefficient
Tram	1.00	Default	0.94	100	100

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

Optimisation type	OUTProfile accuracy	SASart temperature	SACooling factor	Random seed	Use enhanced optimisation	Auto optimisation order	Optimisation order	Master controller	Offsets relative to master controller	Master controller offset after each run
Simulated Annealing (Slow)	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05	300.00	100.00	1	✓	✓	7, 8, 9, 10			Do nothing

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
(ALL)		

Links

Links

Link	Name	Description	Traffic node	Length (m)	Has Saturation Flow	Use RR67	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Is minor shared	Major link	Allow Nearside Turn On Red
700			7	200.00	✓		1954	✓		Normal			
701			7	200.00	✓		2097	✓		Normal			
710			7	109.89	✓		2088	✓		Normal			
711				109.89						Normal	✓	710	
712				109.89						Normal	✓	710	
720			7	107.01	✓		2231	✓		Normal			
721				107.01						Normal	✓	720	
730			7	104.31	✓		2299	✓		Normal			
731				104.31						Normal	✓	730	
790			7	106.14	✓		2010			Normal			
791			7	82.17	✓		2124			Normal			
792			7	82.87	✓		2115			Normal			
800			8	200.00	✓		2001	✓		Normal			
801			8	200.00	✓		2110	✓		Normal			
810			8	83.00	✓		2182	✓		Normal			
811				83.14						Normal	✓	810	
812				83.14						Normal	✓	810	
820			8	80.23	✓		2295	✓		Normal			
821				80.23						Normal	✓	820	
890			8	200.00	✓		1911			Normal			
891			8	200.00	✓		2042			Normal			
900			9	200.00	✓		2158	✓		Normal			
901			9	200.00	✓		2287	✓		Normal			
910			9	162.90	✓		1995	✓		Normal			
911				162.90						Normal	✓	910	
912				162.90						Normal	✓	910	
920			9	158.76	✓		2187	✓		Normal			
921	(untitled)			158.76						Normal	✓	920	
930	(untitled)		9	158.76	✓		2187	✓		Normal			
990			9	200.00	✓		2133			Normal			
991	(untitled)		9	200.00	✓		2133			Normal			
1000			10	200.00	✓		2139	✓		Normal			
1001			10	200.00	✓		2317	✓		Normal			
1010	(untitled)		10	95.68	✓		2071	✓		Normal			
1011	(untitled)			95.68						Normal	✓	1010	
1020			10	95.68	✓		2071	✓		Normal			
1021				95.68						Normal	✓	1020	
1022				95.68						Normal	✓	1020	
1030			10	90.73	✓		2247	✓		Normal			
1031				90.73						Normal	✓	1030	
1040			10	85.01	✓		2253	✓		Normal			
1090			10	63.28	✓		2051			Normal			
1091			10	63.07	✓		2164			Normal			

Modelling

Link	Traffic model	Stop weighting (%)	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Queue limit (PCU)	Excess queue penalty (£)	Has degree of saturation limit
700	NetworkDefault	0	20	100		0.00				
701	NetworkDefault	0	20	100		0.00				
710	NetworkDefault	500	100	100		13.00	✓	10.00	1000.00	
711	NetworkDefault	500	100	100					0.00	
712	NetworkDefault	500	100	100					0.00	
720	NetworkDefault	500	100	100		13.00	✓	10.00	1000.00	
721	NetworkDefault	500	100	100					0.00	
730	NetworkDefault	500	100	100		14.00	✓	11.00	1000.00	
731	NetworkDefault	500	100	100					0.00	
790	NetworkDefault	100	100	100		0.00				
791	NetworkDefault	100	100	100		0.00				
792	NetworkDefault	100	100	100		0.00				
800	NetworkDefault	0	20	100		0.00				
801	NetworkDefault	20	0	100		0.00				
810	NetworkDefault	500	100	100		7.00	✓	4.00	1000.00	
811	NetworkDefault	500	100	100					0.00	
812	NetworkDefault	500	100	100					0.00	
820	NetworkDefault	500	100	100		9.00	✓	5.00	1000.00	
821	NetworkDefault	500	100	100					0.00	
890	NetworkDefault	100	100	100		0.00				
891	NetworkDefault	100	100	100		0.00				
900	NetworkDefault	0	20	100		0.00				
901	NetworkDefault	0	20	100		0.00				
910	NetworkDefault	500	100	100		20.00				
911	NetworkDefault	500	100	100						
912	NetworkDefault	500	100	100						
920	NetworkDefault	500	100	100		21.00				
921	NetworkDefault	100	100	100						
930	NetworkDefault	100	100	100		0.00				
990	NetworkDefault	100	100	100		0.00				
991	NetworkDefault	100	100	100		0.00				
1000	NetworkDefault	0	20	100		0.00				
1001	NetworkDefault	0	20	100		0.00				
1010	NetworkDefault	500	100	100		0.00	✓	7.00	1000.00	
1011	NetworkDefault	100	100	100					0.00	
1020	NetworkDefault	500	100	100		9.00	✓	7.00	1000.00	
1021	NetworkDefault	500	100	100					0.00	
1022	NetworkDefault	500	100	100					0.00	
1030	NetworkDefault	500	100	100		10.00	✓	8.00	1000.00	
1031	NetworkDefault	500	100	100					0.00	
1040	NetworkDefault	500	100	100		11.00	✓	8.00	1000.00	
1090	NetworkDefault	100	100	100		0.00				
1091	NetworkDefault	100	100	100		0.00				

Modelling - Normal traffic - Advanced

Link	Dispersion type for Normal Traffic	Initial queue (PCU)	Auto cycle time	Cycle time
700	NetworkDefault	0.00	✓	70
701	NetworkDefault	0.00	✓	70
710	NetworkDefault	0.00	✓	70
711	NetworkDefault			
712	NetworkDefault			
720	NetworkDefault	0.00	✓	70
721	NetworkDefault			
730	NetworkDefault	0.00	✓	70
731	NetworkDefault			
790	NetworkDefault	0.00	✓	70
791	NetworkDefault	0.00	✓	70
792	NetworkDefault	0.00	✓	70
800	NetworkDefault	0.00	✓	70
801	NetworkDefault	0.00	✓	70
810	NetworkDefault	0.00	✓	70
811	NetworkDefault			
812	NetworkDefault			
820	NetworkDefault	0.00	✓	70
821	NetworkDefault			
890	NetworkDefault	0.00	✓	70
891	NetworkDefault	0.00	✓	70
900	NetworkDefault	0.00	✓	70
901	NetworkDefault	0.00	✓	70
910	NetworkDefault	0.00	✓	70
911	NetworkDefault			
912	NetworkDefault			
920	NetworkDefault	0.00	✓	70
921	NetworkDefault			
930	NetworkDefault	0.00	✓	70
990	NetworkDefault	0.00	✓	70
991	NetworkDefault	0.00	✓	70
1000	NetworkDefault	0.00	✓	70
1001	NetworkDefault	0.00	✓	70
1010	NetworkDefault	0.00	✓	70
1011	NetworkDefault			
1020	NetworkDefault	0.00	✓	70
1021	NetworkDefault			
1022	NetworkDefault			
1030	NetworkDefault	0.00	✓	70
1031	NetworkDefault			
1040	NetworkDefault	0.00	✓	70
1090	NetworkDefault	0.00	✓	70
1091	NetworkDefault	0.00	✓	70

Flows

Link	Total flow (PCU/hr)	PCU Factor
700	510	1.00
701	547	1.00
710	343	1.00
711	19	1.00
712	320	1.00
720	102	1.00
721	269	1.00
730	427	1.00
731	271	1.00
790	1192	1.00
791	718	1.00
792	269	1.00
800	1248	1.00
801	1316	1.00
810	4	1.00
811	2	1.00
812	422	1.00
820	196	1.00
821	5	1.00
890	974	1.00
891	546	1.00
900	509	1.00
901	540	1.00
910	157	1.00
911	98	1.00
912	5	1.00
920	697	1.00
921	99	1.00
930	619	1.00
990	449	1.00
991	194	1.00
1000	583	1.00
1001	631	1.00
1010	0	1.00
1011	600	1.00
1020	0	1.00
1021	1	1.00
1022	600	1.00
1030	320	1.00
1031	19	1.00
1040	540	1.00
1090	942	1.00
1091	601	1.00

Flows - Advanced

Link	Detectors
(ALL)	

Signals

Link	Controller stream	Phase	Second phase enabled
700	7	C	
701	7	C	
710	7	D	
711			
712			
720	7	D	
721			
730	7	D	
731			
800	8	A	
801	8	A	
810	8	B	
811			
812			
820	8	B	
821			
900	9	A	
901	9	A	
910	9	B	
911			
912			
920	9	B	
921			
930	9	B	
1000	10	A	
1001	10	A	
1010	10	B	
1011			
1020	10	B	
1021			
1022			
1030	10	B	
1031			
1040	10	B	

Entry Sources

Link	Cruise time (seconds)	Cruise speed (kph)
700	18.41	39.10
701	18.41	39.10
800	24.83	29.00
801	24.83	29.00
900	24.91	28.90
901	24.91	28.90
1000	48.00	15.00
1001	48.00	15.00

Sources

Link	Source	Source type	Source link	Destination link	Cruise time (seconds)	Cruise speed (kph)	Total flow (PCU/hr)
710	1	Link	1000	710	12.36	32.00	241
711	1	Link	1031	711	12.36	32.00	19
712	1	Link	1030	712	12.36	32.00	320
720	1	Link	1001	720	12.04	32.00	102
721	1	Link	1040	721	12.04	32.00	269
730	1	Link	1001	730	11.73	32.00	427
731	1	Link	1040	731	11.73	32.00	271
790	1	Link	710	790	11.94	32.00	343
791	1	Link	720	791	9.24	32.00	102
792	1	Link	731	792	9.32	32.00	269
810	1	Link	701	810	9.34	32.00	4
811	1	Link	731	811	9.35	32.00	2
812	1	Link	730	812	9.35	32.00	422
820	1	Link	701	820	9.03	32.00	196
821	1	Link	730	821	9.03	32.00	5
890	1	Link	810	890	22.50	32.00	4
891	1	Link	800	891	22.50	32.00	546
910	1	Link	800	910	18.33	32.00	157
911	1	Link	820	911	18.33	32.00	98
912	1	Link	821	912	18.33	32.00	5
920	1	Link	801	920	17.86	32.00	697
921	1	Link	820	921	17.86	32.00	99
930	1	Link	801	930	17.86	32.00	619
990	1	Link	910	990	22.50	32.00	157
991	1	Link	921	991	22.50	32.00	98
1010	1	Link	900	1010	10.76	32.00	0
1011	1	Link	920	1011	10.76	32.00	600
1020	1	Link	900	1020	10.76	32.00	0
1021	1	Link	921	1021	10.76	32.00	1
1022	1	Link	930	1022	10.76	32.00	600
1030	1	Link	900	1030	10.21	32.00	320
1031	1	Link	930	1031	10.21	32.00	19
1040	1	Link	901	1040	9.56	32.00	540
1090	1	Link	1000	1090	7.12	32.00	342
1091	1	Link	1020	1091	7.10	32.00	0
710	2	Link	1001	710	12.36	32.00	102
790	2	Link	711	790	11.94	32.00	19
791	2	Link	721	791	9.24	32.00	269
890	2	Link	800	890	22.50	32.00	546
990	2	Link	900	990	22.50	32.00	189
991	2	Link	920	991	22.50	32.00	97
1090	2	Link	1010	1090	7.12	32.00	0
1091	2	Link	1021	1091	7.10	32.00	1
790	3	Link	700	790	11.94	32.00	510
791	3	Link	701	791	9.24	32.00	347
890	3	Link	812	890	22.50	32.00	422
990	3	Link	911	990	22.50	32.00	98
1090	3	Link	1011	1090	7.59	30.00	600
1091	3	Link	1022	1091	7.10	32.00	600
790	4	Link	712	790	11.94	32.00	320
890	4	Link	811	890	22.50	32.00	2
990	4	Link	912	990	22.50	32.00	5

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				
From		A	B	C	D
	A	1	857	4	195
	B	1200	19	1091	254
	C	0	858	2	189
	D	342	445	422	5

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	A	(untitled)	701, 700	1090, 1091	#0000FF
	B	(untitled)	801, 800	792, 791, 790	#FF0000
	C	(untitled)	900, 901	891, 890	#00FF00
	D	(untitled)	1000, 1001	990, 991	#FFFF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
1	6		A	B	701, 791	Normal	347
	7		A	B	700, 790	Normal	510
	13		B	C	800, 891	Normal	546
	14		A	C	701, 810, 890	Normal	4
	15		B	C	800, 890	Normal	546
	17		D	B	1000, 710, 790	Normal	241
	18		D	A	1000, 1090	Normal	342
	19		D	B	1001, 710, 790	Normal	102
	20		D	B	1001, 720, 791	Normal	102
	21		D	C	1001, 730, 812, 890	Normal	422
	22		A	D	701, 820, 911, 990	Normal	98
	23		C	A	900, 1020, 1091	Normal	0
	24		B	D	800, 910, 990	Normal	157
	25		C	D	900, 990	Normal	189
	26		D	D	1001, 730, 821, 912, 990	Normal	5
	27		A	D	701, 820, 921, 991	Normal	98
	28		B	D	801, 920, 991	Normal	97
	32		B	B	801, 930, 1031, 711, 790	Normal	19
	34		C	B	900, 1030, 712, 790	Normal	320
	35		C	B	901, 1040, 721, 791	Normal	269
	36		C	C	901, 1040, 731, 811, 890	Normal	2
	37		C	B	901, 1040, 731, 792	Normal	269
	41		C	A	900, 1010, 1090	Normal	0
	42		A	A	701, 820, 921, 1021, 1091	Normal	1
	45		B	A	801, 930, 1022, 1091	Normal	600
	46		B	A	801, 920, 1011, 1090	Normal	600

Link Results

Link Results: Vehicle summary

Time Segment	Link	Major link	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	700		65	38	510	1954	27	23.64	8.87	24.13	9.51	0.00	9.51
	701		65	38	547	2097	27	23.18	9.44	23.94	10.00	0.00	10.00
	710		71	26	343	2088	31	14.41	9.45	72.70	19.50	24.84	44.34
	711	710			19			20.64			1.55	0.92	2.46
	712	710			320			15.15			19.13	7.80	26.93
	720		36	147	102	2231	31	6.74	2.85	21.90	2.71	4.43	7.14
	721	720			269			10.88			11.55	5.30	16.85
	730		66	36	427	2299	31	13.34	10.10	72.15	22.46	31.01	53.47
	731	730			271			11.66			12.47	5.10	17.56
	790		59	52	1192	2010	70	2.20	1.86	9.25	10.33	0.54	10.87
	791		34	166	718	2124	70	1.28	0.26	1.56	3.63	0.00	3.63
	792		13	608	269	2115	70	0.98	0.07	0.44	1.03	0.00	1.03
	800		99	-9	1248	2001	43	57.22	38.96	103.56	56.34	0.00	56.34
	801		99	-9	1316	2110	43	55.91	40.61	102.36	0.00	4.48	4.48
	810		86	5	4	2182	15	45.39	5.53	79.00	0.72	0.37	1119.58
	811	810			2			59.82			0.47	0.16	0.63
	812	810			422			40.39			67.21	18.94	86.14
	820		38	135	196	2295	15	26.02	4.14	46.05	20.11	14.97	35.08
	821	820			5			21.53			0.42	0.15	0.57
	890		51	77	973	1911	70	1.92	0.52	1.44	7.36	0.00	7.36
	891		27	237	545	2042	70	1.20	0.18	0.47	2.59	0.00	2.59
	900		87	4	509	2158	18	46.03	12.40	30.57	18.49	0.00	18.49
	901		87	3	540	2287	18	45.02	13.00	30.24	19.18	0.00	19.18
	910		22	305	157	1995	40	12.52	2.53	12.64	7.75	7.28	15.04
	911	910			97			2.33			0.90	1.14	2.03
	912	910			5			2.37			0.05	0.05	0.10
	920		62	45	697	2187	40	17.40	11.11	52.93	47.84	33.83	81.68
	921	920			98			12.33			4.79	1.34	6.12
	930		48	86	619	2187	40	15.89	8.01	24.55	38.81	5.86	44.67
	990		21	328	448	2133	70	1.07	0.13	0.33	1.89	0.00	1.89
	991		9	887	194	2133	70	0.93	0.05	0.13	0.71	0.00	0.71
	1000		87	4	583	2139	21	41.50	13.58	33.77	19.09	0.00	19.09
	1001		87	4	631	2317	21	40.04	14.45	33.16	19.93	0.00	19.93
	1010		53	69	0	2071	37	0.00	6.15	33.02	0.00	0.00	0.00
	1011	1010			600			13.25			31.35	4.50	35.85
	1020		53	68	0	2071	37	0.00	5.75	63.91	0.00	0.00	0.00
	1021	1020			1			28.48			0.11	0.07	0.18
	1022	1020			600			11.92			28.21	20.98	49.19
	1030		28	224	320	2247	37	2.11	0.84	8.38	2.66	1.29	3.96
	1031	1030			19			8.53			0.64	0.59	1.23
	1040		44	104	540	2253	37	2.73	1.71	15.57	5.81	4.49	10.29
	1090		46	96	942	2051	70	1.62	0.42	3.48	6.03	0.00	6.03
	1091		28	224	601	2164	70	1.15	0.19	1.50	2.73	0.00	2.73

Link Results: Flows and signals

Time Segment	Link	Major link	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))	Effective green (s (per cycle))
08:00-09:00	700		510	510	0		1954	782	65		38	0.00	27	28
	701		547	547	0		2097	839	65		38	0.00	27	28
	710		343	343	0		2088	955	71		26	1.20	31	32
	711	710	19	19	0						26	1.05		
	712	710	320	320	0						26	1.19		
	720		102	102	0		2231	1020	36		147	1.21	31	32
	721	720	269	269	0						147	1.21		
	730		427	427	0		2299	1051	66		36	1.21	31	32
	731	730	271	271	0						36	1.21		
	790		1192	1192	0		2010	2010	59		52	0.36	70	70
	791		718	718	0		2124	2124	34		166	0.48	70	70
	792		269	269	0		2115	2115	13		608	1.11	70	70
	800		1248	1248	0		2001	1258	99	✓	-9	0.00	43	44
	801		1316	1316	0		2110	1326	99	✓	-9	0.00	43	44
	810		4	4	0		2182	499	86		5	1.12	15	16
	811	810	2	2	0						5	1.11		
	812	810	422	422	0						5	1.39		
	820		196	196	0		2295	525	38		135	1.13	15	16
	821	820	5	5	0						135	1.39		
	890		973	973	0		1911	1911	51		77	0.21	70	70
	891		545	545	0	✓	2042	2042	27		237	0.55	70	70
	900		509	509	0		2158	586	87		4	0.00	18	19
	901		540	540	0		2287	621	87		3	0.00	18	19
	910		157	157	0		1995	1169	22		305	0.58	40	41
	911	910	97	97	0	✓					305	1.35		
	912	910	5	5	0						305	1.16		
	920		697	697	0		2187	1281	62		45	0.59	40	41
	921	920	98	98	0						45	1.36		
	930		619	619	0		2187	1281	48		86	0.59	40	41
	990		448	448	0	✓	2133	2133	21		328	0.49	70	70
	991		194	194	0		2133	2133	9		887	0.76	70	70
	1000		583	583	0		2139	672	87		4	0.00	21	22
	1001		631	631	0		2317	728	87		4	0.00	21	22
	1010		0	0	0		2071	1124	53		69	0.00	37	38
	1011	1010	600	600	0						69	0.79		
	1020		0	0	0		2071	1124	53		68	0.00	37	38
	1021	1020	1	1	0						68	1.51		
	1022	1020	600	600	0						68	0.83		
	1030		320	320	0		2247	1220	28		224	1.30	37	38
	1031	1030	19	19	0						224	0.84		
	1040		540	540	0		2253	1223	44		104	1.31	37	38
	1090		942	942	0		2051	2051	46		96	0.54	70	70
	1091		601	601	0		2164	2164	28		224	1.08	70	70

Link Results: Stops and delays

Time Segment	Link	Major link	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	700		18.41	23.64	2.42	0.93	47.55	9.51	86.26	393.06	46.85	9.37	0.00
	701		18.41	23.18	2.59	0.93	50.01	10.00	85.63	421.54	46.86	9.98	0.00
	710		12.36	14.41	0.75	0.62	19.50	19.50	101.55	316.92	31.33	4.97	24.84
	711	710	12.36	20.64	0.07	0.03	1.55	1.55	67.66	11.12	1.74	0.18	0.92
	712	710	12.36	15.15	0.77	0.58	19.13	19.13	34.14	80.05	29.25	1.56	7.80
	720		12.04	6.74	0.11	0.08	2.71	2.71	60.86	58.12	4.00	0.89	4.43
	721	720	12.04	10.88	0.61	0.21	11.55	11.55	27.63	63.77	10.55	1.06	5.30
	730		11.73	13.34	0.98	0.60	22.46	22.46	101.87	404.45	30.36	6.20	31.01
	731	730	11.73	11.66	0.50	0.38	12.47	12.47	26.36	52.16	19.27	1.02	5.10
	790		11.94	2.20	0.00	0.73	10.33	10.33	3.15	0.42	37.12	0.54	0.54
	791		9.24	1.28	0.00	0.26	3.63	3.63	0.00	0.00	0.00	0.00	0.00
	792		9.32	0.98	0.00	0.07	1.03	1.03	0.00	0.00	0.00	0.00	0.00
	800		24.83	57.22	4.45	15.39	281.69	56.34	146.80	1153.78	678.23	21.46	0.00
	801		24.83	55.91	4.69	15.75	290.24	0.00	145.43	1216.68	697.16	22.42	4.48
	810		9.34	45.39	0.02	0.03	0.72	0.72	129.87	3.96	1.24	0.07	0.37
	811	810	9.35	59.82	0.02	0.01	0.47	0.47	113.81	1.66	0.62	0.03	0.16
	812	810	9.35	40.39	1.98	2.76	67.21	67.21	62.94	135.00	130.52	3.79	18.94
	820		9.03	26.02	1.11	0.30	20.11	20.11	107.12	194.67	15.24	2.99	14.97
	821	820	9.03	21.53	0.02	0.01	0.42	0.42	41.03	1.66	0.39	0.03	0.15
	890		22.50	1.92	0.00	0.52	7.36	7.36	0.00	0.00	0.00	0.00	0.00
	891		22.50	1.20	0.00	0.18	2.59	2.59	0.00	0.00	0.00	0.00	0.00
	900		24.91	46.03	3.44	3.07	92.43	18.49	121.00	469.60	146.28	7.17	0.00
	901		24.91	45.02	3.65	3.10	95.90	19.18	119.76	498.27	148.43	7.52	0.00
	910		18.33	12.52	0.46	0.09	7.75	7.75	65.04	97.71	4.41	1.46	7.28
	911	910	18.33	2.33	0.01	0.05	0.90	0.90	16.37	13.22	2.74	0.23	1.14
	912	910	18.33	2.37	0.00	0.00	0.05	0.05	13.64	0.54	0.14	0.01	0.05
	920		17.86	17.40	2.65	0.72	47.84	47.84	68.05	438.00	36.31	6.77	33.83
	921	920	17.86	12.33	0.24	0.10	4.79	4.79	95.04	88.46	5.13	1.34	1.34
	930		17.86	15.89	2.27	0.47	38.81	38.81	66.40	387.24	23.78	5.86	5.86
	990		22.50	1.07	0.00	0.13	1.89	1.89	0.00	0.00	0.00	0.00	0.00
	991		22.50	0.93	0.00	0.05	0.71	0.71	0.00	0.00	0.00	0.00	0.00
	1000		48.00	41.50	3.66	3.06	95.43	19.09	117.20	536.22	147.06	2.14	0.00
	1001		48.00	40.04	3.96	3.05	99.66	19.93	115.37	580.33	147.68	2.28	0.00
	1010		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1011	1010	10.76	13.25	1.64	0.57	31.35	31.35	52.59	286.54	29.01	4.50	4.50
	1020		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1021	1020	10.76	28.48	0.01	0.00	0.11	0.11	91.93	0.87	0.05	0.01	0.07
	1022	1020	10.76	11.92	1.41	0.57	28.21	28.21	49.01	265.02	29.06	4.20	20.98
	1030		10.21	2.11	0.01	0.18	2.66	2.66	5.66	8.83	9.27	0.26	1.29
	1031	1030	10.21	8.53	0.03	0.01	0.64	0.64	43.58	7.73	0.55	0.12	0.59
	1040		9.56	2.73	0.01	0.39	5.81	5.81	11.65	23.04	39.86	0.90	4.49
	1090		7.42	1.62	0.00	0.42	6.03	6.03	0.00	0.00	0.00	0.00	0.00
	1091		7.10	1.15	0.00	0.19	2.73	2.73	0.00	0.00	0.00	0.00	0.00

Link Results: Queues and blocking

Time Segment	Link	Major link	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	700		0.00	8.87	36.74	24.13	0.00	0.00	0.00	0.93	6.88	0.00	0.00	0.00	
	701		0.00	9.44	39.43	23.94	0.00	0.00	0.00	0.93	7.31	0.00	0.00	0.00	
	710		0.00	9.45	13.00	72.70	0.00	0.00	0.00	1.24	6.06	0.00	0.00	0.00	
	711	710							0.00						
	712	710							0.00						
	720		0.00	2.85	13.00	21.90	0.00	0.00	0.00	0.29	2.44	1.00	0.00	1.00	
	721	720							0.00						
	730		0.00	10.10	14.00	72.15	0.00	0.00	0.00	0.98	6.27	0.00	0.00	0.00	
	731	730							0.00						
	790		0.00	1.86	20.06	9.25	0.00	0.00	0.00			0.00	0.00	0.00	
	791		0.00	0.26	16.41	1.56	0.00	0.00	0.00			0.00	0.00	0.00	
	792		0.00	0.07	16.48	0.44	0.00	0.00	0.00			34.00	0.00	34.00	
	800		0.00	38.96	37.62	103.56	0.05	0.00	0.00	15.39	24.40	0.00	0.00	0.00	
	801		0.00	40.61	39.67	102.36	0.02	0.00	0.00	15.75	25.25	0.00	0.00	0.00	
	810		0.00	5.53	7.00	79.00	0.00	1.12	1118.49	2.81	5.53	0.00	0.00	0.00	
	811	810							0.00						
	812	810							0.00						
	820		0.00	4.14	9.00	46.05	0.00	0.00	0.00	0.31	4.08	10.00	0.00	10.00	
	821	820							0.00						
	890		0.00	0.52	35.93	1.44	0.00	0.00	0.00			0.00	0.00	0.00	
	891		0.00	0.18	38.39	0.47	0.00	0.00	0.00			9.00	0.00	9.00	
	900		0.00	12.40	40.57	30.57	0.00	0.00	0.00	3.07	10.28	0.00	0.00	0.00	
	901		0.00	13.00	43.00	30.24	0.00	0.00	0.00	3.10	10.75	0.00	0.00	0.00	
	910		0.00	2.53	20.00	12.64	0.00	0.00	0.00	0.14	2.01	0.00	0.00	0.00	
	911	910							0.00						
	912	910							0.00						
	920		0.00	11.11	21.00	52.93	0.00	0.00	0.00	0.82	8.93	1.00	0.00	1.00	
	921	920							0.00						
	930		0.00	8.01	32.64	24.55	0.00	0.00	0.00	0.47	7.63	7.00	0.00	7.00	
	990		0.00	0.13	40.10	0.33	0.00	0.00	0.00			0.00	0.00	0.00	
	991		0.00	0.05	40.10	0.13	0.00	0.00	0.00			24.00	0.00	24.00	
	1000		0.00	13.58	40.22	33.77	0.00	0.00	0.00	3.06	10.83	0.00	0.00	0.00	
	1001		0.00	14.45	43.56	33.16	0.00	0.00	0.00	3.05	11.47	0.00	0.00	0.00	
	1010		0.00	6.15	18.63	33.02	0.00	0.00	0.00	0.57	6.02	13.00	0.00	13.00	
	1011	1010							0.00						
	1020		0.00	5.75	9.00	63.91	0.00	0.00	0.00	0.57	5.63	14.00	0.00	14.00	
	1021	1020							0.00						
	1022	1020							0.00						
	1030		0.00	0.84	10.00	8.38	0.00	0.00	0.00	0.19	0.61	4.00	0.00	4.00	
	1031	1030							0.00						
	1040		0.00	1.71	11.00	15.57	0.00	0.00	0.00	0.39	0.87	12.00	0.00	12.00	
	1090		0.00	0.42	12.20	3.48	0.00	0.00	0.00			5.00	0.00	5.00	
	1091		0.00	0.19	12.83	1.50	0.00	0.00	0.00			31.00	0.00	31.00	

Link Results: Journey times

Time Segment	Link	Major link	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	700		102.00	5.96	17.12	42.05
	701		109.40	6.32	17.31	41.59
	710		37.69	2.55	14.78	26.77
	711	710	2.09	0.17	11.99	33.01
	712	710	35.18	2.45	14.38	27.52
	720		10.92	0.53	20.52	18.78
	721	720	28.79	1.71	16.81	22.92
	730		44.52	2.97	14.98	25.07
	731	730	28.27	1.76	16.05	23.40
	790		126.52	4.68	27.03	14.14
	791		59.01	2.10	28.11	10.52
	792		22.29	0.77	28.97	10.30
	800		249.60	28.44	8.78	82.05
	801		263.20	29.51	8.92	80.74
	810		0.33	0.06	5.46	54.72
	811	810	0.17	0.04	4.33	69.17
	812	810	35.07	5.83	6.02	49.74
	820		15.72	1.91	8.24	35.05
	821	820	0.40	0.04	9.45	30.56
	890		194.67	6.60	29.49	24.42
	891		109.10	3.59	30.38	23.70
	900		101.80	10.03	10.15	70.95
	901		108.00	10.49	10.30	69.94
	910		25.58	1.35	19.01	30.85
	911	910	15.88	0.56	28.39	20.66
	912	910	0.81	0.03	28.33	20.70
	920		110.66	6.83	16.21	35.26
	921	920	15.63	0.83	18.93	30.19
	930		98.27	5.80	16.93	33.75
	990		89.67	2.94	30.55	23.57
	991		38.89	1.27	30.73	23.43
	1000		116.60	14.49	8.04	89.50
	1001		126.20	15.43	8.18	88.04
	1010		0.00	0.00	0.00	0.00
	1011	1010	57.41	4.00	14.35	24.01
	1020		0.00	0.00	0.00	0.00
	1021	1020	0.10	0.01	8.78	39.25
	1022	1020	57.41	3.78	15.18	22.69
	1030		29.04	1.10	26.52	12.32
	1031	1030	1.72	0.10	17.43	18.74
	1040		45.91	1.84	24.90	12.29
	1090		59.62	2.37	25.19	9.04
	1091		37.91	1.38	27.53	8.25

Link Results: Advanced

Time Segment	Link	Major link	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Mean Max Queue EoTS (PCU)	Max End of Green Queue EoTS (PCU)	Max End of Red Queue EoTS (PCU)	PCU Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	700		0.00	0.00	✓	8.87	0.94	6.89	1.00	0.00	56.92	9.51
	701		0.00	0.00	✓	9.44	0.93	7.32	1.00	0.00	59.99	10.00
	710		0.00	0.00	✓	9.46	1.25	6.06	1.00	0.00	24.46	44.34
	711	710	0.00	0.00					1.00	0.00	1.73	2.46
	712	710	0.00	0.00					1.00	0.00	20.69	26.93
	720		0.00	0.00	✓	2.85	0.29	2.44	1.00	0.00	3.60	7.14
	721	720	0.00	0.00					1.00	0.00	12.61	16.85
	730		0.00	0.00	✓	10.10	0.99	6.28	1.00	0.00	28.66	53.47
	731	730	0.00	0.00					1.00	0.00	13.49	17.56
	790		0.00	0.00	✓	1.86			1.00	0.00	10.87	10.87
	791		0.00	0.00	✓	0.26			1.00	0.00	3.63	3.63
	792		0.00	0.00	✓	0.07			1.00	0.00	1.03	1.03
	800		0.00	0.00	✓	44.14	20.57	29.58	1.00	0.00	303.15	56.34
	801		0.00	0.00	✓	45.88	21.02	30.52	1.00	0.00	312.66	4.48
	810		0.00	0.00	✓	5.63	2.91	5.63	1.00	1118.49	0.79	1119.58
	811	810	0.00	0.00					1.00	0.00	0.50	0.63
	812	810	0.00	0.00					1.00	0.00	70.99	86.14
	820		0.00	0.00	✓	4.14	0.31	4.08	1.00	0.00	23.11	35.08
	821	820	0.00	0.00					1.00	0.00	0.45	0.57
	890		0.00	0.00	✓	0.52			1.00	0.00	7.36	7.36
	891		0.00	0.00	✓	0.18			1.00	0.00	2.59	2.59
	900		0.00	0.00	✓	12.52	3.18	10.39	1.00	0.00	99.59	18.49
	901		0.00	0.00	✓	13.12	3.22	10.87	1.00	0.00	103.42	19.18
	910		0.00	0.00	✓	2.53	0.14	2.01	1.00	0.00	9.21	15.04
	911	910	0.00	0.00					1.00	0.00	1.12	2.03
	912	910	0.00	0.00					1.00	0.00	0.06	0.10
	920		0.00	0.00	✓	11.12	0.82	8.93	1.00	0.00	54.61	81.68
	921	920	0.00	0.00					1.00	0.00	6.12	6.12
	930		0.00	0.00	✓	8.01	0.47	7.63	1.00	0.00	44.67	44.67
	990		0.00	0.00	✓	0.13			1.00	0.00	1.89	1.89
	991		0.00	0.00	✓	0.05			1.00	0.00	0.71	0.71
	1000		0.00	0.00	✓	13.68	3.15	10.93	1.00	0.00	97.57	19.09
	1001		0.00	0.00	✓	14.54	3.14	11.56	1.00	0.00	101.94	19.93
	1010		0.00	0.00	✓	6.15	0.57	6.02	1.00	0.00	0.00	0.00
	1011	1010	0.00	0.00					1.00	0.00	35.85	35.85
	1020		0.00	0.00	✓	5.75	0.57	5.63	1.00	0.00	0.00	0.00
	1021	1020	0.00	0.00					1.00	0.00	0.13	0.18
	1022	1020	0.00	0.00					1.00	0.00	32.41	49.19
	1030		0.00	0.00	✓	0.84	0.19	0.61	1.00	0.00	2.92	3.96
	1031	1030	0.00	0.00					1.00	0.00	0.76	1.23
	1040		0.00	0.00	✓	1.71	0.40	0.87	1.00	0.00	6.70	10.29
	1090		0.00	0.00	✓	0.42			1.00	0.00	6.03	6.03
	1091		0.00	0.00	✓	0.19			1.00	0.00	2.73	2.73

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	Items with worst overall PRC
3	29/05/2019 18:33:25	29/05/2019 18:33:25	08:00	70	1854.96	101.16	99.22	801	2	5	801	790	80

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	99	-9	17902	1676	20.34	536.04	200.42	1854.96

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	17902	17902	0	✓	99	✓	-9	1676	1710

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	18.39	20.34	44.54	56.61	1436.40	536.04	60.11	8210.63	2550.45	131.33	200.42

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	103.56	1118.49	222.00	0.00	222.00

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
08:00-09:00	2612.04	192.62	13.56

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	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	✓	1.00	1118.49	0.00	1567.73	1854.96

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

	To				
From		A	B	C	D
	A	154.3	54.5	120.7	125.6
	B	147.2	180.4	106.1	137.6
	C	0.0	119.2	199.2	94.5
	D	98.5	127.1	187.3	187.9

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)
6	A	B	347	52.12	347	52.12
7	A	B	510	56.19	510	56.19
13	B	C	546	105.75	546	105.75
14	A	C	4	120.73	4	120.73
15	B	C	546	106.47	546	106.47
17	D	B	241	130.41	241	130.41
18	D	A	342	98.54	342	98.54
19	D	B	102	128.95	102	128.95
20	D	B	102	117.34	102	117.34
21	D	C	422	187.28	422	187.28
22	A	D	98	120.87	98	120.87
23	C	A	0	79.20	0	0.00
24	B	D	157	136.47	157	136.47
25	C	D	189	94.52	189	94.52
26	D	D	5	187.94	5	187.94
27	A	D	98	130.26	98	130.26
28	B	D	97	139.43	97	139.43
32	B	B	19	180.38	19	180.38
34	C	B	320	124.92	320	124.92
35	C	B	269	115.67	269	115.67
36	C	C	2	199.22	2	199.22
37	C	B	269	115.92	269	115.92
41	C	A	0	79.99	0	0.00
42	A	A	1	154.32	1	154.32
45	B	A	600	145.43	600	145.43
46	B	A	600	149.06	600	149.06

Final Prediction Table

Link Results

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QUEUES	
Link	Name	Major link	Traffic node	Controller stream	Phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s per cycle)	Wasted time total (s per cycle)	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (PCU)	Max end of red queue (PCU)
700			7	7	C	510	1954	27	0.00	65	38	42.05	23.64	86.26	8.87	6.88
701			7	7	C	547	2097	27	0.00	65	38	41.59	23.18	85.63	9.44	7.31
710		(710)	7	7	D	343	2088	31	0.00	71	26	26.77	14.41	101.55	9.45	6.06
711		710				19						33.01	20.64	67.66		
712		710				320						27.52	15.15	34.14		
720		(720)	7	7	D	102	2231	31	1.00	36	147	18.78	6.74	60.86	2.85	2.44
721		720				269						22.92	10.88	27.63		
730		(730)	7	7	D	427	2299	31	0.00	66	36	25.07	13.34	101.87	10.10	6.27
731		730				271						23.40	11.66	26.36		
790			7			1192	2010	70	0.00	59	52	14.14	2.20	3.15	1.86	
791			7			718	2124	70	0.00	34	166	10.52	1.28	0.00	0.26	
792			7			269	2115	70	34.00	13	608	10.30	0.98	0.00	0.07	
800			8	8	A	1248 <	2001	43	0.00	99	-9	82.05	57.22	146.80	38.96 +	24.40
801			8	8	A	1316 <	2110	43	0.00	99	-9	80.74	55.91	145.43	40.61 +	25.25
810		(810)	8	8	B	4	2182	15	0.00	86	5	54.72	45.39	129.87	5.53	5.53
811		810				2						69.17	59.82	113.81		
812		810				422						49.74	40.39	62.94		
820		(820)	8	8	B	196	2295	15	10.00	38	135	35.05	26.02	107.12	4.14	4.08
821		820				5						30.56	21.53	41.03		
890			8			973	1911	70	0.00	51	77	24.42	1.92	0.00	0.52	
891			8			545	2042	70	9.00	27	237	23.70	1.20	0.00	0.18	
900			9	9	A	509	2158	18	0.00	87	4	70.95	46.03	121.00	12.40	10.28
901			9	9	A	540	2287	18	0.00	87	3	69.94	45.02	119.76	13.00	10.75
910		(910)	9	9	B	157	1995	40	0.00	22	305	30.85	12.52	65.04	2.53	2.01
911		910				97						20.66	2.33	16.37		
912		910				5						20.70	2.37	13.64		
920		(920)	9	9	B	697	2187	40	1.00	62	45	35.26	17.40	68.05	11.11	8.93
921	(untitled)	920				98						30.19	12.33	95.04		
930	(untitled)		9	9	B	619	2187	40	7.00	48	86	33.75	15.89	66.40	8.01	7.63
990			9			448	2133	70	0.00	21	328	23.57	1.07	0.00	0.13	
991	(untitled)		9			194	2133	70	24.00	9	887	23.43	0.93	0.00	0.05	
1000			10	10	A	583	2139	21	0.00	87	4	89.50	41.50	117.20	13.58	10.83
1001			10	10	A	631	2317	21	0.00	87	4	88.04	40.04	115.37	14.45	11.47
1010	(untitled)	(1010)	10	10	B	0	2071	37	13.00	53	69	0.00	0.00	0.00	6.15	6.02
1011	(untitled)	1010				600						24.01	13.25	52.59		
1020		(1020)	10	10	B	0	2071	37	14.00	53	68	0.00	0.00	0.00	5.75	5.63
1021		1020				1						39.25	28.48	91.93		
1022		1020				600						22.69	11.92	49.01		
1030		(1030)	10	10	B	320	2247	37	4.00	28	224	12.32	2.11	5.66	0.84	0.61
1031		1030				19						18.74	8.53	43.58		
1040			10	10	B	540	2253	37	12.00	44	104	12.29	2.73	11.65	1.71	0.87
1090			10			942	2051	70	5.00	46	96	9.04	1.62	0.00	0.42	
1091			10			601	2164	70	31.00	28	224	8.25	1.15	0.00	0.19	

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	2612.04	192.62	13.56	44.54	56.61	536.04	200.42	1118.49	1854.96
Bus									
Tram									
Pedestrians									
TOTAL	2612.04	192.62	13.56	44.54	56.61	536.04	200.42	1118.49	1854.96

- | < = 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 - Phase 1B - PM 2026 inc. 1500 D

D4 - 2026 inc. 1500 D 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	Item with worst over PR
4	29/05/2019 18:33:25	29/05/2019 18:33:26	17:00	70	987.91	75.61	86.42	801	0	0	801	790	80

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
Phase 1B - PM 2026 inc. 1500 D		D4	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2026 inc. 1500 D 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)
70		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	PCU Length (m)	Calculate results for Path Segments	Generate PDM Profile Data
1	90	100	✓	✓		Simplified (TRANSYT 12)	5.75		✓

Normal Traffic parameters

Dispersion type	Dispersion coefficient	Travel time coefficient
Default	35	80

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion type	Acceleration (ms ⁻²)	Stationary time coefficient	Cruise time coefficient
Bus	1.00	Default	0.94	30	85

Tram parameters

Name	PCU Factor	Dispersion type	Acceleration (ms ⁻²)	Stationary time coefficient	Cruise time coefficient
Tram	1.00	Default	0.94	100	100

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

Optimisation type	OUTProfile accuracy	SASart temperature	SACooling factor	Random seed	Use enhanced optimisation	Auto optimisation order	Optimisation order	Master controller	Offsets relative to master controller	Master controller offset after each run
Simulated Annealing (Slow)	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05	300.00	100.00	1	✓	✓	7, 8, 9, 10			Do nothing

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
(ALL)		

Links

Links

Link	Name	Description	Traffic node	Length (m)	Has Saturation Flow	Use RR67	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Is minor shared	Major link	Allow Nearside Turn On Red
700			7	200.00	✓		1954	✓		Normal			
701			7	200.00	✓		2097	✓		Normal			
710			7	109.89	✓		2088	✓		Normal			
711				109.89						Normal	✓	710	
712				109.89						Normal	✓	710	
720			7	107.01	✓		2231	✓		Normal			
721				107.01						Normal	✓	720	
730			7	104.31	✓		2299	✓		Normal			
731				104.31						Normal	✓	730	
790			7	106.14	✓		2010			Normal			
791			7	82.17	✓		2124			Normal			
792			7	82.87	✓		2115			Normal			
800			8	200.00	✓		2001	✓		Normal			
801			8	200.00	✓		2110	✓		Normal			
810			8	83.00	✓		2182	✓		Normal			
811				83.14						Normal	✓	810	
812				83.14						Normal	✓	810	
820			8	80.23	✓		2295	✓		Normal			
821				80.23						Normal	✓	820	
890			8	200.00	✓		1911			Normal			
891			8	200.00	✓		2042			Normal			
900			9	200.00	✓		2158	✓		Normal			
901			9	200.00	✓		2287	✓		Normal			
910			9	162.90	✓		1995	✓		Normal			
911				162.90						Normal	✓	910	
912				162.90						Normal	✓	910	
920			9	158.76	✓		2187	✓		Normal			
921	(untitled)			158.76						Normal	✓	920	
930	(untitled)		9	158.76	✓		2187	✓		Normal			
990			9	200.00	✓		2133			Normal			
991	(untitled)		9	200.00	✓		2133			Normal			
1000			10	200.00	✓		2139	✓		Normal			
1001			10	200.00	✓		2317	✓		Normal			
1010	(untitled)		10	95.68	✓		2071	✓		Normal			
1011	(untitled)			95.68						Normal	✓	1010	
1020			10	95.68	✓		2071	✓		Normal			
1021				95.68						Normal	✓	1020	
1022				95.68						Normal	✓	1020	
1030			10	90.73	✓		2247	✓		Normal			
1031				90.73						Normal	✓	1030	
1040			10	85.01	✓		2253	✓		Normal			
1090			10	63.28	✓		2051			Normal			
1091			10	63.07	✓		2164			Normal			

Modelling

Link	Traffic model	Stop weighting (%)	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Queue limit (PCU)	Excess queue penalty (£)	Has degree of saturation limit
700	NetworkDefault	0	20	100		0.00				
701	NetworkDefault	0	20	100		0.00				
710	NetworkDefault	500	100	100		13.00	✓	10.00	1000.00	
711	NetworkDefault	500	100	100					0.00	
712	NetworkDefault	500	100	100					0.00	
720	NetworkDefault	500	100	100		13.00	✓	10.00	1000.00	
721	NetworkDefault	500	100	100					0.00	
730	NetworkDefault	500	100	100		14.00	✓	11.00	1000.00	
731	NetworkDefault	500	100	100					0.00	
790	NetworkDefault	100	100	100		0.00				
791	NetworkDefault	100	100	100		0.00				
792	NetworkDefault	100	100	100		0.00				
800	NetworkDefault	0	20	100		0.00				
801	NetworkDefault	20	0	100		0.00				
810	NetworkDefault	500	100	100		7.00	✓	4.00	1000.00	
811	NetworkDefault	500	100	100					0.00	
812	NetworkDefault	500	100	100					0.00	
820	NetworkDefault	500	100	100		9.00	✓	5.00	1000.00	
821	NetworkDefault	500	100	100					0.00	
890	NetworkDefault	100	100	100		0.00				
891	NetworkDefault	100	100	100		0.00				
900	NetworkDefault	0	20	100		0.00				
901	NetworkDefault	0	20	100		0.00				
910	NetworkDefault	500	100	100		20.00				
911	NetworkDefault	500	100	100						
912	NetworkDefault	500	100	100						
920	NetworkDefault	500	100	100		21.00				
921	NetworkDefault	100	100	100						
930	NetworkDefault	100	100	100		0.00				
990	NetworkDefault	100	100	100		0.00				
991	NetworkDefault	100	100	100		0.00				
1000	NetworkDefault	0	20	100		0.00				
1001	NetworkDefault	0	20	100		0.00				
1010	NetworkDefault	500	100	100		0.00	✓	7.00	1000.00	
1011	NetworkDefault	100	100	100					0.00	
1020	NetworkDefault	500	100	100		9.00	✓	7.00	1000.00	
1021	NetworkDefault	500	100	100					0.00	
1022	NetworkDefault	500	100	100					0.00	
1030	NetworkDefault	500	100	100		10.00	✓	8.00	1000.00	
1031	NetworkDefault	500	100	100					0.00	
1040	NetworkDefault	500	100	100		11.00	✓	8.00	1000.00	
1090	NetworkDefault	100	100	100		0.00				
1091	NetworkDefault	100	100	100		0.00				

Modelling - Normal traffic - Advanced

Link	Dispersion type for Normal Traffic	Initial queue (PCU)	Auto cycle time	Cycle time
700	NetworkDefault	0.00	✓	70
701	NetworkDefault	0.00	✓	70
710	NetworkDefault	0.00	✓	70
711	NetworkDefault			
712	NetworkDefault			
720	NetworkDefault	0.00	✓	70
721	NetworkDefault			
730	NetworkDefault	0.00	✓	70
731	NetworkDefault			
790	NetworkDefault	0.00	✓	70
791	NetworkDefault	0.00	✓	70
792	NetworkDefault	0.00	✓	70
800	NetworkDefault	0.00	✓	70
801	NetworkDefault	0.00	✓	70
810	NetworkDefault	0.00	✓	70
811	NetworkDefault			
812	NetworkDefault			
820	NetworkDefault	0.00	✓	70
821	NetworkDefault			
890	NetworkDefault	0.00	✓	70
891	NetworkDefault	0.00	✓	70
900	NetworkDefault	0.00	✓	70
901	NetworkDefault	0.00	✓	70
910	NetworkDefault	0.00	✓	70
911	NetworkDefault			
912	NetworkDefault			
920	NetworkDefault	0.00	✓	70
921	NetworkDefault			
930	NetworkDefault	0.00	✓	70
990	NetworkDefault	0.00	✓	70
991	NetworkDefault	0.00	✓	70
1000	NetworkDefault	0.00	✓	70
1001	NetworkDefault	0.00	✓	70
1010	NetworkDefault	0.00	✓	70
1011	NetworkDefault			
1020	NetworkDefault	0.00	✓	70
1021	NetworkDefault			
1022	NetworkDefault			
1030	NetworkDefault	0.00	✓	70
1031	NetworkDefault			
1040	NetworkDefault	0.00	✓	70
1090	NetworkDefault	0.00	✓	70
1091	NetworkDefault	0.00	✓	70

Flows

Link	Total flow (PCU/hr)	PCU Factor
700	635	1.00
701	682	1.00
710	269	1.00
711	21	1.00
712	380	1.00
720	100	1.00
721	431	1.00
730	223	1.00
731	432	1.00
790	1305	1.00
791	939	1.00
792	431	1.00
800	988	1.00
801	1042	1.00
810	2	1.00
811	1	1.00
812	221	1.00
820	271	1.00
821	2	1.00
890	597	1.00
891	373	1.00
900	814	1.00
901	862	1.00
910	243	1.00
911	134	1.00
912	2	1.00
920	557	1.00
921	137	1.00
930	485	1.00
990	813	1.00
991	228	1.00
1000	390	1.00
1001	423	1.00
1010	0	1.00
1011	464	1.00
1020	0	1.00
1021	3	1.00
1022	464	1.00
1030	380	1.00
1031	21	1.00
1040	862	1.00
1090	685	1.00
1091	467	1.00

Flows - Advanced

Link	Detectors
(ALL)	

Signals

Link	Controller stream	Phase	Second phase enabled
700	7	C	
701	7	C	
710	7	D	
711			
712			
720	7	D	
721			
730	7	D	
731			
800	8	A	
801	8	A	
810	8	B	
811			
812			
820	8	B	
821			
900	9	A	
901	9	A	
910	9	B	
911			
912			
920	9	B	
921			
930	9	B	
1000	10	A	
1001	10	A	
1010	10	B	
1011			
1020	10	B	
1021			
1022			
1030	10	B	
1031			
1040	10	B	

Entry Sources

Link	Cruise time (seconds)	Cruise speed (kph)
700	18.41	39.10
701	18.41	39.10
800	24.83	29.00
801	24.83	29.00
900	24.91	28.90
901	24.91	28.90
1000	48.00	15.00
1001	48.00	15.00

Sources

Link	Source	Source type	Source link	Destination link	Cruise time (seconds)	Cruise speed (kph)	Total flow (PCU/hr)
710	1	Link	1000	710	12.36	32.00	169
711	1	Link	1031	711	12.36	32.00	21
712	1	Link	1030	712	12.36	32.00	380
720	1	Link	1001	720	12.04	32.00	100
721	1	Link	1040	721	12.04	32.00	431
730	1	Link	1001	730	11.73	32.00	223
731	1	Link	1040	731	11.73	32.00	432
790	1	Link	710	790	11.94	32.00	269
791	1	Link	720	791	9.24	32.00	100
792	1	Link	731	792	9.32	32.00	431
810	1	Link	701	810	9.34	32.00	2
811	1	Link	731	811	9.35	32.00	1
812	1	Link	730	812	9.35	32.00	221
820	1	Link	701	820	9.03	32.00	271
821	1	Link	730	821	9.03	32.00	2
890	1	Link	810	890	22.50	32.00	2
891	1	Link	800	891	22.50	32.00	373
910	1	Link	800	910	18.33	32.00	243
911	1	Link	820	911	18.33	32.00	134
912	1	Link	821	912	18.33	32.00	2
920	1	Link	801	920	17.86	32.00	557
921	1	Link	820	921	17.86	32.00	137
930	1	Link	801	930	17.86	32.00	485
990	1	Link	910	990	22.50	32.00	243
991	1	Link	921	991	22.50	32.00	134
1010	1	Link	900	1010	10.76	32.00	0
1011	1	Link	920	1011	10.76	32.00	464
1020	1	Link	900	1020	10.76	32.00	0
1021	1	Link	921	1021	10.76	32.00	3
1022	1	Link	930	1022	10.76	32.00	464
1030	1	Link	900	1030	10.21	32.00	380
1031	1	Link	930	1031	10.21	32.00	21
1040	1	Link	901	1040	9.56	32.00	862
1090	1	Link	1000	1090	7.12	32.00	221
1091	1	Link	1020	1091	7.10	32.00	0
710	2	Link	1001	710	12.36	32.00	100
790	2	Link	711	790	11.94	32.00	21
791	2	Link	721	791	9.24	32.00	431
890	2	Link	800	890	22.50	32.00	373
990	2	Link	900	990	22.50	32.00	434
991	2	Link	920	991	22.50	32.00	94
1090	2	Link	1010	1090	7.12	32.00	0
1091	2	Link	1021	1091	7.10	32.00	3
790	3	Link	700	790	11.94	32.00	635
791	3	Link	701	791	9.24	32.00	409
890	3	Link	812	890	22.50	32.00	221
990	3	Link	911	990	22.50	32.00	134
1090	3	Link	1011	1090	7.59	30.00	464
1091	3	Link	1022	1091	7.10	32.00	464
790	4	Link	712	790	11.94	32.00	380
890	4	Link	811	890	22.50	32.00	1
990	4	Link	912	990	22.50	32.00	2

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				
		A	B	C	D
From	A	3	1044	2	268
	B	927	21	745	337
	C	0	1241	1	434
	D	221	369	221	2

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	A	(untitled)	701, 700	1090, 1091	#0000FF
	B	(untitled)	801, 800	792, 791, 790	#FF0000
	C	(untitled)	900, 901	891, 890	#00FF00
	D	(untitled)	1000, 1001	990, 991	#FFFF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
1	6		A	B	701, 791	Normal	409
	7		A	B	700, 790	Normal	635
	13		B	C	800, 891	Normal	373
	14		A	C	701, 810, 890	Normal	2
	15		B	C	800, 890	Normal	373
	17		D	B	1000, 710, 790	Normal	169
	18		D	A	1000, 1090	Normal	221
	19		D	B	1001, 710, 790	Normal	100
	20		D	B	1001, 720, 791	Normal	100
	21		D	C	1001, 730, 812, 890	Normal	221
	22		A	D	701, 820, 911, 990	Normal	134
	23		C	A	900, 1020, 1091	Normal	0
	24		B	D	800, 910, 990	Normal	243
	25		C	D	900, 990	Normal	434
	26		D	D	1001, 730, 821, 912, 990	Normal	2
	27		A	D	701, 820, 921, 991	Normal	134
	28		B	D	801, 920, 991	Normal	94
	32		B	B	801, 930, 1031, 711, 790	Normal	21
	34		C	B	900, 1030, 712, 790	Normal	380
	35		C	B	901, 1040, 721, 791	Normal	431
	36		C	C	901, 1040, 731, 811, 890	Normal	1
	37		C	B	901, 1040, 731, 792	Normal	431
	41		C	A	900, 1010, 1090	Normal	0
	42		A	A	701, 820, 921, 1021, 1091	Normal	3
	45		B	A	801, 930, 1022, 1091	Normal	464
	46		B	A	801, 920, 1011, 1090	Normal	464

Link Results

Link Results: Vehicle summary

Time Segment	Link	Major link	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (PCU)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	700		84	7	635	1954	26	34.11	13.68	37.23	17.09	0.00	17.09
	701		84	7	682	2097	26	33.21	14.52	36.82	17.87	0.00	17.87
	710		68	32	269	2088	32	6.60	9.37	72.04	7.01	6.17	13.18
	711	710			21			23.30			1.93	1.00	2.93
	712	710			380			16.56			24.81	23.79	48.60
	720		50	78	100	2231	32	4.24	8.09	62.21	1.67	1.65	3.32
	721	720			431			15.83			26.87	27.14	54.01
	730		60	49	223	2299	32	5.31	9.76	69.69	4.67	5.64	10.31
	731	730			431			16.35			27.83	27.03	54.86
	790		65	39	1305	2010	70	2.55	2.62	13.06	13.11	0.69	13.80
	791		44	104	939	2124	70	1.52	2.20	13.44	5.64	0.32	5.95
	792		20	342	431	2115	70	1.08	2.49	15.13	1.83	0.12	1.95
	800		86	4	988	2001	39	23.84	19.25	51.17	18.58	0.00	18.58
	801		86	4	1042	2110	39	23.30	20.14	50.78	0.00	2.31	2.31
	810		36	150	2	2182	19	39.81	3.94	56.31	0.31	0.15	0.47
	811	810			1			13.25			0.05	0.06	0.11
	812	810			221			7.72			6.74	11.53	18.27
	820		42	116	271	2295	19	43.74	5.66	62.92	46.77	20.61	345.66
	821	820			2			12.60			0.10	0.13	0.23
	890		31	188	597	1911	70	1.37	0.23	0.63	3.22	0.00	3.22
	891		18	393	372	2042	70	1.08	0.11	0.29	1.58	0.00	1.58
	900		85	6	814	2158	30	29.67	16.78	41.37	19.06	0.00	19.06
	901		85	6	862	2287	30	28.95	17.60	40.94	19.69	0.00	19.69
	910		46	96	243	1995	28	13.51	5.05	25.27	12.95	7.69	20.65
	911	910			134			26.25			13.88	10.04	23.93
	912	910			2			22.92			0.18	0.15	0.33
	920		77	17	557	2187	28	18.32	10.91	51.94	40.28	25.95	66.22
	921	920			137			33.41			18.06	2.18	20.24
	930		53	68	485	2187	28	12.76	3.87	11.87	24.39	2.61	26.99
	990		38	136	813	2133	70	1.36	0.31	0.77	4.37	0.00	4.37
	991		11	742	228	2133	70	0.94	0.06	0.15	0.85	0.00	0.85
	1000		85	6	390	2139	14	50.87	9.91	24.63	15.65	0.00	15.65
	1001		85	6	423	2317	14	49.26	10.55	24.23	16.44	0.00	16.44
	1010		35	158	0	2071	44	0.00	6.70	35.96	0.00	0.00	0.00
	1011	1010			464			5.21			9.53	4.00	13.54
	1020		35	157	0	2071	44	0.00	6.85	76.15	0.00	0.00	0.00
	1021	1020			3			9.22			0.11	0.21	0.32
	1022	1020			464			6.66			12.19	22.62	34.81
	1030		28	224	380	2247	44	6.79	2.16	21.58	10.18	7.08	17.26
	1031	1030			21			5.76			0.48	0.77	1.25
	1040		60	51	862	2253	44	8.53	7.06	64.18	29.00	17.51	46.51
	1090		33	170	684	2051	70	1.32	0.25	2.05	3.55	0.00	3.55
	1091		22	317	467	2164	70	1.06	0.14	1.07	1.95	0.00	1.95

Link Results: Flows and signals

Time Segment	Link	Major link	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))	Effective green (s (per cycle))
17:00-18:00	700		635	635	0		1954	754	84		7	0.00	26	27
	701		682	682	0		2097	809	84		7	0.00	26	27
	710		269	269	0		2088	984	68		32	1.34	32	33
	711	710	21	21	0						32	1.29		
	712	710	380	380	0						32	0.89		
	720		100	100	0		2231	1052	50		78	1.35	32	33
	721	720	431	431	0						78	0.85		
	730		223	223	0		2299	1084	60		49	1.36	32	33
	731	730	431	431	0	✓					49	0.85		
	790		1305	1305	0		2010	2010	65		39	0.39	70	70
	791		939	939	0		2124	2124	44		104	0.51	70	70
	792		431	431	0		2115	2115	20		342	1.17	70	70
	800		988	988	0		2001	1143	86		4	0.00	39	40
	801		1042	1042	0		2110	1206	86		4	0.00	39	40
	810		2	2	0		2182	623	36		150	1.14	19	20
	811	810	1	1	0						150	1.17		
	812	810	221	221	0						150	1.38		
	820		271	271	0		2295	656	42		116	1.14	19	20
	821	820	2	2	0						116	1.38		
	890		597	597	0	✓	1911	1911	31		188	0.34	70	70
	891		372	372	0		2042	2042	18		393	0.69	70	70
	900		814	814	0		2158	956	85		6	0.00	30	31
	901		862	862	0		2287	1013	85		6	0.00	30	31
	910		243	243	0		1995	827	46		96	0.72	28	29
	911	910	134	134	0						96	1.32		
	912	910	2	2	0						96	1.42		
	920		557	557	0		2187	906	77		17	0.73	28	29
	921	920	137	137	0						17	1.33		
	930		485	485	0	✓	2187	906	53		68	0.73	28	29
	990		813	813	0		2133	2133	38		136	0.31	70	70
	991		228	228	0		2133	2133	11		742	1.03	70	70
	1000		390	390	0		2139	458	85		6	0.00	14	15
	1001		423	423	0		2317	497	85		6	0.00	14	15
	1010		0	0	0		2071	1331	35		158	0.00	44	45
	1011	1010	464	464	0						158	1.02		
	1020		0	0	0		2071	1331	35		157	0.00	44	45
	1021	1020	3	3	0						157	1.51		
	1022	1020	464	464	0						157	1.02		
	1030		380	380	0		2247	1445	28		224	1.03	44	45
	1031	1030	21	21	0						224	1.03		
	1040		862	862	0		2253	1448	60		51	1.03	44	45
	1090		684	684	0		2051	2051	33		170	0.85	70	70
	1091		467	467	0	✓	2164	2164	22		317	1.26	70	70

Link Results: Stops and delays

Time Segment	Link	Major link	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	700		18.41	34.11	3.45	2.56	85.43	17.09	106.33	549.92	125.26	14.38	0.00
	701		18.41	33.21	3.71	2.58	89.34	17.87	105.18	590.76	126.58	15.28	0.00
	710		12.36	6.60	0.07	0.43	7.01	7.01	32.14	65.06	21.42	1.23	6.17
	711	710	12.36	23.30	0.10	0.03	1.93	1.93	66.54	12.30	1.67	0.20	1.00
	712	710	12.36	16.56	1.15	0.60	24.81	24.81	87.81	303.28	30.24	4.76	23.79
	720		12.04	4.24	0.02	0.10	1.67	1.67	23.21	18.33	4.86	0.33	1.65
	721	720	12.04	15.83	1.48	0.41	26.87	26.87	88.39	359.57	20.93	5.43	27.14
	730		11.73	5.31	0.07	0.26	4.67	4.67	35.41	65.88	13.13	1.13	5.64
	731	730	11.73	16.35	1.46	0.50	27.83	27.83	87.81	353.52	25.38	5.41	27.03
	790		11.94	2.55	0.00	0.92	13.11	13.11	3.69	1.06	47.04	0.69	0.69
	791		9.24	1.52	0.00	0.40	5.64	5.64	2.35	1.83	20.27	0.32	0.32
	792		9.32	1.08	0.00	0.13	1.83	1.83	1.99	2.01	6.55	0.12	0.12
	800		24.83	23.84	3.49	3.06	92.92	18.58	95.33	790.66	151.17	11.04	0.00
	801		24.83	23.30	3.68	3.07	95.76	0.00	94.62	834.02	151.93	11.55	2.31
	810		9.34	39.81	0.02	0.00	0.31	0.31	106.32	2.00	0.13	0.03	0.15
	811	810	9.35	13.25	0.00	0.00	0.05	0.05	87.95	0.82	0.06	0.01	0.06
	812	810	9.35	7.72	0.20	0.28	6.74	6.74	73.09	147.64	14.00	2.31	11.53
	820		9.03	43.74	2.94	0.35	46.77	46.77	106.60	271.10	17.88	4.12	20.61
	821	820	9.03	12.60	0.00	0.00	0.10	0.10	92.15	1.71	0.13	0.03	0.13
	890		22.50	1.37	0.00	0.23	3.22	3.22	0.00	0.00	0.00	0.00	0.00
	891		22.50	1.08	0.00	0.11	1.58	1.58	0.00	0.00	0.00	0.00	0.00
	900		24.91	29.67	3.94	2.76	95.28	19.06	102.55	698.58	136.15	9.71	0.00
	901		24.91	28.95	4.18	2.76	98.44	19.69	101.58	739.47	136.12	10.19	0.00
	910		18.33	13.51	0.64	0.27	12.95	12.95	44.37	94.10	13.75	1.54	7.69
	911	910	18.33	26.25	0.83	0.15	13.88	13.88	105.05	133.24	7.58	2.01	10.04
	912	910	18.33	22.92	0.01	0.00	0.18	0.18	104.32	1.97	0.11	0.03	0.15
	920		17.86	18.32	1.54	1.30	40.28	40.28	65.25	298.95	64.79	5.19	25.95
	921	920	17.86	33.41	0.95	0.32	18.06	18.06	111.44	136.81	15.93	2.18	2.18
	930		17.86	12.76	1.14	0.57	24.39	24.39	37.70	153.65	29.04	2.61	2.61
	990		22.50	1.36	0.00	0.31	4.37	4.37	0.00	0.00	0.00	0.00	0.00
	991		22.50	0.94	0.00	0.06	0.85	0.85	0.00	0.00	0.00	0.00	0.00
	1000		48.00	50.87	2.86	2.65	78.26	15.65	126.59	368.77	124.94	1.55	0.00
	1001		48.00	49.26	3.11	2.68	82.20	16.44	124.66	400.06	127.27	1.65	0.00
	1010		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1011	1010	10.76	5.21	0.40	0.27	9.53	9.53	60.55	267.06	13.63	4.00	4.00
	1020		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1021	1020	10.76	9.22	0.01	0.00	0.11	0.11	98.37	2.86	0.09	0.04	0.21
	1022	1020	10.76	6.66	0.59	0.27	12.19	12.19	68.43	303.51	13.67	4.52	22.62
	1030		10.21	6.79	0.54	0.18	10.18	10.18	26.13	89.95	9.30	1.42	7.08
	1031	1030	10.21	5.76	0.02	0.01	0.48	0.48	51.50	10.30	0.51	0.15	0.77
	1040		9.56	8.53	1.31	0.73	29.00	29.00	28.48	208.23	37.30	3.50	17.51
	1090		7.44	1.32	0.00	0.25	3.55	3.55	0.00	0.00	0.00	0.00	0.00
	1091		7.10	1.06	0.00	0.14	1.95	1.95	0.00	0.00	0.00	0.00	0.00

Link Results: Queues and blocking

Time Segment	Link	Major link	Initial queue (PCU)	Mean max queue (PCU)	Max queue storage (PCU)	Utilised storage (%)	Average storage excess queue (PCU)	Average limit excess queue (PCU)	Excess queue penalty (£ per hr)	Max end of green queue (PCU)	Max end of red queue (PCU)	Wasted time starvation (s (per cycle))	Wasted time blocking back (s (per cycle))	Wasted time total (s (per cycle))	Estimated blocking
17:00-18:00	700		0.00	13.68	36.74	37.23	0.00	0.00	0.00	2.56	10.15	0.00	0.00	0.00	
	701		0.00	14.52	39.43	36.82	0.00	0.00	0.00	2.58	10.73	0.00	0.00	0.00	
	710		0.00	9.37	13.00	72.04	0.00	0.00	0.00	1.06	6.12	0.00	0.00	0.00	
	711	710							0.00						
	712	710							0.00						
	720		0.00	8.09	13.00	62.21	0.00	0.00	0.00	0.51	6.28	0.00	0.00	0.00	
	721	720							0.00						
	730		0.00	9.76	14.00	69.69	0.00	0.00	0.00	0.76	6.72	0.00	0.00	0.00	
	731	730							0.00						
	790		0.00	2.62	20.06	13.06	0.00	0.00	0.00			0.00	0.00	0.00	
	791		0.00	2.20	16.41	13.44	0.00	0.00	0.00			0.00	0.00	0.00	
	792		0.00	2.49	16.48	15.13	0.00	0.00	0.00			33.00	0.00	33.00	
	800		0.00	19.25	37.62	51.17	0.00	0.00	0.00	3.06	11.29	0.00	0.00	0.00	
	801		0.00	20.14	39.67	50.78	0.00	0.00	0.00	3.07	11.75	0.00	0.00	0.00	
	810		0.00	3.94	7.00	56.31	0.00	0.00	0.00	0.28	2.42	4.00	0.00	4.00	
	811	810							0.00						
	812	810							0.00						
	820		0.00	5.66	9.00	62.92	0.00	0.28	278.27	0.36	5.65	11.00	0.00	11.00	
	821	820							0.00						
	890		0.00	0.23	35.93	0.63	0.00	0.00	0.00			0.00	0.00	0.00	
	891		0.00	0.11	38.39	0.29	0.00	0.00	0.00			17.00	0.00	17.00	
	900		0.00	16.78	40.57	41.37	0.00	0.00	0.00	2.76	11.58	0.00	0.00	0.00	
	901		0.00	17.60	43.00	40.94	0.00	0.00	0.00	2.76	12.10	0.00	0.00	0.00	
	910		0.00	5.05	20.00	25.27	0.00	0.00	0.00	0.42	4.30	0.00	0.00	0.00	
	911	910							0.00						
	912	910							0.00						
	920		0.00	10.91	21.00	51.94	0.00	0.00	0.00	1.62	7.02	0.00	0.00	0.00	
	921	920							0.00						
	930		0.00	3.87	32.64	11.87	0.00	0.00	0.00	0.57	2.98	0.00	0.00	0.00	
	990		0.00	0.31	40.10	0.77	0.00	0.00	0.00			0.00	0.00	0.00	
	991		0.00	0.06	40.10	0.15	0.00	0.00	0.00			33.00	0.00	33.00	
	1000		0.00	9.91	40.22	24.63	0.00	0.00	0.00	2.65	8.61	0.00	0.00	0.00	
	1001		0.00	10.55	43.56	24.23	0.00	0.00	0.00	2.68	9.14	0.00	0.00	0.00	
	1010		0.00	6.70	18.63	35.96	0.00	0.00	0.00	0.27	2.68	18.00	0.00	18.00	
	1011	1010							0.00						
	1020		0.00	6.85	9.00	76.15	0.00	0.00	0.00	0.27	3.98	18.00	0.00	18.00	
	1021	1020							0.00						
	1022	1020							0.00						
	1030		0.00	2.16	10.00	21.58	0.00	0.00	0.00	0.19	2.12	18.00	0.00	18.00	
	1031	1030							0.00						
	1040		0.00	7.06	11.00	64.18	0.00	0.00	0.00	0.80	4.65	15.00	0.00	15.00	
	1090		0.00	0.25	12.20	2.05	0.00	0.00	0.00			20.00	0.00	20.00	
	1091		0.00	0.14	12.83	1.07	0.00	0.00	0.00			40.00	0.00	40.00	

Link Results: Journey times

Time Segment	Link	Major link	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
17:00-18:00	700		127.00	9.26	13.71	52.52
	701		136.40	9.78	13.95	51.63
	710		29.57	1.42	20.86	18.96
	711	710	2.31	0.21	11.09	35.66
	712	710	41.74	3.05	13.68	28.92
	720		10.69	0.45	23.67	16.27
	721	720	46.07	3.33	13.83	27.86
	730		23.28	1.06	22.03	17.05
	731	730	45.01	3.37	13.37	28.09
	790		138.50	5.25	26.37	14.49
	791		77.18	2.81	27.48	10.77
	792		35.68	1.24	28.69	10.40
	800		197.60	13.36	14.79	48.67
	801		208.40	13.93	14.96	48.13
	810		0.17	0.03	6.08	49.15
	811	810	0.08	0.01	13.24	22.61
	812	810	18.39	1.05	17.53	17.08
	820		21.75	3.97	5.47	52.77
	821	820	0.16	0.01	13.36	21.63
	890		119.32	3.96	30.16	23.87
	891		74.49	2.44	30.54	23.58
	900		162.80	12.34	13.19	54.59
	901		172.40	12.90	13.37	53.87
	910		39.60	2.15	18.42	31.84
	911	910	21.84	1.66	13.16	44.58
	912	910	0.33	0.02	14.22	41.25
	920		88.50	5.60	15.80	36.18
	921	920	21.76	1.95	11.15	51.27
	930		76.93	4.12	18.67	30.62
	990		162.66	5.39	30.17	23.86
	991		45.59	1.48	30.71	23.44
	1000		78.00	10.71	7.28	98.87
	1001		84.60	11.43	7.40	97.26
	1010		0.00	0.00	0.00	0.00
	1011	1010	44.35	2.06	21.56	15.98
	1020		0.00	0.00	0.00	0.00
	1021	1020	0.29	0.02	17.24	19.98
	1022	1020	44.35	2.24	19.76	17.43
	1030		34.46	1.79	19.21	17.00
	1031	1030	1.91	0.09	20.45	15.97
	1040		73.28	4.33	16.92	18.09
	1090		43.31	1.66	26.01	8.76
	1091		29.42	1.06	27.84	8.16

Link Results: Advanced

Time Segment	Link	Major link	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Mean Max Queue EoTS (PCU)	Max End of Green Queue EoTS (PCU)	Max End of Red Queue EoTS (PCU)	PCU Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
17:00-18:00	700		0.00	0.00	✓	13.73	2.62	10.20	1.00	0.00	99.81	17.09
	701		0.00	0.00	✓	14.57	2.63	10.78	1.00	0.00	104.62	17.87
	710		0.00	0.00	✓	9.37	1.06	6.13	1.00	0.00	8.24	13.18
	711	710	0.00	0.00					1.00	0.00	2.13	2.93
	712	710	0.00	0.00					1.00	0.00	29.57	48.60
	720		0.00	0.00	✓	8.09	0.51	6.28	1.00	0.00	2.00	3.32
	721	720	0.00	0.00					1.00	0.00	32.30	54.01
	730		0.00	0.00	✓	9.76	0.76	6.72	1.00	0.00	5.80	10.31
	731	730	0.00	0.00					1.00	0.00	33.24	54.86
	790		0.00	0.00	✓	2.62			1.00	0.00	13.80	13.80
	791		0.00	0.00	✓	2.20			1.00	0.00	5.95	5.95
	792		0.00	0.00	✓	2.49			1.00	0.00	1.95	1.95
	800		0.00	0.00	✓	19.31	3.12	11.35	1.00	0.00	103.95	18.58
	801		0.00	0.00	✓	20.20	3.12	11.81	1.00	0.00	107.32	2.31
	810		0.00	0.00	✓	3.94	0.28	2.42	1.00	0.00	0.34	0.47
	811	810	0.00	0.00					1.00	0.00	0.06	0.11
	812	810	0.00	0.00					1.00	0.00	9.04	18.27
	820		0.00	0.00	✓	5.66	0.36	5.65	1.00	278.27	50.90	345.66
	821	820	0.00	0.00					1.00	0.00	0.13	0.23
	890		0.00	0.00	✓	0.23			1.00	0.00	3.22	3.22
	891		0.00	0.00	✓	0.11			1.00	0.00	1.58	1.58
	900		0.00	0.00	✓	16.84	2.82	11.63	1.00	0.00	104.99	19.06
	901		0.00	0.00	✓	17.65	2.81	12.14	1.00	0.00	108.63	19.69
	910		0.00	0.00	✓	5.05	0.42	4.30	1.00	0.00	14.49	20.65
	911	910	0.00	0.00					1.00	0.00	15.89	23.93
	912	910	0.00	0.00					1.00	0.00	0.21	0.33
	920		0.00	0.00	✓	10.92	1.63	7.03	1.00	0.00	45.47	66.22
	921	920	0.00	0.00					1.00	0.00	20.24	20.24
	930		0.00	0.00	✓	3.87	0.57	2.98	1.00	0.00	26.99	26.99
	990		0.00	0.00	✓	0.31			1.00	0.00	4.37	4.37
	991		0.00	0.00	✓	0.06			1.00	0.00	0.85	0.85
	1000		0.00	0.00	✓	10.00	2.74	8.70	1.00	0.00	79.80	15.65
	1001		0.00	0.00	✓	10.65	2.77	9.24	1.00	0.00	83.85	16.44
	1010		0.00	0.00	✓	6.70	0.27	2.68	1.00	0.00	0.00	0.00
	1011	1010	0.00	0.00					1.00	0.00	13.54	13.54
	1020		0.00	0.00	✓	6.85	0.27	3.98	1.00	0.00	0.00	0.00
	1021	1020	0.00	0.00					1.00	0.00	0.15	0.32
	1022	1020	0.00	0.00					1.00	0.00	16.71	34.81
	1030		0.00	0.00	✓	2.16	0.19	2.12	1.00	0.00	11.60	17.26
	1031	1030	0.00	0.00					1.00	0.00	0.63	1.25
	1040		0.00	0.00	✓	7.06	0.80	4.65	1.00	0.00	32.50	46.51
	1090		0.00	0.00	✓	0.25			1.00	0.00	3.55	3.55
	1091		0.00	0.00	✓	0.14			1.00	0.00	1.95	1.95

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	Item with worst over PR
4	29/05/2019 18:33:25	29/05/2019 18:33:26	17:00	70	987.91	75.61	86.42	801	0	0	801	790	80

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Actual green (s per cycle)	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	86	4	17775	1687	15.31	480.48	229.16	987.91

Network Results: Flows and signals

Time Segment	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s per cycle)	Effective green (s per cycle)
17:00-18:00	17775	17775	0	✓	86		4	1687	1721

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	17.70	15.31	43.91	31.70	1073.73	480.48	55.06	8278.97	1508.79	128.65	229.16

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)
17:00-18:00	76.15	278.27	318.00	0.00	318.00

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
17:00-18:00	2580.15	163.01	15.83

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	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	✓	1.00	278.27	0.00	1202.38	987.91

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

	To				
From		A	B	C	D
	A	183.8	65.2	124.6	176.0
	B	106.7	144.9	72.4	105.3
	C	0.0	111.9	146.5	78.5
	D	107.6	129.7	155.3	201.0

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)
6	A	B	409	62.39	409	62.39
7	A	B	635	67.01	635	67.01
13	B	C	373	72.25	373	72.25
14	A	C	2	124.64	2	124.64
15	B	C	373	72.54	373	72.54
17	D	B	169	132.32	169	132.32
18	D	A	221	107.63	221	107.63
19	D	B	100	130.72	100	130.72
20	D	B	100	124.30	100	124.30
21	D	C	221	155.25	221	155.25
22	A	D	134	172.83	134	172.83
23	C	A	0	62.74	0	0.00
24	B	D	243	104.37	243	104.37
25	C	D	434	78.45	434	78.45
26	D	D	2	201.05	2	201.05
27	A	D	134	179.10	134	179.10
28	B	D	94	107.75	94	107.75
32	B	B	21	144.87	21	144.87
34	C	B	380	115.00	380	115.00
35	C	B	431	110.59	431	110.59
36	C	C	1	146.52	1	146.52
37	C	B	431	110.44	431	110.44
41	C	A	0	63.34	0	0.00
42	A	A	3	183.80	3	183.80
45	B	A	464	104.33	464	104.33
46	B	A	464	109.04	464	109.04

Final Prediction Table

Link Results

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QUEUES	
Link	Name	Major link	Traffic node	Controller stream	Phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (PCU)	Max end of red queue (PCU)
700			7	7	C	635	1954	26	0.00	84	7	52.52	34.11	106.33	13.68	10.15
701			7	7	C	682	2097	26	0.00	84	7	51.63	33.21	105.18	14.52	10.73
710		(710)	7	7	D	269	2088	32	0.00	68	32	18.96	6.60	32.14	9.37	6.12
711		710				21						35.66	23.30	66.54		
712		710				380						28.92	16.56	87.81		
720		(720)	7	7	D	100	2231	32	0.00	50	78	16.27	4.24	23.21	8.09	6.28
721		720				431						27.86	15.83	88.39		
730		(730)	7	7	D	223	2299	32	0.00	60	49	17.05	5.31	35.41	9.76	6.72
731		730				431						28.09	16.35	87.81		
790			7			1305	2010	70	0.00	65	39	14.49	2.55	3.69	2.62	
791			7			939	2124	70	0.00	44	104	10.77	1.52	2.35	2.20	
792			7			431	2115	70	33.00	20	342	10.40	1.08	1.99	2.49	
800			8	8	A	988	2001	39	0.00	86	4	48.67	23.84	95.33	19.25	11.29
801			8	8	A	1042	2110	39	0.00	86	4	48.13	23.30	94.62	20.14	11.75
810		(810)	8	8	B	2	2182	19	4.00	36	150	49.15	39.81	106.32	3.94	2.42
811		810				1						22.61	13.25	87.95		
812		810				221						17.08	7.72	73.09		
820		(820)	8	8	B	271	2295	19	11.00	42	116	52.77	43.74	106.60	5.66	5.65
821		820				2						21.63	12.60	92.15		
890			8			597	1911	70	0.00	31	188	23.87	1.37	0.00	0.23	
891			8			372	2042	70	17.00	18	393	23.58	1.08	0.00	0.11	
900			9	9	A	814	2158	30	0.00	85	6	54.59	29.67	102.55	16.78	11.58
901			9	9	A	862	2287	30	0.00	85	6	53.87	28.95	101.58	17.60	12.10
910		(910)	9	9	B	243	1995	28	0.00	46	96	31.84	13.51	44.37	5.05	4.30
911		910				134						44.58	26.25	105.05		
912		910				2						41.25	22.92	104.32		
920		(920)	9	9	B	557	2187	28	0.00	77	17	36.18	18.32	65.25	10.91	7.02
921	(untitled)	920				137						51.27	33.41	111.44		
930	(untitled)		9	9	B	485	2187	28	0.00	53	68	30.62	12.76	37.70	3.87	2.98
990			9			813	2133	70	0.00	38	136	23.86	1.36	0.00	0.31	
991	(untitled)		9			228	2133	70	33.00	11	742	23.44	0.94	0.00	0.06	
1000			10	10	A	390	2139	14	0.00	85	6	98.87	50.87	126.59	9.91	8.61
1001			10	10	A	423	2317	14	0.00	85	6	97.26	49.26	124.66	10.55	9.14
1010	(untitled)	(1010)	10	10	B	0	2071	44	18.00	35	158	0.00	0.00	0.00	6.70	2.68
1011	(untitled)	1010				464						15.98	5.21	60.55		
1020		(1020)	10	10	B	0	2071	44	18.00	35	157	0.00	0.00	0.00	6.85	3.98
1021		1020				3						19.98	9.22	98.37		
1022		1020				464						17.43	6.66	68.43		
1030		(1030)	10	10	B	380	2247	44	18.00	28	224	17.00	6.79	26.13	2.16	2.12
1031		1030				21						15.97	5.76	51.50		
1040			10	10	B	862	2253	44	15.00	60	51	18.09	8.53	28.48	7.06	4.65
1090			10			684	2051	70	20.00	33	170	8.76	1.32	0.00	0.25	
1091			10			467	2164	70	40.00	22	317	8.16	1.06	0.00	0.14	

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	2580.15	163.01	15.83	43.91	31.70	480.48	229.16	278.27	987.91
Bus									
Tram									
Pedestrians									
TOTAL	2580.15	163.01	15.83	43.91	31.70	480.48	229.16	278.27	987.91

- | < = 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 - Phase 1B - AM 2027 inc. 1750 D D5 - 2027 inc. 1750 D 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	Item with worst over PR
5	29/05/2019 18:33:26	29/05/2019 18:33:27	08:00	70	2122.99	129.58	102.26	800	4	9	800	790	80

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
Phase 1B - AM 2027 inc. 1750 D		D5	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2027 inc. 1750 D 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)
70		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	PCU Length (m)	Calculate results for Path Segments	Generate PDM Profile Data
1	90	100	✓	✓		Simplified (TRANSYT 12)	5.75		✓

Normal Traffic parameters

Dispersion type	Dispersion coefficient	Travel time coefficient
Default	35	80

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion type	Acceleration (ms ^[-2])	Stationary time coefficient	Cruise time coefficient
Bus	1.00	Default	0.94	30	85

Tram parameters

Name	PCU Factor	Dispersion type	Acceleration (ms ^[-2])	Stationary time coefficient	Cruise time coefficient
Tram	1.00	Default	0.94	100	100

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

Optimisation type	OUTProfile accuracy	SASart temperature	SACooling factor	Random seed	Use enhanced optimisation	Auto optimisation order	Optimisation order	Master controller	Offsets relative to master controller	Master controller offset after each run
Simulated Annealing (Slow)	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05	300.00	100.00	1	✓	✓	7, 8, 9, 10			Do nothing

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
(ALL)		

Links

Links

Link	Name	Description	Traffic node	Length (m)	Has Saturation Flow	Use RR67	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Is minor shared	Major link	Allow Nearside Turn On Red
700			7	200.00	✓		1954	✓		Normal			
701			7	200.00	✓		2097	✓		Normal			
710			7	109.89	✓		2088	✓		Normal			
711				109.89						Normal	✓	710	
712				109.89						Normal	✓	710	
720			7	107.01	✓		2231	✓		Normal			
721				107.01						Normal	✓	720	
730			7	104.31	✓		2299	✓		Normal			
731				104.31						Normal	✓	730	
790			7	106.14	✓		2010			Normal			
791			7	82.17	✓		2124			Normal			
800			8	200.00	✓		2001	✓		Normal			
801			8	200.00	✓		2110	✓		Normal			
810			8	83.00	✓		2182	✓		Normal			
811				83.14						Normal	✓	810	
812				83.14						Normal	✓	810	
820			8	80.23	✓		2295	✓		Normal			
821				80.23						Normal	✓	820	
890			8	200.00	✓		1911			Normal			
891			8	200.00	✓		2042			Normal			
900			9	200.00	✓		2158	✓		Normal			
901			9	200.00	✓		2287	✓		Normal			
910			9	162.90	✓		1995	✓		Normal			
911				162.90						Normal	✓	910	
912				162.90						Normal	✓	910	
920			9	158.76	✓		2187	✓		Normal			
921	(untitled)			158.76						Normal	✓	920	
930	(untitled)		9	158.76	✓		2187	✓		Normal			
990			9	200.00	✓		2133			Normal			
991	(untitled)		9	200.00	✓		2133			Normal			
1000			10	200.00	✓		2139	✓		Normal			
1001			10	200.00	✓		2317	✓		Normal			
1010	(untitled)		10	95.68	✓		2071	✓		Normal			
1011	(untitled)			95.68						Normal	✓	1010	
1020			10	95.68	✓		2071	✓		Normal			
1021				95.68						Normal	✓	1020	
1022				95.68						Normal	✓	1020	
1030			10	90.73	✓		2247	✓		Normal			
1031				90.73						Normal	✓	1030	
1040			10	85.01	✓		2253	✓		Normal			
1090			10	63.28	✓		2051			Normal			
1091			10	63.07	✓		2164			Normal			

Modelling

Link	Traffic model	Stop weighting (%)	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Queue limit (PCU)	Excess queue penalty (£)	Has degree of saturation limit
700	NetworkDefault	0	20	100		0.00				
701	NetworkDefault	0	20	100		0.00				
710	NetworkDefault	500	100	100		13.00	✓	10.00	1000.00	
711	NetworkDefault	500	100	100					0.00	
712	NetworkDefault	500	100	100					0.00	
720	NetworkDefault	500	100	100		13.00	✓	10.00	1000.00	
721	NetworkDefault	500	100	100					0.00	
730	NetworkDefault	500	100	100		14.00	✓	11.00	1000.00	
731	NetworkDefault	500	100	100					0.00	
790	NetworkDefault	100	100	100		0.00				
791	NetworkDefault	100	100	100		0.00				
792	NetworkDefault	100	100	100		0.00				
800	NetworkDefault	0	20	100		0.00				
801	NetworkDefault	20	0	100		0.00				
810	NetworkDefault	500	100	100		7.00	✓	4.00	1000.00	
811	NetworkDefault	500	100	100					0.00	
812	NetworkDefault	500	100	100					0.00	
820	NetworkDefault	500	100	100		9.00	✓	5.00	1000.00	
821	NetworkDefault	500	100	100					0.00	
890	NetworkDefault	100	100	100		0.00				
891	NetworkDefault	100	100	100		0.00				
900	NetworkDefault	0	20	100		0.00				
901	NetworkDefault	0	20	100		0.00				
910	NetworkDefault	500	100	100		20.00				
911	NetworkDefault	500	100	100						
912	NetworkDefault	500	100	100						
920	NetworkDefault	500	100	100		21.00				
921	NetworkDefault	100	100	100						
930	NetworkDefault	100	100	100		0.00				
990	NetworkDefault	100	100	100		0.00				
991	NetworkDefault	100	100	100		0.00				
1000	NetworkDefault	0	20	100		0.00				
1001	NetworkDefault	0	20	100		0.00				
1010	NetworkDefault	500	100	100		0.00	✓	7.00	1000.00	
1011	NetworkDefault	100	100	100					0.00	
1020	NetworkDefault	500	100	100		9.00	✓	7.00	1000.00	
1021	NetworkDefault	500	100	100					0.00	
1022	NetworkDefault	500	100	100					0.00	
1030	NetworkDefault	500	100	100		10.00	✓	8.00	1000.00	
1031	NetworkDefault	500	100	100					0.00	
1040	NetworkDefault	500	100	100		11.00	✓	8.00	1000.00	
1090	NetworkDefault	100	100	100		0.00				
1091	NetworkDefault	100	100	100		0.00				

Modelling - Normal traffic - Advanced

Link	Dispersion type for Normal Traffic	Initial queue (PCU)	Auto cycle time	Cycle time
700	NetworkDefault	0.00	✓	70
701	NetworkDefault	0.00	✓	70
710	NetworkDefault	0.00	✓	70
711	NetworkDefault			
712	NetworkDefault			
720	NetworkDefault	0.00	✓	70
721	NetworkDefault			
730	NetworkDefault	0.00	✓	70
731	NetworkDefault			
790	NetworkDefault	0.00	✓	70
791	NetworkDefault	0.00	✓	70
792	NetworkDefault	0.00	✓	70
800	NetworkDefault	0.00	✓	70
801	NetworkDefault	0.00	✓	70
810	NetworkDefault	0.00	✓	70
811	NetworkDefault			
812	NetworkDefault			
820	NetworkDefault	0.00	✓	70
821	NetworkDefault			
890	NetworkDefault	0.00	✓	70
891	NetworkDefault	0.00	✓	70
900	NetworkDefault	0.00	✓	70
901	NetworkDefault	0.00	✓	70
910	NetworkDefault	0.00	✓	70
911	NetworkDefault			
912	NetworkDefault			
920	NetworkDefault	0.00	✓	70
921	NetworkDefault			
930	NetworkDefault	0.00	✓	70
990	NetworkDefault	0.00	✓	70
991	NetworkDefault	0.00	✓	70
1000	NetworkDefault	0.00	✓	70
1001	NetworkDefault	0.00	✓	70
1010	NetworkDefault	0.00	✓	70
1011	NetworkDefault			
1020	NetworkDefault	0.00	✓	70
1021	NetworkDefault			
1022	NetworkDefault			
1030	NetworkDefault	0.00	✓	70
1031	NetworkDefault			
1040	NetworkDefault	0.00	✓	70
1090	NetworkDefault	0.00	✓	70
1091	NetworkDefault	0.00	✓	70

Flows

Link	Total flow (PCU/hr)	PCU Factor
700	516	1.00
701	554	1.00
710	361	1.00
711	19	1.00
712	320	1.00
720	114	1.00
721	272	1.00
730	449	1.00
731	274	1.00
790	1216	1.00
791	730	1.00
792	272	1.00
800	1257	1.00
801	1325	1.00
810	4	1.00
811	2	1.00
812	444	1.00
820	205	1.00
821	5	1.00
890	998	1.00
891	548	1.00
900	515	1.00
901	545	1.00
910	161	1.00
911	102	1.00
912	5	1.00
920	704	1.00
921	103	1.00
930	622	1.00
990	463	1.00
991	203	1.00
1000	625	1.00
1001	676	1.00
1010	0	1.00
1011	603	1.00
1020	0	1.00
1021	1	1.00
1022	603	1.00
1030	320	1.00
1031	19	1.00
1040	545	1.00
1090	980	1.00
1091	604	1.00

Flows - Advanced

Link	Detectors
(ALL)	

Signals

Link	Controller stream	Phase	Second phase enabled
700	7	C	
701	7	C	
710	7	D	
711			
712			
720	7	D	
721			
730	7	D	
731			
800	8	A	
801	8	A	
810	8	B	
811			
812			
820	8	B	
821			
900	9	A	
901	9	A	
910	9	B	
911			
912			
920	9	B	
921			
930	9	B	
1000	10	A	
1001	10	A	
1010	10	B	
1011			
1020	10	B	
1021			
1022			
1030	10	B	
1031			
1040	10	B	

Entry Sources

Link	Cruise time (seconds)	Cruise speed (kph)
700	18.41	39.10
701	18.41	39.10
800	24.83	29.00
801	24.83	29.00
900	24.91	28.90
901	24.91	28.90
1000	48.00	15.00
1001	48.00	15.00

Sources

Link	Source	Source type	Source link	Destination link	Cruise time (seconds)	Cruise speed (kph)	Total flow (PCU/hr)
710	1	Link	1000	710	12.36	32.00	248
711	1	Link	1031	711	12.36	32.00	19
712	1	Link	1030	712	12.36	32.00	320
720	1	Link	1001	720	12.04	32.00	114
721	1	Link	1040	721	12.04	32.00	272
730	1	Link	1001	730	11.73	32.00	449
731	1	Link	1040	731	11.73	32.00	274
790	1	Link	710	790	11.94	32.00	361
791	1	Link	720	791	9.24	32.00	114
792	1	Link	731	792	9.32	32.00	272
810	1	Link	701	810	9.34	32.00	4
811	1	Link	731	811	9.35	32.00	2
812	1	Link	730	812	9.35	32.00	444
820	1	Link	701	820	9.03	32.00	205
821	1	Link	730	821	9.03	32.00	5
890	1	Link	810	890	22.50	32.00	4
891	1	Link	800	891	22.50	32.00	548
910	1	Link	800	910	18.33	32.00	161
911	1	Link	820	911	18.33	32.00	102
912	1	Link	821	912	18.33	32.00	5
920	1	Link	801	920	17.86	32.00	704
921	1	Link	820	921	17.86	32.00	103
930	1	Link	801	930	17.86	32.00	622
990	1	Link	910	990	22.50	32.00	161
991	1	Link	921	991	22.50	32.00	102
1010	1	Link	900	1010	10.76	32.00	0
1011	1	Link	920	1011	10.76	32.00	603
1020	1	Link	900	1020	10.76	32.00	0
1021	1	Link	921	1021	10.76	32.00	1
1022	1	Link	930	1022	10.76	32.00	603
1030	1	Link	900	1030	10.21	32.00	320
1031	1	Link	930	1031	10.21	32.00	19
1040	1	Link	901	1040	9.56	32.00	545
1090	1	Link	1000	1090	7.12	32.00	377
1091	1	Link	1020	1091	7.10	32.00	0
710	2	Link	1001	710	12.36	32.00	114
790	2	Link	711	790	11.94	32.00	19
791	2	Link	721	791	9.24	32.00	272
890	2	Link	800	890	22.50	32.00	548
990	2	Link	900	990	22.50	32.00	195
991	2	Link	920	991	22.50	32.00	101
1090	2	Link	1010	1090	7.12	32.00	0
1091	2	Link	1021	1091	7.10	32.00	1
790	3	Link	700	790	11.94	32.00	516
791	3	Link	701	791	9.24	32.00	345
890	3	Link	812	890	22.50	32.00	444
990	3	Link	911	990	22.50	32.00	102
1090	3	Link	1011	1090	7.59	30.00	603
1091	3	Link	1022	1091	7.10	32.00	603
790	4	Link	712	790	11.94	32.00	320
890	4	Link	811	890	22.50	32.00	2
990	4	Link	912	990	22.50	32.00	5

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				
From		A	B	C	D
	A	1	861	4	204
	B	1205	19	1096	262
	C	0	863	2	195
	D	377	475	444	5

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	A	(untitled)	701, 700	1090, 1091	#0000FF
	B	(untitled)	801, 800	792, 791, 790	#FF0000
	C	(untitled)	900, 901	891, 890	#00FF00
	D	(untitled)	1000, 1001	990, 991	#FFFF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
1	6		A	B	701, 791	Normal	345
	7		A	B	700, 790	Normal	516
	13		B	C	800, 891	Normal	548
	14		A	C	701, 810, 890	Normal	4
	15		B	C	800, 890	Normal	548
	17		D	B	1000, 710, 790	Normal	248
	18		D	A	1000, 1090	Normal	377
	19		D	B	1001, 710, 790	Normal	114
	20		D	B	1001, 720, 791	Normal	114
	21		D	C	1001, 730, 812, 890	Normal	444
	22		A	D	701, 820, 911, 990	Normal	102
	23		C	A	900, 1020, 1091	Normal	0
	24		B	D	800, 910, 990	Normal	161
	25		C	D	900, 990	Normal	195
	26		D	D	1001, 730, 821, 912, 990	Normal	5
	27		A	D	701, 820, 921, 991	Normal	102
	28		B	D	801, 920, 991	Normal	101
	32		B	B	801, 930, 1031, 711, 790	Normal	19
	34		C	B	900, 1030, 712, 790	Normal	320
	35		C	B	901, 1040, 721, 791	Normal	272
	36		C	C	901, 1040, 731, 811, 890	Normal	2
	37		C	B	901, 1040, 731, 792	Normal	272
	41		C	A	900, 1010, 1090	Normal	0
	42		A	A	701, 820, 921, 1021, 1091	Normal	1
	45		B	A	801, 930, 1022, 1091	Normal	603
	46		B	A	801, 920, 1011, 1090	Normal	603

Link Results

Link Results: Vehicle summary

Time Segment	Link	Major link	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	700		66	36	516	1954	27	23.85	9.13	24.86	9.71	0.00	9.71
	701		66	36	554	2097	27	23.40	9.74	24.70	10.23	0.00	10.23
	710		73	23	361	2088	31	14.59	9.89	76.04	20.79	26.09	46.88
	711	710			19			21.18			1.55	0.90	2.46
	712	710			320			15.77			19.89	8.04	27.93
	720		38	138	114	2231	31	6.60	2.95	22.68	2.96	4.72	7.68
	721	720			272			11.08			11.87	5.44	17.31
	730		69	31	449	2299	31	13.46	10.74	76.69	23.82	32.58	56.40
	731	730			273			12.15			13.11	5.38	18.49
	790		60	49	1216	2010	70	2.26	1.89	9.44	10.85	0.56	11.41
	791		34	162	730	2124	70	1.29	0.26	1.60	3.72	0.00	3.72
	792		13	601	272	2115	70	0.98	0.07	0.45	1.05	0.00	1.05
	800		102	-12	1257	2001	42	87.65	49.56	131.72	86.92	0.00	86.92
	801		102	-12	1325	2110	42	86.00	51.63	130.16	0.00	5.47	5.47
	810		85	6	4	2182	16	42.84	5.81	83.01	0.68	0.36	1329.14
	811	810			2			56.88			0.45	0.16	0.61
	812	810			444			39.53			69.18	20.11	89.29
	820		38	139	205	2295	16	24.73	4.31	47.88	20.00	15.58	35.58
	821	820			5			22.58			0.45	0.15	0.60
	890		52	74	986	1911	70	1.94	0.53	1.48	7.55	0.00	7.55
	891		26	243	536	2042	70	1.19	0.18	0.46	2.53	0.00	2.53
	900		88	2	515	2158	18	47.66	12.77	31.47	19.36	0.00	19.36
	901		88	3	545	2287	18	46.24	13.30	30.93	19.88	0.00	19.88
	910		23	298	157	1995	40	12.64	2.93	14.66	7.84	7.29	15.13
	911	910			102			2.63			1.06	1.76	2.82
	912	910			5			2.62			0.05	0.07	0.12
	920		62	46	688	2187	40	17.36	11.03	52.51	47.13	33.12	80.25
	921	920			103			12.87			5.23	1.42	6.65
	930		47	90	608	2187	40	15.82	7.80	23.90	37.94	5.71	43.64
	990		22	318	459	2133	70	1.08	0.14	0.34	1.95	0.00	1.95
	991		9	855	201	2133	70	0.93	0.05	0.13	0.74	0.00	0.74
	1000		93	-3	625	2139	21	54.27	17.02	42.31	26.76	0.00	26.76
	1001		93	-3	676	2317	21	51.84	17.95	41.21	27.64	0.00	27.64
	1010		52	72	0	2071	37	0.00	6.02	32.31	0.00	0.00	0.00
	1011	1010			589			13.01			30.24	4.41	34.64
	1020		53	71	0	2071	37	0.00	5.63	62.57	0.00	0.00	0.00
	1021	1020			1			27.48			0.11	0.06	0.17
	1022	1020			589			11.71			27.22	20.53	47.75
	1030		28	224	320	2247	37	2.11	0.83	8.29	2.66	1.27	3.92
	1031	1030			19			8.48			0.62	0.58	1.20
	1040		45	102	545	2253	37	2.75	2.28	20.77	5.90	4.55	10.45
	1090		47	91	967	2051	70	1.66	0.45	3.65	6.32	0.00	6.32
	1091		27	230	590	2164	70	1.14	0.19	1.46	2.66	0.00	2.66

Link Results: Flows and signals

Time Segment	Link	Major link	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))	Effective green (s (per cycle))
08:00-09:00	700		516	516	0		1954	782	66		36	0.00	27	28
	701		554	554	0		2097	839	66		36	0.00	27	28
	710		361	361	0		2088	955	73		23	1.18	31	32
	711	710	19	19	0						23	1.06		
	712	710	320	320	0						23	1.19		
	720		114	114	0		2231	1020	38		138	1.19	31	32
	721	720	272	272	0						138	1.20		
	730		449	449	0		2299	1051	69		31	1.19	31	32
	731	730	273	273	0	✓					31	1.21		
	790		1216	1216	0		2010	2010	60		49	0.36	70	70
	791		730	730	0		2124	2124	34		162	0.47	70	70
	792		272	272	0		2115	2115	13		601	1.11	70	70
	800		1257	1229	0		2001	1229	102	✓	-12	0.00	42	43
	801		1325	1296	0		2110	1296	102	✓	-12	0.00	42	43
	810		4	4	0		2182	530	85		6	1.12	16	17
	811	810	2	2	0						6	1.11		
	812	810	444	444	0						6	1.37		
	820		205	205	0		2295	557	38		139	1.13	16	17
	821	820	5	5	0						139	1.38		
	890		986	986	12	✓	1911	1911	52		74	0.22	70	70
	891		536	536	12	✓	2042	2042	26		243	0.56	70	70
	900		515	515	0		2158	586	88		2	0.00	18	19
	901		545	545	0		2287	621	88		3	0.00	18	19
	910		157	157	4	✓	1995	1169	23		298	0.60	40	41
	911	910	102	102	0						298	1.35		
	912	910	5	5	0						298	1.14		
	920		688	688	15	✓	2187	1281	62		46	0.60	40	41
	921	920	103	103	0						46	1.36		
	930		608	608	14	✓	2187	1281	47		90	0.60	40	41
	990		459	459	3	✓	2133	2133	22		318	0.50	70	70
	991		201	201	2	✓	2133	2133	9		855	0.77	70	70
	1000		625	625	0		2139	672	93	✓	-3	0.00	21	22
	1001		676	676	0		2317	728	93	✓	-3	0.00	21	22
	1010		0	0	0		2071	1124	52		72	0.00	37	38
	1011	1010	589	589	13	✓					72	0.79		
	1020		0	0	0		2071	1124	53		71	0.00	37	38
	1021	1020	1	1	0						71	1.50		
	1022	1020	589	589	13	✓					71	0.83		
	1030		320	320	0		2247	1220	28		224	1.30	37	38
	1031	1030	19	19	0						224	0.84		
	1040		545	545	0		2253	1223	45		102	1.31	37	38
	1090		967	967	13	✓	2051	2051	47		91	0.52	70	70
	1091		590	590	13	✓	2164	2164	27		230	1.09	70	70

Link Results: Stops and delays

Time Segment	Link	Major link	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	700		18.41	23.85	2.45	0.96	48.54	9.71	86.73	399.11	48.42	9.53	0.00
	701		18.41	23.40	2.64	0.97	51.14	10.23	86.14	428.62	48.59	10.16	0.00
	710		12.36	14.59	0.76	0.70	20.79	20.79	101.20	330.50	35.21	5.22	26.09
	711	710	12.36	21.18	0.07	0.04	1.55	1.55	68.15	10.85	1.81	0.18	0.90
	712	710	12.36	15.77	0.78	0.62	19.89	19.89	35.23	81.51	31.17	1.61	8.04
	720		12.04	6.60	0.12	0.09	2.96	2.96	58.17	61.56	4.55	0.94	4.72
	721	720	12.04	11.08	0.62	0.21	11.87	11.87	28.09	65.39	10.88	1.09	5.44
	730		11.73	13.46	1.00	0.68	23.82	23.82	101.78	422.49	34.19	6.52	32.58
	731	730	11.73	12.15	0.51	0.41	13.11	13.11	27.56	54.54	20.84	1.08	5.38
	790		11.94	2.26	0.00	0.76	10.85	10.85	3.24	0.42	38.97	0.56	0.56
	791		9.24	1.29	0.00	0.26	3.72	3.72	0.00	0.00	0.00	0.00	0.00
	792		9.32	0.98	0.00	0.07	1.05	1.05	0.00	0.00	0.00	0.00	0.00
	800		24.83	87.65	4.61	26.00	434.59	86.92	181.58	1195.07	1036.89	26.15	0.00
	801		24.83	86.00	4.86	26.79	449.47	0.00	180.09	1259.77	1074.45	27.35	5.47
	810		9.34	42.84	0.02	0.02	0.68	0.68	126.85	3.96	1.12	0.07	0.36
	811	810	9.35	56.88	0.02	0.01	0.45	0.45	110.46	1.65	0.56	0.03	0.16
	812	810	9.35	39.53	2.28	2.59	69.18	69.18	63.54	158.01	123.90	4.02	20.11
	820		9.03	24.73	1.11	0.29	20.00	20.00	106.52	203.53	14.88	3.12	15.58
	821	820	9.03	22.58	0.02	0.01	0.45	0.45	42.51	1.76	0.36	0.03	0.15
	890		22.50	1.94	0.00	0.53	7.55	7.55	0.00	0.00	0.00	0.00	0.00
	891		22.50	1.19	0.00	0.18	2.53	2.53	0.00	0.00	0.00	0.00	0.00
	900		24.91	47.66	3.49	3.33	96.81	19.36	123.00	475.78	157.65	7.37	0.00
	901		24.91	46.24	3.69	3.31	99.41	19.88	121.28	503.44	157.52	7.69	0.00
	910		18.33	12.64	0.47	0.09	7.84	7.84	64.96	97.71	4.44	1.46	7.29
	911	910	18.33	2.63	0.02	0.06	1.06	1.06	24.17	21.78	2.88	0.35	1.76
	912	910	18.33	2.62	0.00	0.00	0.05	0.05	18.50	0.78	0.14	0.01	0.07
	920		17.86	17.36	2.62	0.70	47.13	47.13	67.47	428.82	35.56	6.62	33.12
	921	920	17.86	12.87	0.26	0.10	5.23	5.23	96.36	93.95	5.32	1.42	1.42
	930		17.86	15.82	2.22	0.45	37.94	37.94	65.81	377.05	22.97	5.71	5.71
	990		22.50	1.08	0.00	0.14	1.95	1.95	0.00	0.00	0.00	0.00	0.00
	991		22.50	0.93	0.00	0.05	0.74	0.74	0.00	0.00	0.00	0.00	0.00
	1000		48.00	54.27	4.04	5.39	133.80	26.76	134.49	592.11	248.42	2.63	0.00
	1001		48.00	51.84	4.36	5.37	138.22	27.64	131.66	640.25	249.80	2.79	0.00
	1010		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1011	1010	10.76	13.01	1.58	0.55	30.24	30.24	52.40	280.85	27.93	4.41	4.41
	1020		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1021	1020	10.76	27.48	0.01	0.00	0.11	0.11	88.63	0.84	0.05	0.01	0.06
	1022	1020	10.76	11.71	1.37	0.55	27.22	27.22	48.85	259.89	27.98	4.11	20.53
	1030		10.21	2.11	0.01	0.18	2.66	2.66	5.55	8.48	9.26	0.25	1.27
	1031	1030	10.21	8.48	0.03	0.01	0.62	0.62	43.67	7.58	0.54	0.12	0.58
	1040		9.56	2.75	0.01	0.40	5.90	5.90	11.69	23.20	40.52	0.91	4.55
	1090		7.41	1.66	0.00	0.45	6.32	6.32	0.00	0.00	0.00	0.00	0.00
	1091		7.10	1.14	0.00	0.19	2.66	2.66	0.00	0.00	0.00	0.00	0.00

Link Results: Queues and blocking

Time Segment	Link	Major link	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	700		0.00	9.13	36.74	24.86	0.00	0.00	0.00	0.96	6.98	0.00	0.00	0.00	
	701		0.00	9.74	39.43	24.70	0.00	0.00	0.00	0.97	7.43	0.00	0.00	0.00	
	710		0.00	9.89	13.00	76.04	0.00	0.00	0.00	1.36	6.15	0.00	0.00	0.00	
	711	710							0.00						
	712	710							0.00						
	720		0.00	2.95	13.00	22.68	0.00	0.00	0.00	0.30	2.53	0.00	0.00	0.00	
	721	720							0.00						
	730		0.00	10.74	14.00	76.69	0.00	0.00	0.00	1.09	6.33	0.00	0.00	0.00	
	731	730							0.00						
	790		0.00	1.89	20.06	9.44	0.00	0.00	0.00			0.00	0.00	0.00	
	791		0.00	0.26	16.41	1.60	0.00	0.00	0.00			0.00	0.00	0.00	
	792		0.00	0.07	16.48	0.45	0.00	0.00	0.00			35.00	0.00	35.00	
	800		0.00	49.56	37.62	131.72	3.06	0.00	0.00	26.00	35.21	0.00	0.00	0.00	
	801		0.00	51.63	39.67	130.16	2.93	0.00	0.00	26.79	36.51	0.00	0.00	0.00	
	810		0.00	5.81	7.00	83.01	0.00	1.33	1328.10	2.64	5.81	0.00	0.00	0.00	
	811	810							0.00						
	812	810							0.00						
	820		0.00	4.31	9.00	47.88	0.00	0.00	0.00	0.30	4.22	10.00	0.00	10.00	
	821	820							0.00						
	890		0.00	0.53	35.93	1.48	0.00	0.00	0.00			0.00	0.00	0.00	
	891		0.00	0.18	38.39	0.46	0.00	0.00	0.00			9.00	0.00	9.00	
	900		0.00	12.77	40.57	31.47	0.00	0.00	0.00	3.33	10.62	0.00	0.00	0.00	
	901		0.00	13.30	43.00	30.93	0.00	0.00	0.00	3.31	11.03	0.00	0.00	0.00	
	910		0.00	2.93	20.00	14.66	0.00	0.00	0.00	0.15	2.07	1.00	0.00	1.00	
	911	910							0.00						
	912	910							0.00						
	920		0.00	11.03	21.00	52.51	0.00	0.00	0.00	0.81	8.89	1.00	0.00	1.00	
	921	920							0.00						
	930		0.00	7.80	32.64	23.90	0.00	0.00	0.00	0.45	7.46	7.00	0.00	7.00	
	990		0.00	0.14	40.10	0.34	0.00	0.00	0.00			0.00	0.00	0.00	
	991		0.00	0.05	40.10	0.13	0.00	0.00	0.00			23.00	0.00	23.00	
	1000		0.00	17.02	40.22	42.31	0.00	0.00	0.00	5.39	13.72	0.00	0.00	0.00	
	1001		0.00	17.95	43.56	41.21	0.00	0.00	0.00	5.37	14.38	0.00	0.00	0.00	
	1010		0.00	6.02	18.63	32.31	0.00	0.00	0.00	0.55	5.89	13.00	0.00	13.00	
	1011	1010							0.00						
	1020		0.00	5.63	9.00	62.57	0.00	0.00	0.00	0.55	5.51	14.00	0.00	14.00	
	1021	1020							0.00						
	1022	1020							0.00						
	1030		0.00	0.83	10.00	8.29	0.00	0.00	0.00	0.19	0.61	4.00	0.00	4.00	
	1031	1030							0.00						
	1040		0.00	2.28	11.00	20.77	0.00	0.00	0.00	0.40	0.87	12.00	0.00	12.00	
	1090		0.00	0.45	12.20	3.65	0.00	0.00	0.00			5.00	0.00	5.00	
	1091		0.00	0.19	12.83	1.46	0.00	0.00	0.00			31.00	0.00	31.00	

Link Results: Journey times

Time Segment	Link	Major link	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
08:00-09:00	700		103.20	6.06	17.04	42.27
	701		110.80	6.44	17.22	41.82
	710		39.71	2.71	14.68	26.95
	711	710	2.04	0.17	11.80	33.54
	712	710	35.15	2.50	14.06	28.13
	720		12.16	0.59	20.67	18.64
	721	720	29.05	1.74	16.66	23.12
	730		46.80	3.14	14.90	25.20
	731	730	28.53	1.81	15.72	23.89
	790		129.05	4.80	26.90	14.20
	791		59.99	2.14	28.08	10.54
	792		22.50	0.78	28.97	10.30
	800		251.40	39.27	6.40	112.48
	801		265.00	40.79	6.50	110.83
	810		0.33	0.06	5.73	52.17
	811	810	0.17	0.04	4.52	66.24
	812	810	36.89	6.02	6.12	48.88
	820		16.45	1.92	8.56	33.75
	821	820	0.40	0.04	9.14	31.61
	890		197.13	6.69	29.46	24.44
	891		107.19	3.53	30.39	23.69
	900		103.00	10.38	9.92	72.57
	901		109.00	10.77	10.12	71.16
	910		25.61	1.35	18.94	30.97
	911	910	16.62	0.59	27.98	20.96
	912	910	0.81	0.03	28.00	20.94
	920		109.27	6.73	16.23	35.22
	921	920	16.36	0.88	18.60	30.73
	930		96.50	5.69	16.97	33.68
	990		91.88	3.01	30.54	23.58
	991		40.21	1.31	30.73	23.43
	1000		125.00	17.76	7.04	102.27
	1001		135.20	18.75	7.21	99.84
	1010		0.00	0.00	0.00	0.00
	1011	1010	56.38	3.89	14.49	23.77
	1020		0.00	0.00	0.00	0.00
	1021	1020	0.10	0.01	9.01	38.24
	1022	1020	56.38	3.68	15.33	22.47
	1030		29.02	1.09	26.53	12.31
	1031	1030	1.69	0.10	17.48	18.69
	1040		46.33	1.86	24.86	12.31
	1090		61.16	2.44	25.12	9.07
	1091		37.23	1.35	27.56	8.24

Link Results: Advanced

Time Segment	Link	Major link	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Mean Max Queue EoTS (PCU)	Max End of Green Queue EoTS (PCU)	Max End of Red Queue EoTS (PCU)	PCU Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
08:00-09:00	700		0.00	0.00	✓	9.14	0.97	6.99	1.00	0.00	58.08	9.71
	701		0.00	0.00	✓	9.74	0.97	7.43	1.00	0.00	61.30	10.23
	710		0.00	0.00	✓	9.89	1.37	6.16	1.00	0.00	26.01	46.88
	711	710	0.00	0.00					1.00	0.00	1.73	2.46
	712	710	0.00	0.00					1.00	0.00	21.50	27.93
	720		0.00	0.00	✓	2.95	0.30	2.53	1.00	0.00	3.90	7.68
	721	720	0.00	0.00					1.00	0.00	12.95	17.31
	730		0.00	0.00	✓	10.74	1.09	6.33	1.00	0.00	30.34	56.40
	731	730	0.00	0.00					1.00	0.00	14.19	18.49
	790		0.00	0.00	✓	1.89			1.00	0.00	11.41	11.41
	791		0.00	0.00	✓	0.26			1.00	0.00	3.72	3.72
	792		0.00	0.00	✓	0.07			1.00	0.00	1.05	1.05
	800		0.00	0.00	✓	66.14	42.58	51.79	1.00	0.00	460.74	86.92
	801		0.00	0.00	✓	68.78	43.94	53.66	1.00	0.00	476.82	5.47
	810		0.00	0.00	✓	5.89	2.72	5.89	1.00	1328.10	0.75	1329.14
	811	810	0.00	0.00					1.00	0.00	0.48	0.61
	812	810	0.00	0.00					1.00	0.00	73.21	89.29
	820		0.00	0.00	✓	4.31	0.30	4.22	1.00	0.00	23.12	35.58
	821	820	0.00	0.00					1.00	0.00	0.48	0.60
	890		0.00	0.00	✓	0.53			1.00	0.00	7.55	7.55
	891		0.00	0.00	✓	0.18			1.00	0.00	2.53	2.53
	900		0.00	0.00	✓	12.91	3.47	10.77	1.00	0.00	104.18	19.36
	901		0.00	0.00	✓	13.43	3.44	11.16	1.00	0.00	107.10	19.88
	910		0.00	0.00	✓	2.93	0.15	2.07	1.00	0.00	9.30	15.13
	911	910	0.00	0.00					1.00	0.00	1.41	2.82
	912	910	0.00	0.00					1.00	0.00	0.06	0.12
	920		0.00	0.00	✓	11.03	0.81	8.89	1.00	0.00	53.75	80.25
	921	920	0.00	0.00					1.00	0.00	6.65	6.65
	930		0.00	0.00	✓	7.80	0.45	7.46	1.00	0.00	43.64	43.64
	990		0.00	0.00	✓	0.14			1.00	0.00	1.95	1.95
	991		0.00	0.00	✓	0.05			1.00	0.00	0.74	0.74
	1000		0.00	0.00	✓	17.51	5.88	14.21	1.00	0.00	136.43	26.76
	1001		0.00	0.00	✓	18.41	5.83	14.84	1.00	0.00	141.01	27.64
	1010		0.00	0.00	✓	6.02	0.55	5.89	1.00	0.00	0.00	0.00
	1011	1010	0.00	0.00					1.00	0.00	34.64	34.64
	1020		0.00	0.00	✓	5.63	0.55	5.51	1.00	0.00	0.00	0.00
	1021	1020	0.00	0.00					1.00	0.00	0.12	0.17
	1022	1020	0.00	0.00					1.00	0.00	31.33	47.75
	1030		0.00	0.00	✓	0.83	0.19	0.61	1.00	0.00	2.91	3.92
	1031	1030	0.00	0.00					1.00	0.00	0.74	1.20
	1040		0.00	0.00	✓	2.28	0.40	0.87	1.00	0.00	6.81	10.45
	1090		0.00	0.00	✓	0.45			1.00	0.00	6.32	6.32
	1091		0.00	0.00	✓	0.19			1.00	0.00	2.66	2.66

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	Items with worst overall PRC
5	29/05/2019 18:33:26	29/05/2019 18:33:27	08:00	70	2122.99	129.58	102.26	800	4	9	800	790	80

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	102	-12	18163	1679	25.68	588.62	206.28	2122.99

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	18163	18106	117	✓	102	✓	-12	1679	1713

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	18.50	25.68	46.06	83.52	1840.11	588.62	66.68	8491.26	3517.77	143.52	206.28

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	131.72	1328.10	223.00	0.00	223.00

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
08:00-09:00	2651.70	222.91	11.90

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	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	✓	1.00	1328.10	0.00	1983.62	2122.99

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

	To				
From		A	B	C	D
	A	152.8	54.8	118.4	124.9
	B	177.1	210.9	136.5	168.0
	C	0.0	121.0	198.0	96.1
	D	111.3	139.4	198.4	201.2

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)
6	A	B	345	52.35	345	52.35
7	A	B	516	56.47	516	56.47
13	B	C	548	136.17	548	136.17
14	A	C	4	118.43	4	118.43
15	B	C	548	136.92	548	136.92
17	D	B	248	143.43	248	143.43
18	D	A	377	111.34	377	111.34
19	D	B	114	140.99	114	140.99
20	D	B	114	129.01	114	129.01
21	D	C	444	198.36	444	198.36
22	A	D	102	120.11	102	120.11
23	C	A	0	80.81	0	0.00
24	B	D	161	167.02	161	167.02
25	C	D	195	96.15	195	96.15
26	D	D	5	201.16	5	201.16
27	A	D	102	129.74	102	129.74
28	B	D	101	169.48	101	169.48
32	B	B	19	210.94	19	210.94
34	C	B	320	127.22	320	127.22
35	C	B	272	117.12	272	117.12
36	C	C	2	198.03	2	198.03
37	C	B	272	117.65	272	117.65
41	C	A	0	81.64	0	0.00
42	A	A	1	152.79	1	152.79
45	B	A	603	175.22	603	175.22
46	B	A	603	178.89	603	178.89

Final Prediction Table

Link Results

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QUEUES	
Link	Name	Major link	Traffic node	Controller stream	Phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s per cycle)	Wasted time total (s per cycle)	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (PCU)	Max end of red queue (PCU)
700			7	7	C	516	1954	27	0.00	66	36	42.27	23.85	86.73	9.13	6.98
701			7	7	C	554	2097	27	0.00	66	36	41.82	23.40	86.14	9.74	7.43
710		(710)	7	7	D	361	2088	31	0.00	73	23	26.95	14.59	101.20	9.89	6.15
711		710				19						33.54	21.18	68.15		
712		710				320						28.13	15.77	35.23		
720		(720)	7	7	D	114	2231	31	0.00	38	138	18.64	6.60	58.17	2.95	2.53
721		720				272						23.12	11.08	28.09		
730		(730)	7	7	D	449	2299	31	0.00	69	31	25.20	13.46	101.78	10.74	6.33
731		730				273						23.89	12.15	27.56		
790			7			1216	2010	70	0.00	60	49	14.20	2.26	3.24	1.89	
791			7			730	2124	70	0.00	34	162	10.54	1.29	0.00	0.26	
792			7			272	2115	70	35.00	13	601	10.30	0.98	0.00	0.07	
800			8	8	A	1257 <	2001	42	0.00	102	-12	112.48	87.65	181.58	49.56 +	35.21
801			8	8	A	1325 <	2110	42	0.00	102	-12	110.83	86.00	180.09	51.63 +	36.51
810		(810)	8	8	B	4	2182	16	0.00	85	6	52.17	42.84	126.85	5.81	5.81
811		810				2						66.24	56.88	110.46		
812		810				444						48.88	39.53	63.54		
820		(820)	8	8	B	205	2295	16	10.00	38	139	33.75	24.73	106.52	4.31	4.22
821		820				5						31.61	22.58	42.51		
890			8			986	1911	70	0.00	52	74	24.44	1.94	0.00	0.53	
891			8			536	2042	70	9.00	26	243	23.69	1.19	0.00	0.18	
900			9	9	A	515	2158	18	0.00	88	2	72.57	47.66	123.00	12.77	10.62
901			9	9	A	545	2287	18	0.00	88	3	71.16	46.24	121.28	13.30	11.03
910		(910)	9	9	B	157	1995	40	1.00	23	298	30.97	12.64	64.96	2.93	2.07
911		910				102						20.96	2.63	24.17		
912		910				5						20.94	2.62	18.50		
920		(920)	9	9	B	688	2187	40	1.00	62	46	35.22	17.36	67.47	11.03	8.89
921	(untitled)	920				103						30.73	12.87	96.36		
930	(untitled)		9	9	B	608	2187	40	7.00	47	90	33.68	15.82	65.81	7.80	7.46
990			9			459	2133	70	0.00	22	318	23.58	1.08	0.00	0.14	
991	(untitled)		9			201	2133	70	23.00	9	855	23.43	0.93	0.00	0.05	
1000			10	10	A	625	2139	21	0.00	93	-3	102.27	54.27	134.49	17.02	13.72
1001			10	10	A	676	2317	21	0.00	93	-3	99.84	51.84	131.66	17.95	14.38
1010	(untitled)	(1010)	10	10	B	0	2071	37	13.00	52	72	0.00	0.00	0.00	6.02	5.89
1011	(untitled)	1010				589						23.77	13.01	52.40		
1020		(1020)	10	10	B	0	2071	37	14.00	53	71	0.00	0.00	0.00	5.63	5.51
1021		1020				1						38.24	27.48	88.63		
1022		1020				589						22.47	11.71	48.85		
1030		(1030)	10	10	B	320	2247	37	4.00	28	224	12.31	2.11	5.55	0.83	0.61
1031		1030				19						18.69	8.48	43.67		
1040			10	10	B	545	2253	37	12.00	45	102	12.31	2.75	11.69	2.28	0.87
1090			10			967	2051	70	5.00	47	91	9.07	1.66	0.00	0.45	
1091			10			590	2164	70	31.00	27	230	8.24	1.14	0.00	0.19	

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	2651.70	222.91	11.90	46.06	83.52	588.62	206.28	1328.10	2122.99
Bus									
Tram									
Pedestrians									
TOTAL	2651.70	222.91	11.90	46.06	83.52	588.62	206.28	1328.10	2122.99

- | < = 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**

A6 - Phase 1B - PM 2027 inc. 1750 D D6 - 2027 inc. 1750 D 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	Item with worst overall PRC
6	29/05/2019 18:33:27	29/05/2019 18:33:27	17:00	70	1388.06	82.42	88.82	1001	0	0	1001	790	1001

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
Phase 1B - PM 2027 inc. 1750 D		D6	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2027 inc. 1750 D 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)
70		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	PCU Length (m)	Calculate results for Path Segments	Generate PDM Profile Data
1	90	100	✓	✓		Simplified (TRANSYT 12)	5.75		✓

Normal Traffic parameters

Dispersion type	Dispersion coefficient	Travel time coefficient
Default	35	80

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion type	Acceleration (ms ⁻²)	Stationary time coefficient	Cruise time coefficient
Bus	1.00	Default	0.94	30	85

Tram parameters

Name	PCU Factor	Dispersion type	Acceleration (ms ⁻²)	Stationary time coefficient	Cruise time coefficient
Tram	1.00	Default	0.94	100	100

Pedestrian parameters

Dispersion type
Default

Optimisation options

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

Advanced

Optimisation type	OUTProfile accuracy	SASart temperature	SACooling factor	Random seed	Use enhanced optimisation	Auto optimisation order	Optimisation order	Master controller	Offsets relative to master controller	Master controller offset after each run
Simulated Annealing (Slow)	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05	300.00	100.00	1	✓	✓	7, 8, 9, 10			Do nothing

Economics

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

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
(ALL)		

Links

Links

Link	Name	Description	Traffic node	Length (m)	Has Saturation Flow	Use RR67	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Is minor shared	Major link	Allow Nearside Turn On Red
700			7	200.00	✓		1954	✓		Normal			
701			7	200.00	✓		2097	✓		Normal			
710			7	109.89	✓		2088	✓		Normal			
711				109.89						Normal	✓	710	
712				109.89						Normal	✓	710	
720			7	107.01	✓		2231	✓		Normal			
721				107.01						Normal	✓	720	
730			7	104.31	✓		2299	✓		Normal			
731				104.31						Normal	✓	730	
790			7	106.14	✓		2010			Normal			
791			7	82.17	✓		2124			Normal			
792			7	82.87	✓		2115			Normal			
800			8	200.00	✓		2001	✓		Normal			
801			8	200.00	✓		2110	✓		Normal			
810			8	83.00	✓		2182	✓		Normal			
811				83.14						Normal	✓	810	
812				83.14						Normal	✓	810	
820			8	80.23	✓		2295	✓		Normal			
821				80.23						Normal	✓	820	
890			8	200.00	✓		1911			Normal			
891			8	200.00	✓		2042			Normal			
900			9	200.00	✓		2158	✓		Normal			
901			9	200.00	✓		2287	✓		Normal			
910			9	162.90	✓		1995	✓		Normal			
911				162.90						Normal	✓	910	
912				162.90						Normal	✓	910	
920			9	158.76	✓		2187	✓		Normal			
921	(untitled)			158.76						Normal	✓	920	
930	(untitled)		9	158.76	✓		2187	✓		Normal			
990			9	200.00	✓		2133			Normal			
991	(untitled)		9	200.00	✓		2133			Normal			
1000			10	200.00	✓		2139	✓		Normal			
1001			10	200.00	✓		2317	✓		Normal			
1010	(untitled)		10	95.68	✓		2071	✓		Normal			
1011	(untitled)			95.68						Normal	✓	1010	
1020			10	95.68	✓		2071	✓		Normal			
1021				95.68						Normal	✓	1020	
1022				95.68						Normal	✓	1020	
1030			10	90.73	✓		2247	✓		Normal			
1031				90.73						Normal	✓	1030	
1040			10	85.01	✓		2253	✓		Normal			
1090			10	63.28	✓		2051			Normal			
1091			10	63.07	✓		2164			Normal			

Modelling

Link	Traffic model	Stop weighting (%)	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Queue limit (PCU)	Excess queue penalty (£)	Has degree of saturation limit
700	NetworkDefault	0	20	100		0.00				
701	NetworkDefault	0	20	100		0.00				
710	NetworkDefault	500	100	100		13.00	✓	10.00	1000.00	
711	NetworkDefault	500	100	100					0.00	
712	NetworkDefault	500	100	100					0.00	
720	NetworkDefault	500	100	100		13.00	✓	10.00	1000.00	
721	NetworkDefault	500	100	100					0.00	
730	NetworkDefault	500	100	100		14.00	✓	11.00	1000.00	
731	NetworkDefault	500	100	100					0.00	
790	NetworkDefault	100	100	100		0.00				
791	NetworkDefault	100	100	100		0.00				
792	NetworkDefault	100	100	100		0.00				
800	NetworkDefault	0	20	100		0.00				
801	NetworkDefault	20	0	100		0.00				
810	NetworkDefault	500	100	100		7.00	✓	4.00	1000.00	
811	NetworkDefault	500	100	100					0.00	
812	NetworkDefault	500	100	100					0.00	
820	NetworkDefault	500	100	100		9.00	✓	5.00	1000.00	
821	NetworkDefault	500	100	100					0.00	
890	NetworkDefault	100	100	100		0.00				
891	NetworkDefault	100	100	100		0.00				
900	NetworkDefault	0	20	100		0.00				
901	NetworkDefault	0	20	100		0.00				
910	NetworkDefault	500	100	100		20.00				
911	NetworkDefault	500	100	100						
912	NetworkDefault	500	100	100						
920	NetworkDefault	500	100	100		21.00				
921	NetworkDefault	100	100	100						
930	NetworkDefault	100	100	100		0.00				
990	NetworkDefault	100	100	100		0.00				
991	NetworkDefault	100	100	100		0.00				
1000	NetworkDefault	0	20	100		0.00				
1001	NetworkDefault	0	20	100		0.00				
1010	NetworkDefault	500	100	100		0.00	✓	7.00	1000.00	
1011	NetworkDefault	100	100	100					0.00	
1020	NetworkDefault	500	100	100		9.00	✓	7.00	1000.00	
1021	NetworkDefault	500	100	100					0.00	
1022	NetworkDefault	500	100	100					0.00	
1030	NetworkDefault	500	100	100		10.00	✓	8.00	1000.00	
1031	NetworkDefault	500	100	100					0.00	
1040	NetworkDefault	500	100	100		11.00	✓	8.00	1000.00	
1090	NetworkDefault	100	100	100		0.00				
1091	NetworkDefault	100	100	100		0.00				

Modelling - Normal traffic - Advanced

Link	Dispersion type for Normal Traffic	Initial queue (PCU)	Auto cycle time	Cycle time
700	NetworkDefault	0.00	✓	70
701	NetworkDefault	0.00	✓	70
710	NetworkDefault	0.00	✓	70
711	NetworkDefault			
712	NetworkDefault			
720	NetworkDefault	0.00	✓	70
721	NetworkDefault			
730	NetworkDefault	0.00	✓	70
731	NetworkDefault			
790	NetworkDefault	0.00	✓	70
791	NetworkDefault	0.00	✓	70
792	NetworkDefault	0.00	✓	70
800	NetworkDefault	0.00	✓	70
801	NetworkDefault	0.00	✓	70
810	NetworkDefault	0.00	✓	70
811	NetworkDefault			
812	NetworkDefault			
820	NetworkDefault	0.00	✓	70
821	NetworkDefault			
890	NetworkDefault	0.00	✓	70
891	NetworkDefault	0.00	✓	70
900	NetworkDefault	0.00	✓	70
901	NetworkDefault	0.00	✓	70
910	NetworkDefault	0.00	✓	70
911	NetworkDefault			
912	NetworkDefault			
920	NetworkDefault	0.00	✓	70
921	NetworkDefault			
930	NetworkDefault	0.00	✓	70
990	NetworkDefault	0.00	✓	70
991	NetworkDefault	0.00	✓	70
1000	NetworkDefault	0.00	✓	70
1001	NetworkDefault	0.00	✓	70
1010	NetworkDefault	0.00	✓	70
1011	NetworkDefault			
1020	NetworkDefault	0.00	✓	70
1021	NetworkDefault			
1022	NetworkDefault			
1030	NetworkDefault	0.00	✓	70
1031	NetworkDefault			
1040	NetworkDefault	0.00	✓	70
1090	NetworkDefault	0.00	✓	70
1091	NetworkDefault	0.00	✓	70

Flows

Link	Total flow (PCU/hr)	PCU Factor
700	653	1.00
701	700	1.00
710	277	1.00
711	21	1.00
712	373	1.00
720	104	1.00
721	437	1.00
730	232	1.00
731	438	1.00
790	1323	1.00
791	938	1.00
792	437	1.00
800	1005	1.00
801	1060	1.00
810	2	1.00
811	1	1.00
812	230	1.00
820	302	1.00
821	2	1.00
890	608	1.00
891	375	1.00
900	826	1.00
901	876	1.00
910	256	1.00
911	150	1.00
912	2	1.00
920	573	1.00
921	153	1.00
930	487	1.00
990	861	1.00
991	257	1.00
1000	407	1.00
1001	441	1.00
1010	0	1.00
1011	466	1.00
1020	0	1.00
1021	3	1.00
1022	466	1.00
1030	373	1.00
1031	21	1.00
1040	876	1.00
1090	701	1.00
1091	469	1.00

Flows - Advanced

Link	Detectors
(ALL)	

Signals

Link	Controller stream	Phase	Second phase enabled
700	7	C	
701	7	C	
710	7	D	
711			
712			
720	7	D	
721			
730	7	D	
731			
800	8	A	
801	8	A	
810	8	B	
811			
812			
820	8	B	
821			
900	9	A	
901	9	A	
910	9	B	
911			
912			
920	9	B	
921			
930	9	B	
1000	10	A	
1001	10	A	
1010	10	B	
1011			
1020	10	B	
1021			
1022			
1030	10	B	
1031			
1040	10	B	

Entry Sources

Link	Cruise time (seconds)	Cruise speed (kph)
700	18.41	39.10
701	18.41	39.10
800	24.83	29.00
801	24.83	29.00
900	24.91	28.90
901	24.91	28.90
1000	48.00	15.00
1001	48.00	15.00

Sources

Link	Source	Source type	Source link	Destination link	Cruise time (seconds)	Cruise speed (kph)	Total flow (PCU/hr)
710	1	Link	1000	710	12.36	32.00	172
711	1	Link	1031	711	12.36	32.00	21
712	1	Link	1030	712	12.36	32.00	373
720	1	Link	1001	720	12.04	32.00	104
721	1	Link	1040	721	12.04	32.00	437
730	1	Link	1001	730	11.73	32.00	232
731	1	Link	1040	731	11.73	32.00	438
790	1	Link	710	790	11.94	32.00	277
791	1	Link	720	791	9.24	32.00	104
792	1	Link	731	792	9.32	32.00	437
810	1	Link	701	810	9.34	32.00	2
811	1	Link	731	811	9.35	32.00	1
812	1	Link	730	812	9.35	32.00	230
820	1	Link	701	820	9.03	32.00	302
821	1	Link	730	821	9.03	32.00	2
890	1	Link	810	890	22.50	32.00	2
891	1	Link	800	891	22.50	32.00	375
910	1	Link	800	910	18.33	32.00	256
911	1	Link	820	911	18.33	32.00	150
912	1	Link	821	912	18.33	32.00	2
920	1	Link	801	920	17.86	32.00	573
921	1	Link	820	921	17.86	32.00	153
930	1	Link	801	930	17.86	32.00	487
990	1	Link	910	990	22.50	32.00	256
991	1	Link	921	991	22.50	32.00	150
1010	1	Link	900	1010	10.76	32.00	0
1011	1	Link	920	1011	10.76	32.00	466
1020	1	Link	900	1020	10.76	32.00	0
1021	1	Link	921	1021	10.76	32.00	3
1022	1	Link	930	1022	10.76	32.00	466
1030	1	Link	900	1030	10.21	32.00	373
1031	1	Link	930	1031	10.21	32.00	21
1040	1	Link	901	1040	9.56	32.00	876
1090	1	Link	1000	1090	7.12	32.00	235
1091	1	Link	1020	1091	7.10	32.00	0
710	2	Link	1001	710	12.36	32.00	104
790	2	Link	711	790	11.94	32.00	21
791	2	Link	721	791	9.24	32.00	437
890	2	Link	800	890	22.50	32.00	375
990	2	Link	900	990	22.50	32.00	453
991	2	Link	920	991	22.50	32.00	108
1090	2	Link	1010	1090	7.12	32.00	0
1091	2	Link	1021	1091	7.10	32.00	3
790	3	Link	700	790	11.94	32.00	653
791	3	Link	701	791	9.24	32.00	396
890	3	Link	812	890	22.50	32.00	230
990	3	Link	911	990	22.50	32.00	150
1090	3	Link	1011	1090	7.59	30.00	466
1091	3	Link	1022	1091	7.10	32.00	466
790	4	Link	712	790	11.94	32.00	373
890	4	Link	811	890	22.50	32.00	1
990	4	Link	912	990	22.50	32.00	2

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				
		A	B	C	D
From	A	3	1049	2	299
	B	931	21	749	364
	C	0	1248	1	453
	D	235	381	230	2

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	A	(untitled)	701, 700	1090, 1091	#0000FF
	B	(untitled)	801, 800	792, 791, 790	#FF0000
	C	(untitled)	900, 901	891, 890	#00FF00
	D	(untitled)	1000, 1001	990, 991	#FFFF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
1	6		A	B	701, 791	Normal	396
	7		A	B	700, 790	Normal	653
	13		B	C	800, 891	Normal	375
	14		A	C	701, 810, 890	Normal	2
	15		B	C	800, 890	Normal	375
	17		D	B	1000, 710, 790	Normal	172
	18		D	A	1000, 1090	Normal	235
	19		D	B	1001, 710, 790	Normal	104
	20		D	B	1001, 720, 791	Normal	104
	21		D	C	1001, 730, 812, 890	Normal	230
	22		A	D	701, 820, 911, 990	Normal	150
	23		C	A	900, 1020, 1091	Normal	0
	24		B	D	800, 910, 990	Normal	256
	25		C	D	900, 990	Normal	453
	26		D	D	1001, 730, 821, 912, 990	Normal	2
	27		A	D	701, 820, 921, 991	Normal	150
	28		B	D	801, 920, 991	Normal	108
	32		B	B	801, 930, 1031, 711, 790	Normal	21
	34		C	B	900, 1030, 712, 790	Normal	373
	35		C	B	901, 1040, 721, 791	Normal	437
	36		C	C	901, 1040, 731, 811, 890	Normal	1
	37		C	B	901, 1040, 731, 792	Normal	437
	41		C	A	900, 1010, 1090	Normal	0
	42		A	A	701, 820, 921, 1021, 1091	Normal	3
	45		B	A	801, 930, 1022, 1091	Normal	466
	46		B	A	801, 920, 1011, 1090	Normal	466

Link Results

Link Results: Vehicle summary

Time Segment	Link	Major link	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (PCU)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	700		87	4	653	1954	26	36.69	14.67	39.92	18.90	0.00	18.90
	701		87	4	700	2097	26	35.49	15.49	39.29	19.60	0.00	19.60
	710		68	32	277	2088	32	6.49	8.82	67.86	7.08	5.41	12.49
	711	710			21			23.59			1.95	1.01	2.96
	712	710			373			16.45			24.22	23.11	47.33
	720		52	75	104	2231	32	4.35	8.22	63.21	1.79	1.74	3.54
	721	720			437			16.26			28.06	27.61	55.67
	730		62	45	232	2299	32	5.51	9.88	70.59	5.04	5.94	10.98
	731	730			439			16.73			28.94	27.43	56.38
	790		66	37	1324	2010	70	2.62	2.09	10.43	13.66	0.71	14.37
	791		44	104	938	2124	70	1.52	2.20	13.43	5.63	0.31	5.94
	792		21	335	437	2115	70	1.08	2.51	15.24	1.87	0.13	2.00
	800		88	2	1005	2001	39	25.30	20.21	53.71	20.06	0.00	20.06
	801		88	2	1060	2110	39	24.71	21.14	53.28	0.00	2.42	2.42
	810		37	141	2	2182	19	39.66	4.06	57.93	0.31	0.15	1.25
	811	810			1			13.30			0.05	0.06	0.12
	812	810			230			7.74			7.02	11.95	18.97
	820		46	94	302	2295	19	44.36	6.34	70.39	52.81	23.07	706.31
	821	820			2			13.70			0.11	0.14	0.24
	890		32	183	607	1911	70	1.38	0.23	0.65	3.31	0.00	3.31
	891		18	391	374	2042	70	1.08	0.11	0.29	1.59	0.00	1.59
	900		86	4	826	2158	30	30.86	17.50	43.12	20.11	0.00	20.11
	901		86	4	876	2287	30	30.20	18.39	42.78	20.87	0.00	20.87
	910		49	83	256	1995	28	14.25	5.67	28.36	14.40	8.69	23.09
	911	910			149			26.53			15.64	11.24	26.88
	912	910			2			23.00			0.18	0.15	0.33
	920		80	12	573	2187	28	20.32	12.38	58.93	45.95	29.26	75.22
	921	920			152			34.83			20.94	2.46	23.41
	930		54	68	487	2187	28	13.08	3.94	12.08	25.10	2.67	27.77
	990		40	123	860	2133	70	1.41	0.34	0.84	4.80	0.00	4.80
	991		12	646	257	2133	70	0.96	0.07	0.17	0.97	0.00	0.97
	1000		89	1	407	2139	14	57.54	11.06	27.51	18.48	0.00	18.48
	1001		89	1	441	2317	14	55.47	11.73	26.93	19.30	0.00	19.30
	1010		35	157	0	2071	44	0.00	6.66	35.74	0.00	0.00	0.00
	1011	1010			466			4.97			9.13	3.82	12.94
	1020		35	156	0	2071	44	0.00	6.87	76.37	0.00	0.00	0.00
	1021	1020			3			9.06			0.11	0.21	0.32
	1022	1020			466			6.71			12.31	22.77	35.08
	1030		27	230	373	2247	44	7.04	2.20	22.04	10.37	7.25	17.61
	1031	1030			21			5.87			0.49	0.78	1.26
	1040		60	49	876	2253	44	8.96	7.09	64.45	30.95	18.62	49.57
	1090		34	164	701	2051	70	1.33	0.26	2.12	3.68	0.00	3.68
	1091		22	316	469	2164	70	1.06	0.14	1.08	1.96	0.00	1.96

Link Results: Flows and signals

Time Segment	Link	Major link	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))	Effective green (s (per cycle))
17:00-18:00	700		653	653	0		1954	754	87		4	0.00	26	27
	701		700	700	0		2097	809	87		4	0.00	26	27
	710		277	277	0		2088	984	68		32	1.34	32	33
	711	710	21	21	0						32	1.28		
	712	710	373	373	0						32	0.88		
	720		104	104	0		2231	1052	52		75	1.34	32	33
	721	720	437	437	0						75	0.84		
	730		232	232	0		2299	1084	62		45	1.35	32	33
	731	730	439	439	0	✓					45	0.85		
	790		1324	1324	0	✓	2010	2010	66		37	0.37	70	70
	791		938	938	0		2124	2124	44		104	0.49	70	70
	792		437	437	0		2115	2115	21		335	1.17	70	70
	800		1005	1005	0		2001	1143	88		2	0.00	39	40
	801		1060	1060	0		2110	1206	88		2	0.00	39	40
	810		2	2	0		2182	623	37		141	1.13	19	20
	811	810	1	1	0						141	1.17		
	812	810	230	230	0						141	1.38		
	820		302	302	0		2295	656	46		94	1.14	19	20
	821	820	2	2	0						94	1.38		
	890		607	607	0		1911	1911	32		183	0.34	70	70
	891		374	374	0		2042	2042	18		391	0.69	70	70
	900		826	826	0		2158	956	86		4	0.00	30	31
	901		876	876	0		2287	1013	86		4	0.00	30	31
	910		256	256	0		1995	827	49		83	0.72	28	29
	911	910	149	149	0	✓					83	1.30		
	912	910	2	2	0						83	1.42		
	920		573	573	0		2187	906	80		12	0.73	28	29
	921	920	152	152	0						12	1.31		
	930		487	487	0	✓	2187	906	54		68	0.73	28	29
	990		860	860	0	✓	2133	2133	40		123	0.30	70	70
	991		257	257	0		2133	2133	12		646	1.03	70	70
	1000		407	407	0		2139	458	89		1	0.00	14	15
	1001		441	441	0		2317	497	89		1	0.00	14	15
	1010		0	0	0		2071	1331	35		157	0.00	44	45
	1011	1010	466	466	0						157	1.03		
	1020		0	0	0		2071	1331	35		156	0.00	44	45
	1021	1020	3	3	0						156	1.51		
	1022	1020	466	466	0						156	1.02		
	1030		373	373	0		2247	1445	27		230	1.02	44	45
	1031	1030	21	21	0						230	1.03		
	1040		876	876	0		2253	1448	60		49	1.03	44	45
	1090		701	701	0	✓	2051	2051	34		164	0.84	70	70
	1091		469	469	0	✓	2164	2164	22		316	1.26	70	70

Link Results: Stops and delays

Time Segment	Link	Major link	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	700		18.41	36.69	3.60	3.06	94.51	18.90	110.56	573.80	148.13	15.38	0.00
	701		18.41	35.49	3.86	3.05	97.99	19.60	109.01	614.90	148.17	16.25	0.00
	710		12.36	6.49	0.06	0.44	7.08	7.08	27.41	53.72	22.07	1.08	5.41
	711	710	12.36	23.59	0.10	0.03	1.95	1.95	67.35	12.47	1.68	0.20	1.01
	712	710	12.36	16.45	1.11	0.59	24.22	24.22	86.82	294.22	29.78	4.62	23.11
	720		12.04	4.35	0.02	0.10	1.79	1.79	23.36	19.22	5.19	0.35	1.74
	721	720	12.04	16.26	1.55	0.43	28.06	28.06	88.48	365.34	21.75	5.52	27.61
	730		11.73	5.51	0.08	0.28	5.04	5.04	35.88	69.09	14.16	1.19	5.94
	731	730	11.73	16.73	1.51	0.53	28.94	28.94	87.71	357.84	26.76	5.49	27.43
	790		11.94	2.62	0.00	0.96	13.66	13.66	3.74	0.50	49.00	0.71	0.71
	791		9.24	1.52	0.00	0.40	5.63	5.63	2.35	1.83	20.22	0.31	0.31
	792		9.32	1.08	0.00	0.13	1.87	1.87	2.09	2.47	6.68	0.13	0.13
	800		24.83	25.30	3.61	3.46	100.30	20.06	98.34	818.10	170.17	11.58	0.00
	801		24.83	24.71	3.80	3.47	103.32	0.00	97.58	863.08	171.24	12.12	2.42
	810		9.34	39.66	0.02	0.00	0.31	0.31	106.47	2.00	0.13	0.03	0.15
	811	810	9.35	13.30	0.00	0.00	0.05	0.05	87.75	0.81	0.06	0.01	0.06
	812	810	9.35	7.74	0.20	0.29	7.02	7.02	72.84	152.66	14.88	2.39	11.95
	820		9.03	44.36	3.29	0.43	52.81	52.81	107.16	301.84	21.61	4.61	23.07
	821	820	9.03	13.70	0.00	0.00	0.11	0.11	94.84	1.75	0.14	0.03	0.14
	890		22.50	1.38	0.00	0.23	3.31	3.31	0.00	0.00	0.00	0.00	0.00
	891		22.50	1.08	0.00	0.11	1.59	1.59	0.00	0.00	0.00	0.00	0.00
	900		24.91	30.86	4.04	3.04	100.55	20.11	104.51	714.02	149.26	10.05	0.00
	901		24.91	30.20	4.29	3.06	104.36	20.87	103.70	757.70	150.71	10.57	0.00
	910		18.33	14.25	0.71	0.30	14.40	14.40	47.56	106.36	15.44	1.74	8.69
	911	910	18.33	26.53	0.92	0.18	15.64	15.64	105.46	148.57	9.01	2.25	11.24
	912	910	18.33	23.00	0.01	0.00	0.18	0.18	104.71	1.97	0.12	0.03	0.15
	920		17.86	20.32	1.68	1.56	45.95	45.95	71.54	332.90	77.35	5.85	29.26
	921	920	17.86	34.83	1.06	0.41	20.94	20.94	113.34	152.19	20.56	2.46	2.46
	930		17.86	13.08	1.19	0.58	25.10	25.10	38.47	157.88	29.29	2.67	2.67
	990		22.50	1.41	0.00	0.34	4.80	4.80	0.00	0.00	0.00	0.00	0.00
	991		22.50	0.96	0.00	0.07	0.97	0.97	0.00	0.00	0.00	0.00	0.00
	1000		48.00	57.54	3.02	3.49	92.38	18.48	134.50	386.39	161.01	1.72	0.00
	1001		48.00	55.47	3.27	3.53	96.48	19.30	132.10	418.67	163.88	1.83	0.00
	1010		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1011	1010	10.76	4.97	0.37	0.27	9.13	9.13	57.49	253.94	13.72	3.82	3.82
	1020		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1021	1020	10.76	9.06	0.01	0.00	0.11	0.11	97.86	2.85	0.09	0.04	0.21
	1022	1020	10.76	6.71	0.60	0.27	12.31	12.31	68.56	305.40	13.76	4.55	22.77
	1030		10.21	7.04	0.55	0.18	10.37	10.37	27.22	92.51	9.08	1.45	7.25
	1031	1030	10.21	5.87	0.02	0.01	0.49	0.49	51.79	10.37	0.51	0.16	0.78
	1040		9.56	8.96	1.42	0.76	30.95	30.95	29.80	222.23	38.81	3.72	18.62
	1090		7.43	1.33	0.00	0.26	3.68	3.68	0.00	0.00	0.00	0.00	0.00
	1091		7.10	1.06	0.00	0.14	1.96	1.96	0.00	0.00	0.00	0.00	0.00

Link Results: Queues and blocking

Time Segment	Link	Major link	Initial queue (PCU)	Mean max queue (PCU)	Max queue storage (PCU)	Utilised storage (%)	Average storage excess queue (PCU)	Average limit excess queue (PCU)	Excess queue penalty (£ per hr)	Max end of green queue (PCU)	Max end of red queue (PCU)	Wasted time starvation (s per cycle)	Wasted time blocking back (s per cycle)	Wasted time total (s per cycle)	Estimated blocking
17:00-18:00	700		0.00	14.67	36.74	39.92	0.00	0.00	0.00	3.06	10.86	0.00	0.00	0.00	
	701		0.00	15.49	39.43	39.29	0.00	0.00	0.00	3.05	11.41	0.00	0.00	0.00	
	710		0.00	8.82	13.00	67.86	0.00	0.00	0.00	1.06	6.01	0.00	0.00	0.00	
	711	710							0.00						
	712	710							0.00						
	720		0.00	8.22	13.00	63.21	0.00	0.00	0.00	0.53	6.41	0.00	0.00	0.00	
	721	720							0.00						
	730		0.00	9.88	14.00	70.59	0.00	0.00	0.00	0.81	6.85	0.00	0.00	0.00	
	731	730							0.00						
	790		0.00	2.09	20.06	10.43	0.00	0.00	0.00			0.00	0.00	0.00	
	791		0.00	2.20	16.41	13.43	0.00	0.00	0.00			0.00	0.00	0.00	
	792		0.00	2.51	16.48	15.24	0.00	0.00	0.00			33.00	0.00	33.00	
	800		0.00	20.21	37.62	53.71	0.00	0.00	0.00	3.46	11.83	0.00	0.00	0.00	
	801		0.00	21.14	39.67	53.28	0.00	0.00	0.00	3.47	12.31	0.00	0.00	0.00	
	810		0.00	4.06	7.00	57.93	0.00	0.00	0.79	0.30	2.42	4.00	0.00	4.00	
	811	810							0.00						
	812	810							0.00						
	820		0.00	6.34	9.00	70.39	0.00	0.63	630.42	0.43	6.32	10.00	0.00	10.00	
	821	820							0.00						
	890		0.00	0.23	35.93	0.65	0.00	0.00	0.00			0.00	0.00	0.00	
	891		0.00	0.11	38.39	0.29	0.00	0.00	0.00			17.00	0.00	17.00	
	900		0.00	17.50	40.57	43.12	0.00	0.00	0.00	3.04	11.99	0.00	0.00	0.00	
	901		0.00	18.39	43.00	42.78	0.00	0.00	0.00	3.06	12.55	0.00	0.00	0.00	
	910		0.00	5.67	20.00	28.36	0.00	0.00	0.00	0.49	4.76	0.00	0.00	0.00	
	911	910							0.00						
	912	910							0.00						
	920		0.00	12.38	21.00	58.93	0.00	0.00	0.00	1.97	7.82	0.00	0.00	0.00	
	921	920							0.00						
	930		0.00	3.94	32.64	12.08	0.00	0.00	0.00	0.58	3.06	0.00	0.00	0.00	
	990		0.00	0.34	40.10	0.84	0.00	0.00	0.00			0.00	0.00	0.00	
	991		0.00	0.07	40.10	0.17	0.00	0.00	0.00			32.00	0.00	32.00	
	1000		0.00	11.06	40.22	27.51	0.00	0.00	0.00	3.49	9.71	0.00	0.00	0.00	
	1001		0.00	11.73	43.56	26.93	0.00	0.00	0.00	3.53	10.26	0.00	0.00	0.00	
	1010		0.00	6.66	18.63	35.74	0.00	0.00	0.00	0.27	2.53	18.00	0.00	18.00	
	1011	1010							0.00						
	1020		0.00	6.87	9.00	76.37	0.00	0.00	0.00	0.27	4.02	18.00	0.00	18.00	
	1021	1020							0.00						
	1022	1020							0.00						
	1030		0.00	2.20	10.00	22.04	0.00	0.00	0.00	0.19	2.17	18.00	0.00	18.00	
	1031	1030							0.00						
	1040		0.00	7.09	11.00	64.45	0.00	0.00	0.00	0.83	4.95	15.00	0.00	15.00	
	1090		0.00	0.26	12.20	2.12	0.00	0.00	0.00			19.00	0.00	19.00	
	1091		0.00	0.14	12.83	1.08	0.00	0.00	0.00			40.00	0.00	40.00	

Link Results: Journey times

Time Segment	Link	Major link	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	JourneyTime (s)
17:00-18:00	700		130.60	10.00	13.07	55.11
	701		140.00	10.48	13.36	53.90
	710		30.39	1.45	20.98	18.85
	711	710	2.31	0.21	11.00	35.95
	712	710	41.01	2.99	13.73	28.81
	720		11.18	0.48	23.50	16.39
	721	720	46.82	3.44	13.61	28.30
	730		24.20	1.11	21.78	17.24
	731	730	45.74	3.47	13.19	28.47
	790		140.50	5.35	26.25	14.56
	791		77.09	2.81	27.48	10.76
	792		36.26	1.26	28.67	10.41
	800		201.00	13.99	14.36	50.13
	801		212.00	14.59	14.53	49.54
	810		0.17	0.03	6.10	49.00
	811	810	0.08	0.01	13.21	22.66
	812	810	19.12	1.09	17.51	17.09
	820		24.22	4.48	5.41	53.39
	821	820	0.16	0.01	12.71	22.73
	890		121.50	4.03	30.15	23.88
	891		74.89	2.45	30.54	23.58
	900		165.20	12.80	12.91	55.77
	901		175.20	13.41	13.06	55.12
	910		41.72	2.32	18.00	32.58
	911	910	24.34	1.86	13.07	44.86
	912	910	0.33	0.02	14.19	41.33
	920		91.04	6.08	14.97	38.18
	921	920	24.20	2.23	10.85	52.69
	930		77.25	4.18	18.47	30.94
	990		172.07	5.71	30.11	23.91
	991		51.46	1.68	30.69	23.46
	1000		81.40	11.93	6.82	105.54
	1001		88.20	12.67	6.96	103.47
	1010		0.00	0.00	0.00	0.00
	1011	1010	44.54	2.03	21.89	15.73
	1020		0.00	0.00	0.00	0.00
	1021	1020	0.29	0.02	17.37	19.82
	1022	1020	44.54	2.26	19.72	17.47
	1030		33.86	1.79	18.93	17.25
	1031	1030	1.91	0.09	20.31	16.08
	1040		74.47	4.51	16.52	18.52
	1090		44.33	1.71	25.99	8.77
	1091		29.55	1.06	27.84	8.16

Link Results: Advanced

Time Segment	Link	Major link	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Mean Max Queue EoTS (PCU)	Max End of Green Queue EoTS (PCU)	Max End of Red Queue EoTS (PCU)	PCU Factor	Cost of traffic penalties (£ per hr)	Unweighted performance index (£ per hr)	Performance Index (£ per hr)
17:00-18:00	700		0.00	0.00	✓	14.75	3.14	10.94	1.00	0.00	109.89	18.90
	701		0.00	0.00	✓	15.57	3.13	11.49	1.00	0.00	114.24	19.60
	710		0.00	0.00	✓	8.83	1.07	6.01	1.00	0.00	8.16	12.49
	711	710	0.00	0.00					1.00	0.00	2.16	2.96
	712	710	0.00	0.00					1.00	0.00	28.84	47.33
	720		0.00	0.00	✓	8.22	0.53	6.41	1.00	0.00	2.14	3.54
	721	720	0.00	0.00					1.00	0.00	33.58	55.67
	730		0.00	0.00	✓	9.88	0.81	6.85	1.00	0.00	6.23	10.98
	731	730	0.00	0.00					1.00	0.00	34.43	56.38
	790		0.00	0.00	✓	2.09			1.00	0.00	14.37	14.37
	791		0.00	0.00	✓	2.20			1.00	0.00	5.94	5.94
	792		0.00	0.00	✓	2.51			1.00	0.00	2.00	2.00
	800		0.00	0.00	✓	20.29	3.54	11.91	1.00	0.00	111.88	20.06
	801		0.00	0.00	✓	21.22	3.55	12.38	1.00	0.00	115.44	2.42
	810		0.00	0.00	✓	4.06	0.30	2.42	1.00	0.79	0.34	1.25
	811	810	0.00	0.00					1.00	0.00	0.07	0.12
	812	810	0.00	0.00					1.00	0.00	9.41	18.97
	820		0.00	0.00	✓	6.34	0.43	6.32	1.00	630.42	57.43	706.31
	821	820	0.00	0.00					1.00	0.00	0.14	0.24
	890		0.00	0.00	✓	0.23			1.00	0.00	3.31	3.31
	891		0.00	0.00	✓	0.11			1.00	0.00	1.59	1.59
	900		0.00	0.00	✓	17.57	3.11	12.06	1.00	0.00	110.59	20.11
	901		0.00	0.00	✓	18.46	3.13	12.62	1.00	0.00	114.93	20.87
	910		0.00	0.00	✓	5.67	0.49	4.76	1.00	0.00	16.14	23.09
	911	910	0.00	0.00					1.00	0.00	17.88	26.88
	912	910	0.00	0.00					1.00	0.00	0.21	0.33
	920		0.00	0.00	✓	12.40	1.99	7.84	1.00	0.00	51.81	75.22
	921	920	0.00	0.00					1.00	0.00	23.41	23.41
	930		0.00	0.00	✓	3.94	0.58	3.06	1.00	0.00	27.77	27.77
	990		0.00	0.00	✓	0.34			1.00	0.00	4.80	4.80
	991		0.00	0.00	✓	0.07			1.00	0.00	0.97	0.97
	1000		0.00	0.00	✓	11.27	3.70	9.91	1.00	0.00	94.10	18.48
	1001		0.00	0.00	✓	11.93	3.72	10.46	1.00	0.00	98.31	19.30
	1010		0.00	0.00	✓	6.66	0.27	2.53	1.00	0.00	0.00	0.00
	1011	1010	0.00	0.00					1.00	0.00	12.94	12.94
	1020		0.00	0.00	✓	6.87	0.27	4.02	1.00	0.00	0.00	0.00
	1021	1020	0.00	0.00					1.00	0.00	0.15	0.32
	1022	1020	0.00	0.00					1.00	0.00	16.87	35.08
	1030		0.00	0.00	✓	2.20	0.19	2.17	1.00	0.00	11.82	17.61
	1031	1030	0.00	0.00					1.00	0.00	0.64	1.26
	1040		0.00	0.00	✓	7.09	0.83	4.95	1.00	0.00	34.67	49.57
	1090		0.00	0.00	✓	0.26			1.00	0.00	3.68	3.68
	1091		0.00	0.00	✓	0.14			1.00	0.00	1.96	1.96

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	Item with worst overall PRC
6	29/05/2019 18:33:27	29/05/2019 18:33:27	17:00	70	1388.06	82.42	88.82	1001	0	0	1001	790	1001

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Actual green (s per cycle)	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	89	1	18180	1687	16.32	517.73	239.11	1388.06

Network Results: Flows and signals

Time Segment	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s per cycle)	Effective green (s per cycle)
17:00-18:00	18180	18180	0	✓	89		1	1687	1721

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Unweighted cost of delay (£ per hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Uniform stops (Stops per hr)	Random stops (Stops per hr)	Unweighted cost of stops (£ per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	17.76	16.32	45.97	36.44	1170.31	517.73	56.62	8569.60	1724.42	134.91	239.11

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	76.37	631.21	314.00	0.00	314.00

Network Results: Journey times

Time Segment	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)
17:00-18:00	2645.11	172.08	15.37

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	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	✓	1.00	631.21	0.00	1305.22	1388.06

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

	To				
From		A	B	C	D
	A	188.0	67.8	126.8	179.8
	B	109.2	147.1	73.9	108.0
	C	0.0	113.7	148.6	79.7
	D	114.3	136.1	161.7	208.7

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)
6	A	B	396	64.67	396	64.67
7	A	B	653	69.66	653	69.66
13	B	C	375	73.71	375	73.71
14	A	C	2	126.78	2	126.78
15	B	C	375	74.01	375	74.01
17	D	B	172	138.95	172	138.95
18	D	A	235	114.31	235	114.31
19	D	B	104	136.88	104	136.88
20	D	B	104	130.62	104	130.62
21	D	C	230	161.68	230	161.68
22	A	D	150	176.06	150	176.06
23	C	A	0	63.93	0	0.00
24	B	D	256	106.62	256	106.62
25	C	D	453	79.69	453	79.69
26	D	D	2	208.68	2	208.68
27	A	D	150	183.44	150	183.44
28	B	D	108	111.17	108	111.17
32	B	B	21	147.06	21	147.06
34	C	B	373	116.40	373	116.40
35	C	B	437	112.70	437	112.70
36	C	C	1	148.64	1	148.64
37	C	B	437	112.51	437	112.51
41	C	A	0	64.54	0	0.00
42	A	A	3	187.96	3	187.96
45	B	A	466	106.10	466	106.10
46	B	A	466	112.21	466	112.21

Final Prediction Table

Link Results

Link	Name	Major link	Traffic node	SIGNALS		FLOWS		PERFORMANCE				PER PCU			QUEUES	
				Controller stream	Phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (PCU)	Max end of red queue (PCU)
700			7	7	C	653	1954	26	0.00	87	4	55.11	36.69	110.56	14.67	10.86
701			7	7	C	700	2097	26	0.00	87	4	53.90	35.49	109.01	15.49	11.41
710		(710)	7	7	D	277	2088	32	0.00	68	32	18.85	6.49	27.41	8.82	6.01
711		710				21						35.95	23.59	67.35		
712		710				373						28.81	16.45	86.82		
720		(720)	7	7	D	104	2231	32	0.00	52	75	16.39	4.35	23.36	8.22	6.41
721		720				437						28.30	16.26	88.48		
730		(730)	7	7	D	232	2299	32	0.00	62	45	17.24	5.51	35.88	9.88	6.85
731		730				439						28.47	16.73	87.71		
790			7			1324	2010	70	0.00	66	37	14.56	2.62	3.74	2.09	
791			7			938	2124	70	0.00	44	104	10.76	1.52	2.35	2.20	
792			7			437	2115	70	33.00	21	335	10.41	1.08	2.09	2.51	
800			8	8	A	1005	2001	39	0.00	88	2	50.13	25.30	98.34	20.21	11.83
801			8	8	A	1060	2110	39	0.00	88	2	49.54	24.71	97.58	21.14	12.31
810		(810)	8	8	B	2	2182	19	4.00	37	141	49.00	39.66	106.47	4.06	2.42
811		810				1						22.66	13.30	87.75		
812		810				230						17.09	7.74	72.84		
820		(820)	8	8	B	302	2295	19	10.00	46	94	53.39	44.36	107.16	6.34	6.32
821		820				2						22.73	13.70	94.84		
890			8			607	1911	70	0.00	32	183	23.88	1.38	0.00	0.23	
891			8			374	2042	70	17.00	18	391	23.58	1.08	0.00	0.11	
900			9	9	A	826	2158	30	0.00	86	4	55.77	30.86	104.51	17.50	11.99
901			9	9	A	876	2287	30	0.00	86	4	55.12	30.20	103.70	18.39	12.55
910		(910)	9	9	B	256	1995	28	0.00	49	83	32.58	14.25	47.56	5.67	4.76
911		910				149						44.86	26.53	105.46		
912		910				2						41.33	23.00	104.71		
920		(920)	9	9	B	573	2187	28	0.00	80	12	38.18	20.32	71.54	12.38	7.82
921	(untitled)	920				152						52.69	34.83	113.34		
930	(untitled)		9	9	B	487	2187	28	0.00	54	68	30.94	13.08	38.47	3.94	3.06
990			9			860	2133	70	0.00	40	123	23.91	1.41	0.00	0.34	
991	(untitled)		9			257	2133	70	32.00	12	646	23.46	0.96	0.00	0.07	
1000			10	10	A	407	2139	14	0.00	89	1	105.54	57.54	134.50	11.06	9.71
1001			10	10	A	441	2317	14	0.00	89	1	103.47	55.47	132.10	11.73	10.26
1010	(untitled)	(1010)	10	10	B	0	2071	44	18.00	35	157	0.00	0.00	0.00	6.66	2.53
1011	(untitled)	1010				466						15.73	4.97	57.49		
1020		(1020)	10	10	B	0	2071	44	18.00	35	156	0.00	0.00	0.00	6.87	4.02
1021		1020				3						19.82	9.06	97.86		
1022		1020				466						17.47	6.71	68.56		
1030		(1030)	10	10	B	373	2247	44	18.00	27	230	17.25	7.04	27.22	2.20	2.17
1031		1030				21						16.08	5.87	51.79		
1040			10	10	B	876	2253	44	15.00	60	49	18.52	8.96	29.80	7.09	4.95
1090			10			701	2051	70	19.00	34	164	8.77	1.33	0.00	0.26	
1091			10			469	2164	70	40.00	22	316	8.16	1.06	0.00	0.14	

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	2645.11	172.08	15.37	45.97	36.44	517.73	239.11	631.21	1388.06
Bus									
Tram									
Pedestrians									
TOTAL	2645.11	172.08	15.37	45.97	36.44	517.73	239.11	631.21	1388.06

- | < = 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**



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