The Great Grid Upgrade

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Bramford to Twinstead Reinforcement

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Executive Summary

Overview

The Transport Assessment (TA) [**APP-061**] for the Bramford to Twinstead Reinforcement (referred to as 'the project') included an analysis of the impact of peak project construction traffic on highway junction capacity in the study area. This is reported in Appendix E of the TA and is a robust and proportionate assessment in line with relevant guidance, accounting for the temporary and modest nature of expected construction traffic impacts. Appendix E concludes that the project would result in no substantial impacts on junction capacity and there is no consequent requirement for mitigation.

To verify the findings of the TA [**APP-061**], the Applicant has undertaken targeted modelling at five junctions where the most substantial impacts were reported in TA Appendix E. This responds to a request from Suffolk County Council (SCC) for further detail on the impacts of the project on junction capacity in its Deadline 5 Submission - 8.7.3: Applicant's Comments on Other Submissions Received at Deadline 4 [**REP5-025**]).

Methodology

The five modelled junctions were as follows:

- J1: A1071/A1214 (signalised junction);
- J2: Copdock Interchange (grade-separated signalised junction);
- J3: Tesco Access Roundabout (part-signalised roundabout);
- J4: A1071/B1113 (standard roundabout); and
- J5: A1071/A134 (priority T-junction).

Signalised junctions and roundabouts were selected based on a forecast % flow change threshold. Priority junctions were selected based on an identified minor arm capacity threshold, defined with reference to Design Manual for Roads and Bridges (DMRB) guidance.

The junction modelling methodology consisted of the following key steps:

- Developing a current baseline at each junction: turning count surveys were collected in 2022/23 and base models were developed in industry-standard Linsig Version 3 and Junctions 10 software.
- Identifying peak hours for modelling with reference to turning count surveys and project construction vehicle and staff vehicle daily trip profiles, summarised in the TA [**APP-061**].
- Developing future baseline (2025) models in line with the expected peak period for project construction traffic (August 2025): a 'core scenario' (using Department for Transport (DfT) Trip End Model Presentation Program (TEMPro) growth forecasts) and a 'high growth scenario (using forecast flows from the TAs for the 'Interchange 55' (I55) and Wolsey Grange 2 developments along the A1214 in south-west Ipswich).
- Adding forecast peak project construction traffic to future baselines to generate 'with project' junction models.

Results and conclusions

The modelling (summarised in Table S.1) indicates that the impact of project construction traffic on junction performance would be marginal, even accounting for substantial contingency included in the forecast (as summarised in section 6.2 of the TA [**APP-061**]) and use of the worst-case alternative scenario programme in ES Appendix 4.2: Construction Schedule [**APP-091**].

Table S.1 – Summary of Findings of Junction Modelling

Junction	Summary of Findings
J1) A1071/A1214	***Core scenario***: degree of saturation 'with project' below practical capacity threshold in all time periods; junction would operate to acceptable standard. ***High growth scenario***: junction exceeds practical capacity threshold in future baseline (AM peak); marginal reduction in performance 'with project' but junction operates within theoretical capacity.
J2) Copdock Interchange	***Core scenario***: practical capacity threshold exceeded in future baseline in all time periods; project traffic marginally reduces junction capacity by 0.4-1% but junction operates below theoretical capacity in all time periods. ***High growth scenario***: practical capacity threshold exceeded in future baseline in all time periods; project traffic marginally reduces junction capacity by 0.8-0.9% but junction operates below theoretical capacity in all time periods.
J3) Tesco Access Roundabout	***Core scenario***: practical capacity threshold exceeded in future baseline in both peaks; degree of saturation on Scrivener Drive above 100% in future baseline PM peak; project traffic marginally reduces junction performance. ***High growth scenario***: practical capacity threshold exceeded in both peaks in future baseline; degree of saturation on A1214 (north) and Scrivener Drive >=110% in PM peak in future baseline; project traffic marginally reduces junction performance.
J4) A1071/B1113	***Core scenario***: future baseline flow/capacity ratio >1.0 on B1113 in all time periods, and Swan Hill in PM peak; project traffic marginally reduces residual capacity by 1-2%. ***High growth scenario***: future baseline flow/capacity ratio >=1.05 on B1113 in all time periods, and Swan Hill in PM peak; project traffic marginally reduces residual capacity by 1-2%.
J5) A1071/A134	***Core scenario***: flow capacity/ratio >=1.0 on A1071 in AM peak future baseline, and >=1.2 in PM peak future baseline; project traffic marginally reduces residual capacity by 1-2%.

Peak project traffic would only be expected to be sustained for a short period around August 2025. The modelling therefore indicates that no mitigation would be warranted specifically due to project activities. It does however suggest that some baseline issues need to be addressed at four of the five junctions tested. In summary, the findings of the junction modelling assessment fully support the conclusions drawn in Appendix E in the TA [**APP-061**].

1 Introduction

1.1 Overview

1.1.1 The Transport Assessment (TA) [**APP-061**] for the Bramford to Twinstead Reinforcement (referred to as 'the project') included an analysis of the impact of peak project construction traffic on highway junction capacity in the study area. This is reported in Appendix E of the TA and is a robust and proportionate assessment in line with relevant guidance, accounting for the temporary and modest nature of expected construction traffic impacts. Appendix E concludes that the project would result in no substantial impacts on junction capacity and there is no consequent requirement for mitigation.

1.1.2 To provide independent verification of the findings of the TA [**APP-061**], the Applicant has undertaken targeted modelling at five junctions where the most substantial impacts were reported in TA Appendix E. This Technical Note summarises the rationale for selecting those junctions and the methodology and results of the modelling. It also responds to a request from Suffolk County Council (SCC) for further detail on the impacts of the project on junction capacity (Ref 3.1p, Deadline 5 Submission - 8.7.3: Applicant's Comments on Other Submissions Received at Deadline 4 [**REP5-025**]).

1.1.3 In summary, the junction modelling indicates that peak project construction traffic would result in only marginal impacts on the performance of assessed junctions, even with significant contingency included in the project traffic forecast (as summarised in section 6.2 of the TA) and accounting for the use of the alternative scenario in Environmental Statement (ES) Appendix 4.2: Construction Schedule [**APP-091**]. This scenario is a reasonable worst case programme for TA purposes as it would require a greater number of construction activities to be undertaken concurrently than the baseline construction schedule.

1.1.4 In addition, peak construction traffic is only expected to occur for a short period. Section 7.3 of the TA indicates that '*construction traffic generation in the peak month of August 2025 (the basis of the assessment described above) is forecast to be 7% higher than in any other month in the construction programme, and 13% higher than all but 5 other months*'.

1.1.5 The junction modelling detailed in this Technical Note therefore fully supports the conclusions in Appendix E of the TA [**APP-061**] summarised above.

2 Methodology

2.1 Selection of Junctions for Modelling

2.1.1 Figure 2.1 and Table 2.1 summarise the locations of the junctions included in the modelling assessment and their broad characteristics.

Figure 2.1 - Location of Modelled Junctions

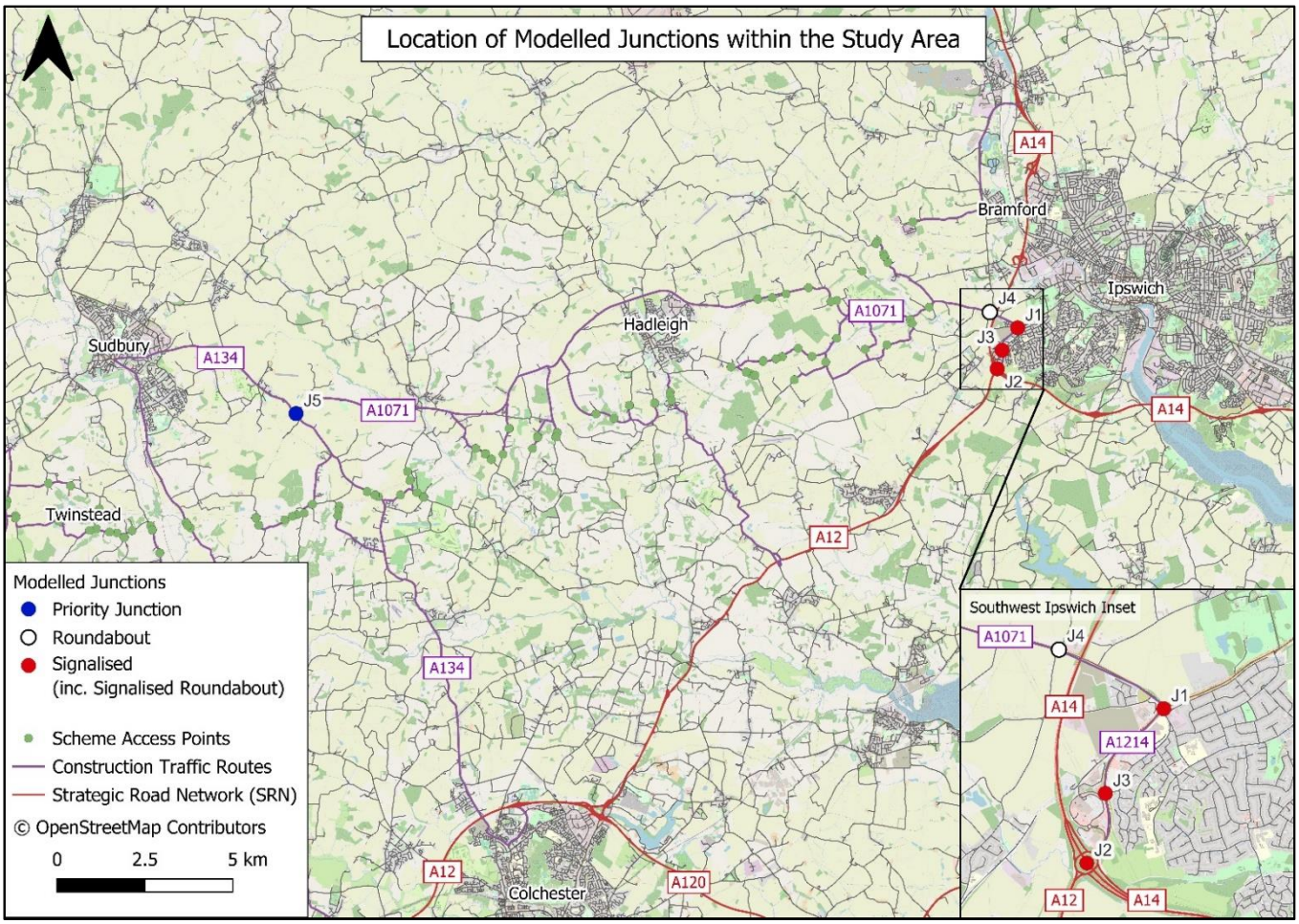

Table 2.1 – List of Modelled Junctions

Identifier	Junction	Junction Type
J1	A1071/A1214	Signalised junction
J2	Copdock Interchange	Grade separated signalised junction
J3	Tesco Access Roundabout	Part signalised roundabout
J4	A1071/B1113	Standard roundabout
J5	A1071/A134	Priority T-junction

2.1.2 Junctions J1, J2, and J4 were selected as peak project construction traffic would exceed 5% of future baseline flow on any arm in either peak hour, as set out in Table 7.5 of the TA [**APP-061**]. The A1214/Scrivener Drive/Tesco Access signalised roundabout, referred to as the Tesco Access Roundabout (J3), was not included in the junction capacity assessment in the TA as no survey data was available for the minor arms. However, it was included in junction modelling due to its location between the A1071/A1214 junction (J1) and the Copdock interchange (J2) – turning counts were collected at the junction in June 2023.

2.1.3 A different approach was used to select priority junctions, based on an identified minor arm capacity threshold at each junction. This threshold was defined based on Design Manual for Roads and Bridges (DMRB) guidance and is dependent on the major road flow at each junction since minor arm capacity reduces as major road flow increases. Further details on this approach are provided in Appendix E of the TA [**APP-061**].

2.1.4 The analysis reported in the TA [**APP-061**] identified three priority junctions where 'future baseline + project traffic' on the minor arm exceeded the minor arm capacity threshold. These are listed in Table 7.4 of the TA as the A1071/A134 junction (J5), the A1071/Duke Street junction, and the A134/B1068 junction. The latter two junctions were subsequently excluded from junction modelling as project traffic on the minor arm was only 1-2% of future baseline flows in both peak hours. The A1071/A134 junction (J5) was in contrast taken forward as the project increased baseline flows on the minor arm by more than 5% in the AM peak hour.

2.2 Junction Modelling Methodology

Overview

2.2.1 The junction modelling methodology consisted of the following key steps:

- Developing a current baseline at each junction based on survey data;
- Identifying peak hours for modelling;
- Developing two future baseline scenarios ('core' and 'high growth'); and
- Adding project construction traffic to future baselines ('with project' scenarios).

2.2.2 Further details on the methodology for each step are provided in the remainder of this section and supported by the following appendices (each including current baseline flows, future baseline flows, project construction flows, and total flows [future baseline + project] for each junction):

- Appendix B – Core Scenario Turning Counts; and
- Appendix C – High Growth Scenario Turning Counts.

Current Baseline

2.2.3 Two 12-hour Classified Turning Count (CTC) surveys were undertaken at each junction on typical, school term-time weekdays (Tuesday-Thursday) during May 2022 and June 2023 (both of which are considered neutral months for traffic data collection).

2.2.4 To model a worst-case, the CTC from the day with the highest combined AM and PM peak traffic flow was selected as the baseline for each junction. Table 2.2 provides an overview of the counts at each of the junctions.

Table 2.2 – CTC Traffic Flow Data

Junction	Count Date	Combined AM and PM Traffic Flow (PCU)	Selected to Provide Baseline
J1: A1071/A1214	17/05/2022	4,417	No
	19/05/2022	4,485	Yes
J2: Copdock Interchange	17/05/2022	13,099	No
	19/05/2022	13,449	Yes
J3: Tesco Access Roundabout	14/06/2023	6,071	No
	15/06/2023	6,088	Yes
J4: A1071/B1113	17/05/2022	4,359	No
	19/05/2022	4,651	Yes
J5: A1071/A134	14/06/2023	3,234	Yes
	15/06/2023	3,066	No

2.2.5 CTCs were then converted to Passenger Car Units (PCU) using industry-standard conversion factors for each vehicle classification as defined in Chapter 6 of the Department for Transport (DfT) Traffic Signs Manual. Heavy Goods Vehicles (HGVs) were converted to PCU assuming an even split between Ordinary Goods Vehicle Type 1 (OGV1) and Ordinary Goods Vehicle Type 2 (OGV2). All subsequent traffic flows in this Technical Note are reported in PCUs.

Identification of Peak Hours

2.2.6 Two AM peak hours were identified for junction modelling as follows:

- 0800-0900: identified as the baseline AM peak hour across the whole study area for the TA [**APP-061**].
- 0730-0830: identified as the AM peak hour for the five junctions based on the CTC data described above.

2.2.7 These two hours were both modelled due to the assumed arrival profile of project construction staff at construction sites in the TA. This assumed profile would result in different numbers of project construction staff vehicles on the road network in the two identified AM peak hours.

2.2.8 In contrast, a single PM hour (1630-1730) was modelled following its identification as the PM peak hour for the five junctions based on the CTC data. The baseline PM peak hour identified across the whole TA study area was 1600-1700. However, modelling a single hour in the PM peak was sufficient because the assumed departure profile of project construction staff from construction sites in the TA would not result in different numbers of project construction staff vehicles on the road network in the two referenced hours.

2.2.9 Further details on the project construction staff arrival and departure profiles are provided later in this section.

Future Baseline Scenarios

2.2.10 Two future baseline scenarios were generated from the current baseline CTC data for the modelled hours identified, as follows:

- Core scenario: current baseline traffic flows uplifted using Department for Transport (DfT) Trip End Model Presentation Program (TEMPro) factors.
- High growth scenario: current baseline traffic flows uplifted based on forecast traffic generated by the 'Interchange 55' (I55) and 'Wolsey Grange 2' developments in south-west Ipswich – this scenario was applicable to junctions J1 to J4 due to their proximity to the development sites. J5 is in contrast 20km away and is unlikely to be affected, and modelling of this scenario was consequently not developed for this junction.

2.2.11 The future baseline year in both scenarios was 2025, aligned with the expected peak period for project construction traffic activity. Engagement with SCC in June 2023 indicated that delivery of the I55 and Wolsey Grange 2 developments had been delayed and they were unlikely to generate the levels of traffic forecast within their TAs (Create Consulting Engineers Limited, 2021 & WSP/Parsons Brinckerhoff, 2015) in the 2025 project assessment year. Consequently, the high growth scenario is treated as a sensitivity test in this Technical Note.

Core Scenario – Future Baseline

2.2.12 The growth factors derived from TEMPro and applied to current baseline traffic flows are summarised in Table 2.3. The same version of TEMPro used to develop the future baseline forecast in the TA was used in the junction modelling assessment for consistency. The factors shown are for an average weekday in Essex and Suffolk combined. Factors for 2022-25 and 2023-25 were required as baseline CTCs were collected in both 2022 and 2023.

Table 2.3 – TEMPro (v7.2) - Traffic growth factors for all vehicle types

Time period	TEMPro growth factor
2022-2025 AM Peak	1.0165 (1.65%)
2022-2025 PM Peak	1.0174 (1.74%)
2023-2025 AM Peak	1.0125 (1.25%)
2023-2025 PM Peak	1.0140 (1.40%)

High Growth Scenario – Future Baseline

2.2.13 In this scenario, development traffic turning counts from the TAs for the I55 and Wolsey Grange 2 developments were added to the 2022/23 baseline CTC counts at junctions J1, J2, J3 and J4. TEMPro factors were not applied to avoid potential double-counting of baseline traffic.

2.2.14 Turning counts generated by I55 and Wolsey Grange 2 were only provided in the development TAs (Create Consulting Engineers Limited, 2021 & WSP/Parsons Brinckerhoff, 2015) for 0800-0900 and 1700-1800. Consequently, only the 0800-0900 AM peak hour was assessed in the high growth scenario. In the PM peak, the 1700-1800 development forecast was added to the 1630-1730 current baseline to generate a conservative 'high growth' future baseline traffic forecast.

Project Construction Traffic

2.2.15 The AM and PM peak hour project construction traffic flows summarised in Figure 7 of the TA [**APP-061**] were added to the future baseline traffic flows in the 0800-0900 AM peak and 1630-1730 PM peak models to generate the 'with project' scenarios.

2.2.16 In the 0730-0830 AM peak model, an adjustment to project construction traffic flows was required due to the assumed arrival profile of project construction staff at construction sites. This profile was reported in section 6.2 of the TA [**APP-061**] as follows:

- 25% arrive in the hour before core working hours (0600-0700).
- 50% arrive in the 30-minutes following the commencement of core working hours (0700-0730).
- 25% arrive in the following hour (0730-0830).

2.2.17 The AM peak hour project traffic flows reported in Figure 7 of the TA [**APP-061**] consequently assumed that 12.5% of staff would arrive between 0800 and 0900, based on an even distribution between 0730 and 0830. However, in the 0730-0830 junction models, this was uplifted to 25% to match the assumed profile for this hour. This uplift only applied to construction staff vehicles, with construction vehicles (HGVs and Light Goods Vehicles (LGVs)) assumed to be evenly distributed across the day in the TA.

2.2.18 The assumed departure profile of project construction staff from construction sites is reported in section 6.2 of the TA [**APP-061**] as follows:

- 25% depart between 1730 and 1830.
- 50% depart in the 30-minute period leading up to the end of core working hours (1830-1900).
- 25% depart in the hour after the end of core working hours (1900-2000).

2.2.19 This profile means that no staff would be travelling during either the PM peak hour identified in the TA (1600-1700) or the PM peak hour identified based on the CTC data at the five modelled junctions (1630-1730). As a result, it was not deemed necessary to model two PM peak hours. To undertake a precautionary junction modelling assessment, it was assumed that 12.5% of construction staff vehicles would be making outbound trips from construction sites between 1630-1730, matching the TA assumption for inbound trips in the AM peak 0800-0900 hour.

3 Junction Modelling Results

3.1 Introduction

3.1.1 Junction modelling involved a comprehensive examination of various factors, including traffic volume, queuing lengths, delay times, level of service, and capacity utilisation. Each junction's specific characteristics, such as signal timings, lane configurations, pedestrian facilities, and turning movements were included in each model. No queue surveys were undertaken but queue observations were made using CTC video footage. The remainder of this chapter includes a summary of modelling results, with further detail on signal time stages and more comprehensive results provided in Appendix A.

3.2 Junction 1: A1214/A1071

Modelling Results

3.2.1 The A1214 / A1070 junction was analysed using LinSig Version 3 software. Observations of signal timings were made using CTC videos. This showed that the cycle time averaged 90 seconds during the AM peaks and 120 seconds during the PM peak. Additionally, it was observed that Stage 5 (the right turn into Scrivener Drive) was not called in every cycle. Consequently, to reflect the existing situation appropriately, the model was adjusted in include Stage 5 in every third cycle. Table 3.1 summarises the junction modelling results in the 0730-0830 hour for the core scenario.

Table 3.1 – A1214/A1071 – AM Peak (0730-0830) Core Scenario

Entry Arm	Base AM (0730 – 0830) 2022			Future Base AM (0730 – 0830) 2025			Future Base + Const. Trips AM (0730 – 0830) 2025		
	DoS (%)	Ave. Delay (s/pcu)	MMQ (pcu)	DoS (%)	Ave. Delay (s/pcu)	MMQ (pcu)	DoS (%)	Ave. Delay (s/pcu)	MMQ (pcu)
A1214 (SW) (AH/L)	80	52	9	80	51	9	89	68	12
A1214 (SW) (R/AH)	74	49	8	75	50	9	82	52	11
Scrivener Dr	80	82	12	82	85	12	89	103	13
A1214 (NE) (AH/L)	81	40	13	83	41	13	79	37	13
A1214 (NE) (AH/R)	78	70	5	82	79	6	82	84	6
A1071	80	51	7	81	53	7	87	65	8
A1071 (R)	68	55	5	70	56	5	79	68	6
PRC:	**11.60%**			**9.10%**			**1.20%**		

Ahead (AH), Right (R), Left (L), Practical Reserve Capacity (PRC), Degree of Saturation (DoS), Mean Maximum Queue length (MMQ)

3.2.2 The 0730-0830 core scenario results indicate that the degree of saturation for the 'with project' scenario would remain less than the practical capacity threshold of the junction, which is 90%. Therefore, the junction would continue to operate to an acceptable standard with the addition of construction traffic.

3.2.3 Table 3.2 summarises the results of the 0800-0900 modelling. This indicates that the degree of saturation with construction traffic in the core scenario would remain less than the practical threshold capacity of the junction (90%).

3.2.4 In the high growth scenario, the results show that in the future baseline the A1214 (north-east), A1071 and Scrivener Drive arms would exceed practical capacity. With project traffic added, there would be a marginal increase in the degree of saturation on each arm and most arms would exceed the practical capacity threshold but would still operate below the theoretical capacity (DoS of 100%).

3.2.5 Table 3.3 summarises the results of the 1630-1730 modelling. This indicates that the degree of saturation with project traffic in the core scenario would remain less than the practical threshold capacity of the junction (90%).

3.2.6 In the high growth scenario, the results show that in the future baseline all arms would remain just within the practical capacity. In the 'with project' scenario, the A1071 would just exceed the practical capacity by 1%.

3.2.7 Given that the high growth scenario is a sensitivity test that is unlikely to materialise due to delays with delivering the I55 and Wolsey Grange 2 developments, it is unlikely that mitigation would be required at this junction. It is noted that there is the potential to increase the cycle time at this junction which could potentially decrease the degree of saturation. Mitigation of this nature is likely to be required due to I55 and Wolsey Grange 2 development traffic in the AM peak, regardless of the impact of the project.

Table 3.2 – A1214/A1071 – AM Peak (0800 – 0900)

Entry Arm	Base AM (0800 – 0900) 2022			Future Base AM (0800 – 0900) 2025			Future Base + Const. Trips AM (0800 – 0900) 2025			Future Base AM (0800 – 0900) 2025 High Growth			Future Base + Const. Trips AM 2025 (0800 – 0900) High Growth		
	DoS (%)	Ave. Delay (s/ pcu)	MMQ (pcu)	DoS (%)	Ave. Delay (s/ pcu)	MMQ (pcu)	DoS (%)	Ave. Delay (s/ pcu)	MMQ (pcu)	DoS (%)	Ave. Delay (s/ pcu)	MMQ (pcu)	DoS (%)	Ave. Delay (s/ pcu)	MMQ (pcu)
A1214 (SW) (AH/L)	82	51	8	83	53	9	89	65	11	88	59	11	97	98	16
A1214 (SW) (R/AH)	73	51	8	75	53	8	85	62	11	83	60	10	95	94	16
Scrivener Dr	82	81	13	84	85	13	88	96	14	95	124	17	98	143	18
A1214 (NE) (AH/L)	80	41	12	86	47	14	83	42	14	94	66	21	92	59	19
A1214 (NE) (AH/R)	77	63	5	78	72	5	78	72	5	90	107	7	90	108	8
A1071	83	54	8	84	55	8	88	62	9	94	78	13	96	89	15
A1071 (R)	73	57	6	74	58	6	81	67	7	89	81	10	92	91	11
PRC:	**8.40%**			**4.60%**			**1.50%**			**-5.10%**			**-8.40%**		

Table 3.3 – A1214/A1071 - PM Peak (1630 - 1730)

Entry Arm	Base PM (1630– 1730) 2022			Future Base PM (1630– 1730) 2025			Future Base + Const. Trips PM (1630– 1730) 2025			Future Base PM (1630– 1730) 2025 High Growth			Future Base + Const. Trips PM 2025 (1630– 1730) High Growth		
	DoS (%)	Ave. Delay (s/ pcu)	MMQ (pcu)	DoS (%)	Ave. Delay (s/ pcu)	MMQ (pcu)	DoS (%)	Ave. Delay (s/ pcu)	MMQ (pcu)	DoS (%)	Ave. Delay (s/ pcu)	MMQ (pcu)	DoS (%)	Ave. Delay (s/ pcu)	MMQ (pcu)
A1214 (SW) (AH/L)	72	49	11	73	49	12	75	52	12	87	64	16	89	71	17
A1214 (SW) (R/AH)	61	50	11	63	51	11	68	52	12	87	74	17	90	80	19
Scrivener Dr	78	104	13	80	106	14	81	110	14	89	119	16	90	129	17
A1214 (NE) (AH/L)	78	40	18	80	42	19	81	43	19	89	51	24	90	54	24
A1214 (NE) (AH/R)	72	75	6	74	79	6	76	83	6	88	105	9	90	114	10
A1071	78	57	10	79	58	11	81	58	12	90	74	15	91	74	16
A1071 (R)	72	59	10	73	61	10	76	61	11	86	74	13	88	77	14
PRC:	**15.90%**			**12.30%**			**10.60%**			**0.10%**			**-0.50%**		

3.3 Junction 2: A12/A14/A1214 Copdock Interchange

Modelling Results

3.3.1 The A12 / A14 / A1214 Copdock Interchange was analysed using LinSig Version 3 software. Signal observation was carried out using CTC videos, indicating that the junction cycle time averaged 60 seconds during both the AM and PM peaks. These timings were reflected in the LinSig model.

3.3.2 To improve the accuracy of the traffic flow representation at the junction during the AM peak periods, specific flow assignment was implemented. This standard practice technique used in traffic modelling constrains the movement of vehicles along certain routes to better reflect real-world conditions.

3.3.3 In this case, two crucial traffic movements were considered for flow assignment: the flow from the A14 (eastbound) off-slip to the A12 (southbound) and the flow from the A12 (southbound) to the A14 (eastbound) on-slip. These movements were selected because they played a significant role in overall traffic dynamics and queue formation at the junction during the AM peak.

3.3.4 Table 3.4 summarises the modelling results in the 0730-0830 core scenario. This indicates that the A14 eastbound off-slip degree of saturation exceeds the practical capacity threshold in the current baseline and would do so in the future baseline. In the 'with project' scenario, the degree of saturation on the A14 EB off-slip (ahead movement) is not predicted to increase and the degree of saturation on all other arms are predicted to remain less than the practical capacity threshold of the junction (90%).

Table 3.4 – Copdock Interchange - AM Peak (0730 - 0830) Core Scenario

Entry Arm	Base AM (0730 – 0830) 2022			Future Base AM (0730 – 0830) 2025			Future Base + Const. Trips AM (0730 – 0830) 2025		
	DoS (%)	Ave. Delay (s/pcu)	MMQ (pcu)	DoS (%)	Ave. Delay (s/pcu)	MMQ (pcu)	DoS (%)	Ave. Delay (s/pcu)	MMQ (pcu)
A14 EB off-slip (L)	44	21	4	45	21	4	47	22	4
A14 EB off-slip (AH)	95	54	19	97	63	21	97	64	21
A1214 [N] (AH)	83	26	11	86	28	12	89	34	14
A1214 [N] (AH)	78	26	11	74	24	10	82	29	12
A14 WB off-slip (L)	61	23	7	60	22	6	63	23	7
A14 WB off-slip (L AH)	71	22	11	69	21	11	73	22	11
A12 [S] (AH)	74	11	7	74	11	7	77	12	7
A12 [S] (AH)	88	21	19	87	20	19	89	23	20
PRC:	**-5.90%**			**-7.80%**			**-8.20%**		

3.3.5 Table 3.5 summarises the modelling results in the 0800-0900 hour. All arms in the current baseline remain less than the practical capacity threshold of the junction (90%). As shown in Appendix A, some circulatory arms operate slightly over 90%, resulting in overall practical reserve capacity estimated at -0.8%.

3.3.6 The core scenario future baseline model shows that the A1214 north arm would exceed 90% degree of saturation. This deteriorates marginally on one arm in the 'with project' core scenario. All other arms are predicted to remain less than the practical capacity threshold of the junction.

3.3.7 The high growth scenario shows that the A14 EB off-slip would exceed 90% degree of saturation in the future baseline scenario. With project traffic, the A12 south and the A1214 north would exceed 90% degree of saturation but would stay below the theoretical capacity (DoS of 100%).

3.3.8 Table 3.6 shows the modelling results for the PM peak hour. This model predicts similar impacts to the AM peaks: degrees of saturation, queue lengths and average delay deteriorate marginally in the 'with project' scenarios when compared with the future baselines. However, degree of saturation exceeds 90% on various arms in both the current baseline and both future baseline scenarios and increases with project traffic would typically be 2% or less.

3.3.9 Degree of saturation on the A14 WB off-slip (Left) lane is predicted to increase from 78% to 94% in the high growth 'with project' scenario but does stay below the theoretical capacity (DoS of 100%). As noted previously, this scenario is unlikely to materialise given delays in the delivery of the I55 and Wolsey Grange 2 developments.

3.3.10 In summary, the impact of the project at this junction is generally marginal and no mitigation measures are likely to be required due to temporary project construction traffic.

Table 3.5 – Copdock Interchange - AM Peak (0800 - 0900)

Entry Arm	Base AM (0800 – 0900) 2022			Future Base AM (0800 – 0900) 2025			Future Base + Const. Trips AM (0800 – 0900) 2025			Future Base AM (0800 – 0900) 2025 High Growth			Future Base + Const. Trips AM 2025 (0800 – 0900) High Growth		
	DoS (%)	Ave. Delay (s/ pcu)	MMQ (pcu)	DoS (%)	Ave. Delay (s/ pcu)	MMQ (pcu)	DoS (%)	Ave. Delay (s/ pcu)	MMQ (pcu)	DoS (%)	Ave. Delay (s/ pcu)	MMQ (pcu)	DoS (%)	Ave. Delay (s/ pcu)	MMQ (pcu)
A14 EB off-slip (L)	45	21	4	43	20	4	44	20	4	43	19	4	44	19	4
A14 EB off-slip (AH)	88	36	14	84	29	11	84	29	11	97	56	21	78	25	10
A1214 [N] (AH)	83	26	11	94	47	16	96	51	18	88	29	13	97	59	21
A1214 [N] (AH)	79	26	11	92	45	15	91	43	15	81	27	12	94	51	18
A14 WB off-slip (L)	69	28	7	60	23	6	74	30	8	65	25	7	82	37	9
A14 WB off-slip (L AH)	82	28	12	72	22	10	83	28	11	77	24	10	89	34	12
A12 [S] (AH)	79	14	8	79	13	8	81	14	9	83	16	10	88	20	13
A12 [S] (AH)	87	22	18	86	21	18	89	24	19	90	26	20	96	42	25
PRC:	**-0.80%**			**-6.60%**			**-7.60%**			**-8.00%**			**-8.90%**		

Table 3.6 – Copdock Interchange - PM Peak (1630 - 1730)

Entry Arm	Base PM (1630– 1730) 2022			Future Base PM (1630– 1730) 2025			Future Base + Const. Trips PM (1630– 1730) 2025			Future Base PM (1630– 1730) 2025 High Growth			Future Base + Const. Trips PM 2025 (1630– 1730) High Growth		
	DoS (%)	Ave. Delay (s/ pcu)	MMQ (pcu)	DoS (%)	Ave. Delay (s/ pcu)	MMQ (pcu)	DoS (%)	Ave. Delay (s/ pcu)	MMQ (pcu)	DoS (%)	Ave. Delay (s/ pcu)	MMQ (pcu)	DoS (%)	Ave. Delay (s/ pcu)	MMQ (pcu)
A14 EB off-slip (L)	46	19	4	47	19	5	47	19	5	52	21	5	49	19	5
A14 EB off-slip (AH)	78	25	9	79	26	10	79	26	10	82	28	10	78	25	9
A1214 [N] (AH)	91	37	12	91	37	13	91	37	13	91	36	13	93	39	16
A1214 [N] (AH)	82	35	10	82	33	11	82	33	11	83	31	11	86	34	13
A14 WB off-slip (L)	71	27	8	78	31	9	78	31	9	78	31	9	94	60	14
A14 WB off-slip (L AH)	83	26	11	88	31	13	88	31	13	91	34	13	98	61	22
A12 [S] (AH)	87	20	13	89	21	14	89	21	14	94	32	14	94	32	20
A12 [S] (AH)	92	31	20	94	36	22	94	36	22	98	56	22	98	56	27
PRC:		**-4.50%**			**-5.80%**			**-6.60%**			**-8.70%**			**-9.50%**	

3.4 Junction 3: Tesco Access Roundabout

Modelling Results

3.4.1 The Tesco Access roundabout was analysed using LinSig Version 3 software. Junctions 10 software was also used to estimate give-way parameters for the priority-controlled approaches.

3.4.2 Signal cycle times for the A1214 (south) arm and its adjoining circulatory approach on the roundabout were determined through observation of CTC videos. The average cycle time was 30 seconds during the AM peak and 60 seconds during the PM peak. These timings were subsequently input into the model. Other minor adjustments were made to improve LinSig representation of traffic dynamics and queue behaviour at the junction.

3.4.3 Table 3.7 shows the modelling results for the 0730-0830 core scenario. The results indicate that the Scrivener Drive approach exceeds the 90% practical capacity threshold in both the current baseline and the future baseline scenarios. There would be a marginal 2% increase in degree of saturation with the addition of project traffic.

Table 3.7 – Tesco Access Roundabout - AM Peak (0730 - 0830) Core Scenario

Entry Arm	Base AM (0730 – 0830) 2023			Future Base AM (0730 – 0830) 2025			Future Base + Const. Trips AM (0730 – 0830) 2025		
	DoS (%)	Ave. Delay (s/pcu)	MMQ (pcu)	DoS (%)	Ave. Delay (s/pcu)	MMQ (pcu)	DoS (%)	Ave. Delay (s/pcu)	MMQ (pcu)
A1214 [N] (AH)	58	9	2	60	10	2	61	10	2
A1214 [N] (AH)	61	9	2	62	18	4	63	10	3
Scrivener Dr [E] (L AH)	93	30	10	95	55	15	97	44	14
A1214 [S] (AH L)	73	18	6	74	22	7	78	20	7
A1214 [S] (AH)	71	18	6	72	22	7	77	20	6
Tesco [W] (AH)	12	3	0	12	4	0	12	3	0
Tesco [W] (AH)	36	7	1	37	9	2	37	7	2
PRC:	**-3.50%**			**-6.00%**			**-7.20%**		

3.4.4 Table 3.8 summarises the 0800-0900 modelling results. This shows that degree of saturation in the current baseline, core future baseline and core ‘with project’ scenarios would remain less than the threshold capacity of the junction (90%).

3.4.5 In the high growth scenario, the results show that in the future baseline all arms would remain just within the practical capacity threshold except for Scrivener Drive. In the ‘with project’ scenario, Scrivener Drive would remain at the same degree of saturation.

Table 3.8 – Tesco Access Roundabout – AM Peak (0800 - 0900)

Entry Arm	Base AM (0800 – 0900) 2023			Future Base AM (0800 – 0900) 2025			Future Base + Const. Trips AM (0800 – 0900) 2025			Future Base AM (0800 – 0900) 2025 High Growth			Future Base + Const. Trips AM 2025 (0800 – 0900) High Growth		
	DoS (%)	Ave. Delay (s/ pcu)	MMQ (pcu)	DoS (%)	Ave. Delay (s/ pcu)	MMQ (pcu)	DoS (%)	Ave. Delay (s/ pcu)	MMQ (pcu)	DoS (%)	Ave. Delay (s/ pcu)	MMQ (pcu)	DoS (%)	Ave. Delay (s/ pcu)	MMQ (pcu)
A1214 [N] (AH)	61	11	2	63	12	3	64	12	3	77	18	2	77	18	4
A1214 [N] (AH)	62	11	3	64	11	3	65	12	3	76	18	2	76	18	4
Scrivener Dr [E] (L AH)	86	16	7	88	18	8	89	20	8	98	55	12	98	56	16
A1214 [S] (AH L)	77	20	6	78	20	7	81	21	7	83	22	6	85	24	8
A1214 [S] (AH)	76	20	6	77	20	6	80	22	7	81	22	6	84	24	8
Tesco [W] (AH)	11	3	0	11	3	0	11	3	0	16	4	0	15	4	0
Tesco [W] (AH)	39	8	2	40	8	2	41	8	2	48	9	1	47	9	2
PRC:	**4.40%**			**2.00%**			**0.80%**			**-9.00%**			**-9.20%**		

3.4.6 Table 3.9 shows the modelling results for the PM peak hour. This indicates that the A1214 (north) and Scrivener Drive approaches both exceed the practical capacity threshold of the junction in the current baseline and in both future baselines (core scenario and high growth). In both the core and high growth scenarios, there is a marginal reduction in performance due to the addition of project traffic.

3.4.7 Across all three time periods assessed, the impact of project traffic on the performance of the junction is marginal and no mitigation related specifically to the project is warranted. Based on information in the Wolsey Grange 2 Transport Assessment, proposals have been developed to upgrade this junction to alleviate the baseline issues described (including an option to part-signalise the A1214 approaches).

Table 3.9 – Tesco Access Roundabout – PM peak (1630 - 1730)

Entry Arm	Base PM (1630– 1730) 2023			Future Base PM (1630– 1730) 2025			Future Base + Const. Trips PM (1630– 1730) 2025			Future Base PM (1630– 1730) 2025 High Growth			Future Base + Const. Trips PM 2025 (1630– 1730) High Growth		
	DoS (%)	Ave. Delay (s/ pcu)	MMQ (pcu)	DoS (%)	Ave. Delay (s/ pcu)	MMQ (pcu)	DoS (%)	Ave. Delay (s/ pcu)	MMQ (pcu)	DoS (%)	Ave. Delay (s/ pcu)	MMQ (pcu)	DoS (%)	Ave. Delay (s/ pcu)	MMQ (pcu)
A1214 [N] (AH)	94	49	13	97	65	15	101	93	32	111	229	55	114	258	59
A1214 [N] (AH)	92	50	10	95	64	12	100	94	16	110	224	39	113	258	43
Scrivener Dr [E] (L AH)	98	61	13	101	95	32	108	176	44	111	217	50	114	260	56
A1214 [S] (AH L)	45	8	5	46	8	5	47	8	5	55	9	6	58	10	7
A1214 [S] (AH)	52	8	6	52	9	6	52	9	6	53	9	7	57	11	7
Tesco [W] (AH)	17	3	0	17	3	0	17	3	0	23	4	1	23	4	1
Tesco [W] (AH)	77	24	7	80	26	8	80	27	8	92	50	12	88	39	10
PRC:	**-8.40%**			**-12.70%**			**-19.70%**			**-23.70%**			**-26.50%**		

3.5 Junction 4: A1071/B1113

Modelling Results

3.5.1 This junction was modelled using Junctions 10 software. Minor adjustments were made to improve the representation of traffic dynamics and queue behaviour. Table 3.10 shows the modelling results for the 0730-0830 core scenario.

Table 3.10 – A1071/B1113 – AM peak (0730 - 0830) Core Scenario

Entry Arm	Base AM (0730 – 0830) 2022			Future Base AM (0730 – 0830) 2025			Future Base + Const. Trips AM (0730 – 0830) 2025		
	Ratio of flow to capacity	Ave. Delay (s/pcu)	MMQ (pcu)	Ratio of flow to capacity	Ave. Delay (s/pcu)	MMQ (pcu)	Ratio of flow to capacity	Ave. Delay (s/pcu)	MMQ (pcu)
B1113 [N]	1.07	165	34	1.10	197	42	1.12	216	47
A1071 [E]	0.70	19	2	0.71	20	3	0.84	28	5
Swan Hill [S]	0.85	28	6	0.87	31	7	0.91	43	9
A1071 [W]	0.80	22	4	0.82	24	4	0.82	30	4
Network Residual Capacity	**-14%**			**-16%**			**-17%**		

3.5.2 The table indicates that the B1113 approach exceeds the threshold of flow to capacity (above 0.85, which is the lower threshold for priority-controlled junctions) in the current baseline and is expected to do so in the future baseline and the 'with project' scenario. The increase in the 'with project' scenario is marginal when compared with the future baseline. A similar marginal change is evident on the Swan Hill approach, with the threshold being exceeded in both the future baseline and the 'with project' scenario.

3.5.3 Table 3.11 summarises outputs from the 0800–0900 models. As with the 0730-0830 results, the B1113 approach exceeds the threshold of flow to capacity in all scenarios and the differences between scenarios are similar: the 'with project' test results in only a marginal reduction in performance when compared with the future baseline, for both the core scenario and the high-growth scenario.

3.5.4 Table 3.12, summarises the outputs from the 1630-1730 models, indicating a similar picture. The B1113 and Swan Hill approaches exceed the threshold of flow to capacity in all scenarios, and the 'with project' scenario only marginally reduces performance compared with the future baseline.

3.5.5 Overall, this junction is operating over capacity in all modelled time periods in the current baseline and future baseline in both the core scenario and the high growth scenario, primarily due to over-loading on the B1113 approach. Comparison of the future baseline and 'with project' tests in both the core and high growth scenarios indicates that the project has a marginal impact on junction performance, reducing capacity by only 1-2%. Given the temporary nature of this impact, no mitigation would be warranted at this junction due to project activities. The modelling however does suggest that baseline issues need to be addressed.

Table 3.11 – A1071/B1113 – AM Peak (0800 - 0900)

Entry Arm	Base AM (0800 – 0900) 2022			Future Base AM (0800 – 0900) 2025			Future Base + Const. Trips AM (0800 – 0900) 2025			Future Base AM (0800 – 0900) 2025 High Growth			Future Base + Const. Trips AM 2025 (0800 – 0900) High Growth		
	Ratio of flow to capacity	Ave. Delay (s/ pcu)	MMQ (pcu)	Ratio of flow to capacity	Ave. Delay (s/ pcu)	MMQ (pcu)	Ratio of flow to capacity	Ave. Delay (s/ pcu)	MMQ (pcu)	Ratio of flow to capacity	Ave. Delay (s/ pcu)	MMQ (pcu)	Ratio of flow to capacity	Ave. Delay (s/ pcu)	MMQ (pcu)
B1113 [N]	0.98	94	15	1.01	116	20	1.03	131	23	1.05	146	27	1.07	163	30
A1071 [E]	0.64	15	2	0.66	16	2	0.72	19	3	0.71	18	3	0.77	22	3
Swan Hill [S]	0.74	16	3	0.76	17	3	0.77	18	4	0.77	18	3	0.79	20	4
A1071 [W]	0.67	13	2	0.68	14	2	0.71	15	2	0.71	15	3	0.74	17	3
Network Residual Capacity	**-10%**			**-11%**			**-12%**			**-13%**			**-14%**		

Table 3.12 – A1071/B1113 – PM Peak (1630 - 1730)

Entry Arm	Base PM (1630 – 1730) 2022			Future Base PM (1630 – 1730) 2025			Future Base + Const. Trips PM (1630 – 1730) 2025			Future Base PM (1630 – 1730) 2025 High Growth			Future Base + Const. Trips PM (1630 – 1730) High Growth		
	Ratio of flow to capacity	Ave. Delay (s/ pcu)	MMQ (pcu)	Ratio of flow to capacity	Ave. Delay (s/ pcu)	MMQ (pcu)	Ratio of flow to capacity	Ave. Delay (s/ pcu)	MMQ (pcu)	Ratio of flow to capacity	Ave. Delay (s/ pcu)	MMQ (pcu)	Ratio of flow to capacity	Ave. Delay (s/ pcu)	MMQ (pcu)
B1113 [N]	0.99	92	18	1.02	115	24	1.06	149	32	1.08	171	38	1.12	216	48
A1071 [E]	0.58	11	1	0.60	12	2	0.61	12	2	0.66	13	2	0.67	14	2
Swan Hill [S]	1.02	102	28	1.05	124	36	1.06	135	39	1.07	148	43	1.08	160	47
A1071 [W]	0.48	9	1	0.49	10	1	0.55	11	1	0.54	10	1	0.60	12	2
Network Residual Capacity	**-11%**			**-12%**			**-14%**			**-16%**			**-18%**		

3.6 Junction 5: A134/A1071

Modelling Results

3.6.1 This junction was modelled using Junctions 10 software. Minor intercept adjustments were necessary on the A134 due to initial deviations from observed queuing patterns. The high growth scenario was not modelled at this junction as it is located some 20km away from the I55 and Wolsey Grange 2 developments.

3.6.2 Table 3.13 shows the modelling results for the 0730-0830 core scenario. This indicates that all approaches exceed the practical threshold ratio of flow to capacity of 0.85 in all scenarios. Furthermore, in the future baseline scenario all approaches exceed the theoretical threshold of the junction. Overall, the project has only a marginal impact on junction performance, reducing junction capacity by 2%.

Table 3.13 – A134/A1071 – AM peak (0730 - 0830) Core Scenario

Entry Arm	Base AM (0730 – 0830) 2023			Future Base AM (0730 – 0830) 2025			Future Base + Const. Trips AM (0730 – 0830) 2025		
	Ratio of flow to capacity	Ave. Delay (s/pcu)	MMQ (pcu)	Ratio of flow to capacity	Ave. Delay (s/pcu)	MMQ (pcu)	Ratio of flow to capacity	Ave. Delay (s/pcu)	MMQ (pcu)
A1071 Boxford Lane (LT)	1.02	116	19	1.04	134	22	1.09	175	31
A1071 Boxford Lane (RT)	1.00	136	13	1.02	154	16	1.07	195	20
A134 (SE) (RT)	0.90	54	8	0.91	59	9	0.95	75	12
Network Residual Capacity	**-10%**			**-11%**			**-13%**		

3.6.3 A similar situation is evident in the 0800-0900 models (Table 3.14). Theoretical capacity is exceeded on the A1071 in the future baseline and the project reduces capacity by 2%.

Table 3.14 – A134/A1071 – AM peak (0800 - 0900) Core Scenario

Entry Arm	Base AM (0800 – 0900) 2023			Future Base AM (0800 – 0900) 2025			Future Base + Const. Trips AM (0800 – 0900) 2025		
	Ratio of flow to capacity	Ave. Delay (s/pcu)	MMQ (pcu)	Ratio of flow to capacity	Ave. Delay (s/pcu)	MMQ (pcu)	Ratio of flow to capacity	Ave. Delay (s/pcu)	MMQ (pcu)
A1071 Boxford Lane (LT)	1.05	146	21	1.07	169	25	1.11	206	32
A1071 Boxford Lane (RT)	1.03	168	14	1.05	191	17	1.09	227	20
A134 (SE) (RT)	0.81	33	4	0.83	35	5	0.85	41	6
Network Residual Capacity	**-13%**			**-14%**			**-16%**		

3.6.4 The situation is also similar in the PM peak hour (Table 3.15). Theoretical capacity is exceeded on the A1071 approach in the future baseline, and the project reduces junction capacity by 1%.

Table 3.15 – A1234/A1071 – PM peak (1630 - 1730) Core Scenario

Entry Arm	Base PM (1630 - 1730) 2023			Future Base PM (1630 - 1730) 2025			Future Base + Const. Trips PM (1630 - 1730) 2025		
	Ratio of flow to capacity	Ave. Delay (s/pcu)	MMQ (pcu)	Ratio of flow to capacity	Ave. Delay (s/pcu)	MMQ (pcu)	Ratio of flow to capacity	Ave. Delay (s/pcu)	MMQ (pcu)
A1071 Boxford Lane (LT)	1.21	390	46	1.24	440	51	1.28	525	59
A1071 Boxford Lane (RT)	1.20	401	31	1.23	454	34	1.27	535	39
A134 (SE) (RT)	0.71	20	2	0.72	21	3	0.74	23	3
Network Residual Capacity	**-24%**			**-25%**			**-26%**		

3.6.5 As with the A1071/B1113 junction (J4), this junction operates over capacity in all modelled time periods in the current baseline and core scenario future baseline due to over-loading on the A1071 approach. Comparison of the future baseline and 'with project' tests indicates that the project has a marginal impact on junction performance, reducing capacity by only 1-2%. Given the temporary nature of this impact, no mitigation would be warranted at this junction due to project activities. The modelling however does suggest that baseline issues need to be addressed.

4 Summary of Findings

4.1 Overview

4.1.1 Five junctions were modelled to verify the conclusions of the junction capacity assessment detailed in Appendix E in the TA [**APP-061**]. The modelling (summarised in Table 4.1) indicates that the impact of project construction traffic would be marginal, even accounting for substantial contingency included in the forecast (as summarised in section 6.2 of the TA) and the use of the alternative scenario in ES Appendix 4.2: Construction Schedule [**APP-091**].

Table 4.1 – Summary of Findings of Junction Modelling

Junction	Summary of findings
J1) A1071/A1214	***Core scenario***: degree of saturation 'with project' below practical capacity threshold in all time periods; junction would operate to acceptable standard. ***High growth scenario***: junction exceeds practical capacity threshold in future baseline (AM peak); marginal reduction in performance 'with project' but junction operates within theoretical capacity.
J2) Copdock Interchange	***Core scenario***: practical capacity threshold exceeded in future baseline in all time periods; project traffic marginally reduces junction capacity by 0.4-1% but junction operates below theoretical capacity in all time periods. ***High growth scenario***: practical capacity threshold exceeded in future baseline in all time periods; project traffic marginally reduces junction capacity by 0.8-0.9% but junction operates below theoretical capacity in all time periods.
J3) Tesco Access Roundabout	***Core scenario***: practical capacity threshold exceeded in future baseline in both peaks; degree of saturation on Scrivener Drive above 100% in future baseline PM peak; project traffic marginally reduces junction performance. ***High growth scenario***: practical capacity threshold exceeded in both peaks in future baseline; degree of saturation on A1214 (north) and Scrivener Drive >=110% in PM peak in future baseline; project traffic marginally reduces junction performance.
J4) A1071/B1113	***Core scenario***: future baseline flow/capacity ratio >1.0 on B1113 in all time periods, and Swan Hill in PM peak; project traffic marginally reduces residual capacity by 1-2%. ***High growth scenario***: future baseline flow/capacity ratio >=1.05 on B1113 in all time periods, and Swan Hill in PM peak; project traffic marginally reduces residual capacity by 1-2%.
J5) A1071/A134	***Core scenario***: flow capacity/ratio >=1.0 on A1071 in AM peak future baseline, and >=1.2 in PM peak future baseline; project traffic marginally reduces residual capacity by 1-2%.

4.1.2 Peak project traffic would only be expected to be sustained for a short period around August 2025. The modelling therefore indicates that no mitigation would be warranted specifically due to project activities. It does however suggest that some baseline issues need to be addressed at four of the five junctions tested. In summary, the findings of the junction modelling assessment fully support the conclusions drawn in Appendix E in the TA [**APP-061**].

References

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Appendix A: Junction Modelling Results

Basic Results Summary

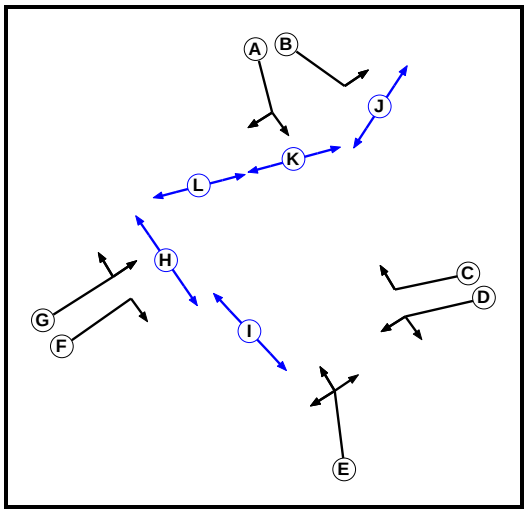
User and Project Details

Project:	**Bramford to Twinstead Reinforcement**
Title:	**TP14 - Junction Modelling**
Location:	Ipswich, UK
Additional detail:	-
File name:	J1_A1214-A1071_R1.lsg3x
Author:	JP/SC
Company:	Jacobs UK Ltd.
Address:	Cottons Centre | Cottons Lane, London. SE1 2QG

Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	3
C	Traffic		7	7
D	Traffic		7	7
E	Traffic		7	7
F	Traffic		7	6
G	Traffic		7	7
H	Pedestrian		7	7
I	Pedestrian		5	5
J	Pedestrian		5	5
K	Pedestrian		5	5
L	Pedestrian		5	5

Phase Diagram



Basic Results Summary

Phase Intergreens Matrix

Terminating Phase \ Starting Phase	A	B	C	D	E	F	G	H	I	J	K	L
A		-	8	9	13	13	6	-	12	-	7	-
B	-		6	-	6	-	6	-	-	6	-	-
C	6	8		-	6	-	6	-	-	-	-	10
D	7	-	-		10	10	-	-	9	-	-	-
E	13	13	12	6		6	9	12	-	-	-	12
F	6	-	-	6	6		-	-	-	-	-	-
G	10	10	9	-	7	-		8	-	-	-	11
H	-	-	-	-	14	-	14		-	-	-	-
I	11	-	-	11	-	-	-	-		-	-	-
J	-	8	-	-	-	-	-	-	-		-	-
K	8	-	-	-	-	-	-	-	-	-		-
L	-	-	10	-	10	-	10	-	-	-	-	

Phase Delays

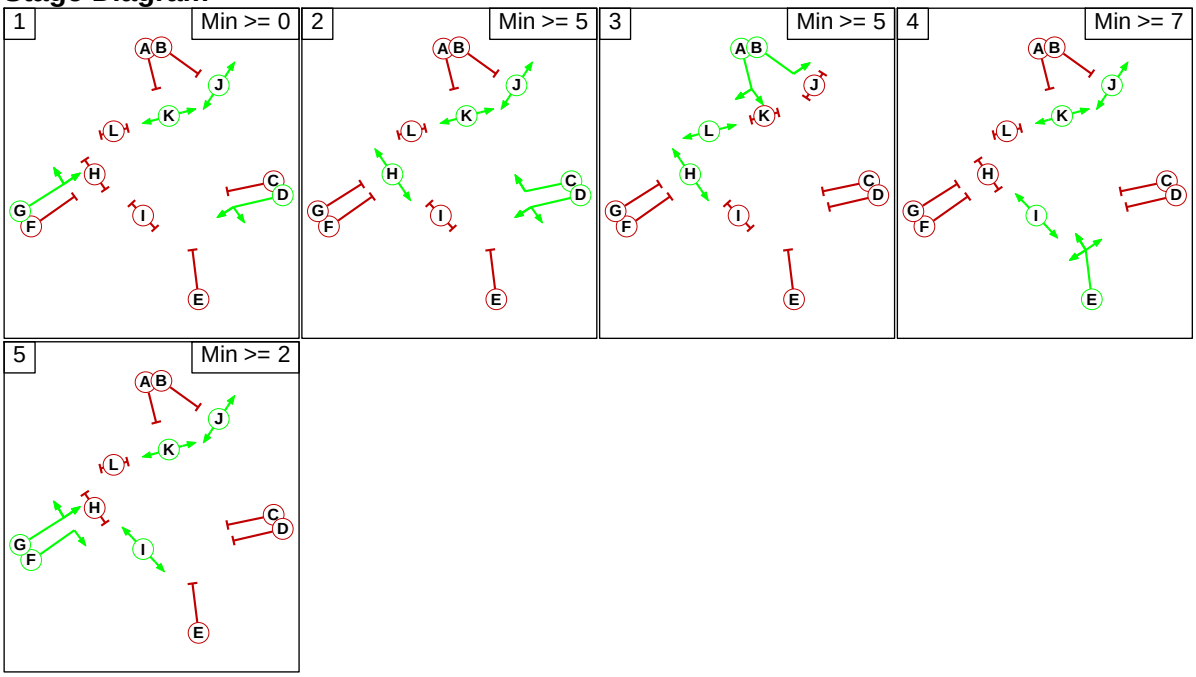
Term. Stage	Start Stage	Phase	Type	Value	Cont value
1	3	D	Losing	3	3
1	4	G	Losing	3	3
2	1	C	Losing	8	8
2	3	D	Losing	1	1
2	4	C	Losing	8	8
2	4	D	Losing	4	4
2	5	C	Losing	8	8
3	1	B	Losing	8	8
3	2	B	Losing	4	4
3	4	B	Losing	8	8
3	5	B	Losing	8	8
5	1	F	Losing	5	5
5	2	F	Losing	5	5
5	3	F	Losing	4	4
5	4	F	Losing	1	1

Basic Results Summary

Phases in Stage

Stage No.	Phases in Stage
1	D G J K
2	C D H J K
3	A B H L
4	E I J K
5	F G I J K

Stage Diagram



Basic Results Summary

Lane Input Data

Junction: J1: A1214-A1071

Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (A1214 (SW))	U	G	2	3	7.7	Geom	-	3.90	0.00	Y	Arm 8 Left	17.00
1/2 (A1214 (SW))	U	G	2	3	60.0	Geom	-	3.90	0.00	Y	Arm 6 Ahead	Inf
1/3 (A1214 (SW))	U	G	2	3	60.0	Geom	-	3.90	0.00	N	Arm 6 Ahead	Inf
1/4 (A1214 (SW))	U	F	2	3	13.2	Geom	-	3.00	0.00	Y	Arm 4 Right	15.00
2/1 (A1214 exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
2/2 (A1214 exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
3/1 (Scrivener Dr)	U	E	2	3	7.8	Geom	-	3.65	0.00	Y	Arm 2 Left	12.00
3/2 (Scrivener Dr)	U	E	2	3	60.0	Geom	-	3.65	0.00	Y	Arm 6 Right	50.00
											Arm 8 Ahead	50.00
4/1 (Scrivener Dr exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
5/1 (A1214 (NE))	U	D	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 2 Ahead	Inf
											Arm 4 Left	15.00
5/2 (A1214 (NE))	U	D	2	3	60.0	Geom	-	3.50	0.00	N	Arm 2 Ahead	Inf
5/3 (A1214 (NE))	U	C	2	3	19.0	Geom	-	3.50	0.00	Y	Arm 8 Right	25.00
6/1 (A1214 exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
6/2 (A1214 exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1 (A1071)	U	B	2	3	6.1	Geom	-	3.20	0.00	Y	Arm 6 Left	20.00
7/2 (A1071)	U	A	2	3	47.0	Geom	-	3.40	0.00	Y	Arm 2 Right	25.00
											Arm 4 Ahead	25.00

Basic Results Summary

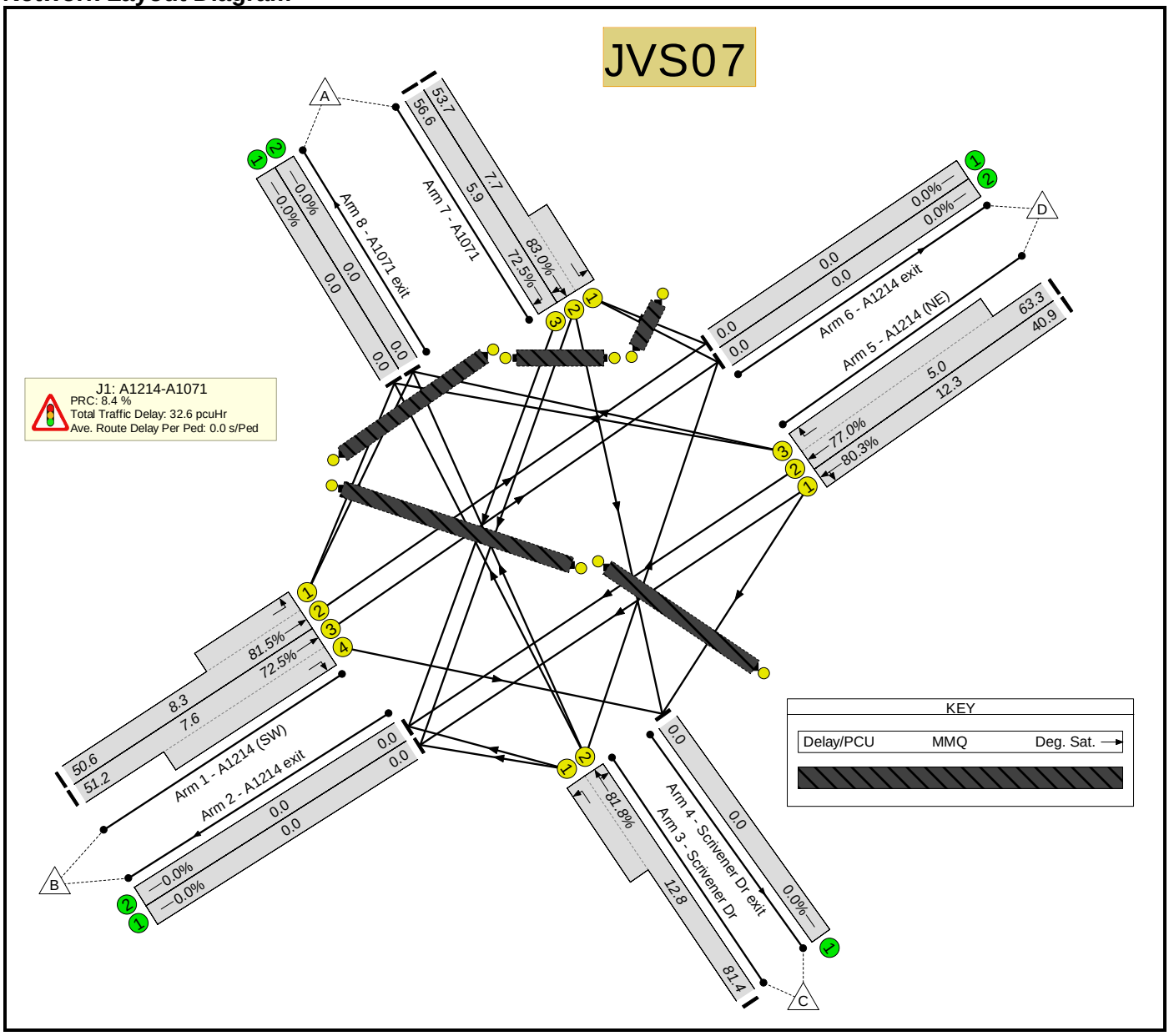
7/3 (A1071)	U	A	2	3	60.0	Geom	-	3.40	0.00	Y	Arm 2 Right	22.00
8/1 (A1071 exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
8/2 (A1071 exit)	U		2	3	60.0	Inf	-	-	-	-	-	-

Give-Way Lane Input Data

Junction: J1: A1214-A1071
There are no Opposed Lanes in this Junction

Scenario 1: 'Base 2022 AM 8-9' (FG1: 'Base 2022 AM 8-9', Plan 2: 'Stage 5 every 3rd')

Network Layout Diagram



Basic Results Summary

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	273	146	132	551
	B	256	0	8	422	686
	C	174	15	0	77	266
	D	144	426	82	0	652
	Tot.	574	714	236	631	2155

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'Base 2022 AM 8-9'	08:00	09:00	01:00	

Basic Results Summary

Network Results

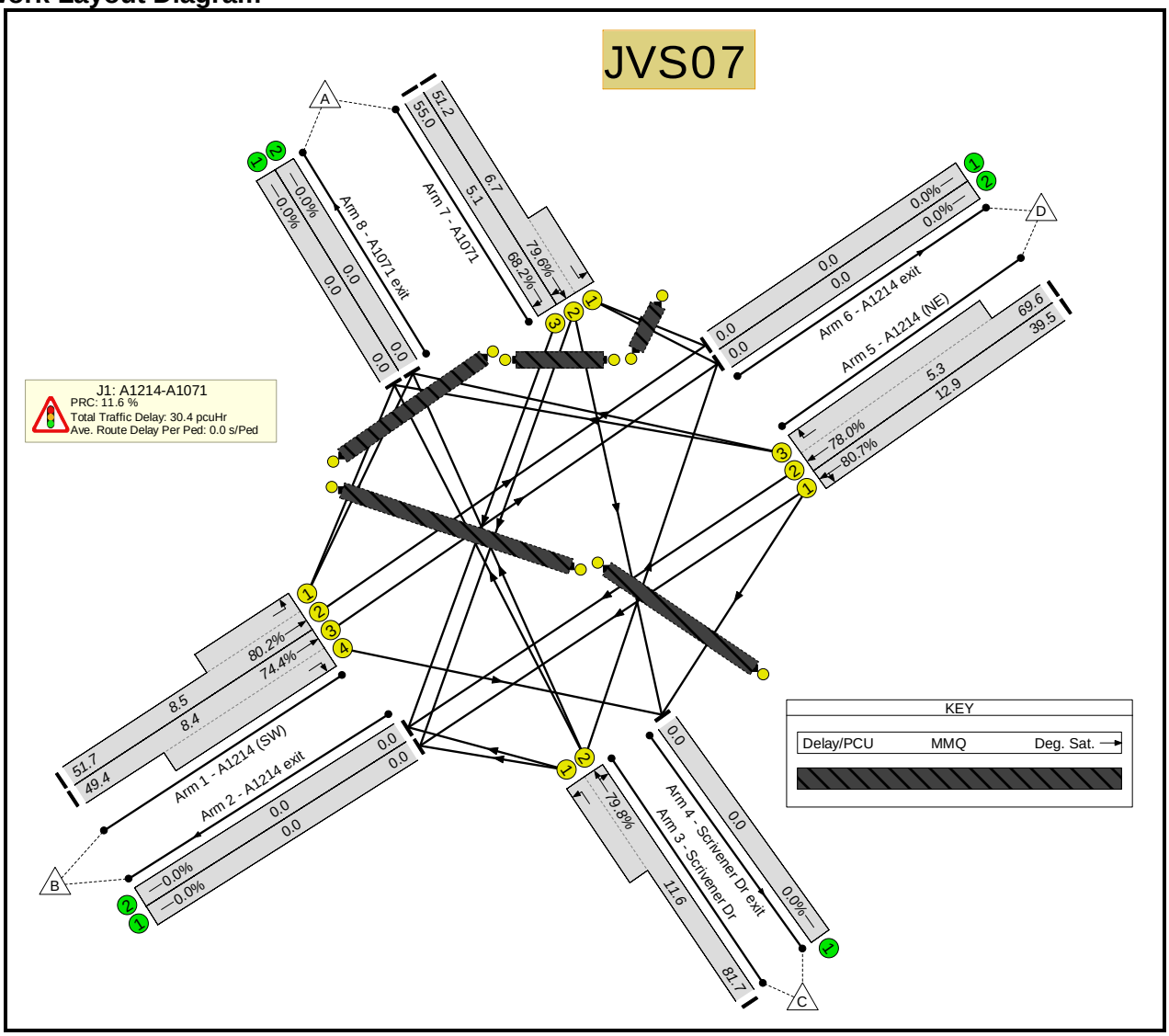
Item	Lane Description	Deg Sat (%)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	**-**	**83.0%**	**-**	**-**
J1: A1214-A1071	**-**	**83.0%**	**-**	**-**
1/2+1/1	A1214 (SW) Ahead Left	81.5%	50.6	8.3
1/3+1/4	A1214 (SW) Right Ahead	72.5%	51.2	7.6
3/2+3/1	Scrivener Dr Left Right Ahead	81.8%	81.4	12.8
5/1	A1214 (NE) Ahead Left	80.3%	40.9	12.3
5/2+5/3	A1214 (NE) Ahead Right	77.0%	63.3	5.0
7/2+7/1	A1071 Right Ahead Left	83.0%	53.7	7.7
7/3	A1071 Right	72.5%	56.6	5.9
Ped Link: P1	Unnamed Ped Link	0.0%	-	-
Ped Link: P2	Unnamed Ped Link	0.0%	-	-
Ped Link: P3	Unnamed Ped Link	0.0%	-	-
Ped Link: P4	Unnamed Ped Link	0.0%	-	-
Ped Link: P5	Unnamed Ped Link	0.0%	-	-

C1	PRC for Signalled Lanes (%):	8.4	Total Delay for Signalled Lanes (pcuHr):	32.62	Cycle Time (s):	238
	PRC Over All Lanes (%):	8.4	Total Delay Over All Lanes(pcuHr):	32.62		

Basic Results Summary

Scenario 2: 'Base 2022 AM 730-830' (FG2: 'Base 2022 AM 730-830', Plan 2: 'Stage 5 every 3rd')

Network Layout Diagram



Traffic Flows, Desired

Desired Flow :

Origin	Destination				
	A	B	C	D	Tot.
A	0	249	127	124	500
B	273	0	3	363	639
C	167	6	0	65	238
D	152	452	63	0	667
Tot.	592	707	193	552	2044

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
2: 'Base 2022 AM 730-830'	07:30	08:30	01:00	

Basic Results Summary

Network Results

Item	Lane Description	Deg Sat (%)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	**-**	**80.7%**	**-**	**-**
J1: A1214-A1071	**-**	**80.7%**	**-**	**-**
1/2+1/1	A1214 (SW) Ahead Left	80.2%	51.7	8.5
1/3+1/4	A1214 (SW) Right Ahead	74.4%	49.4	8.4
3/2+3/1	Scrivener Dr Left Right Ahead	79.8%	81.7	11.6
5/1	A1214 (NE) Ahead Left	80.7%	39.5	12.9
5/2+5/3	A1214 (NE) Ahead Right	78.0%	69.6	5.3
7/2+7/1	A1071 Right Ahead Left	79.6%	51.2	6.7
7/3	A1071 Right	68.2%	55.0	5.1
Ped Link: P1	Unnamed Ped Link	0.0%	-	-
Ped Link: P2	Unnamed Ped Link	0.0%	-	-
Ped Link: P3	Unnamed Ped Link	0.0%	-	-
Ped Link: P4	Unnamed Ped Link	0.0%	-	-
Ped Link: P5	Unnamed Ped Link	0.0%	-	-

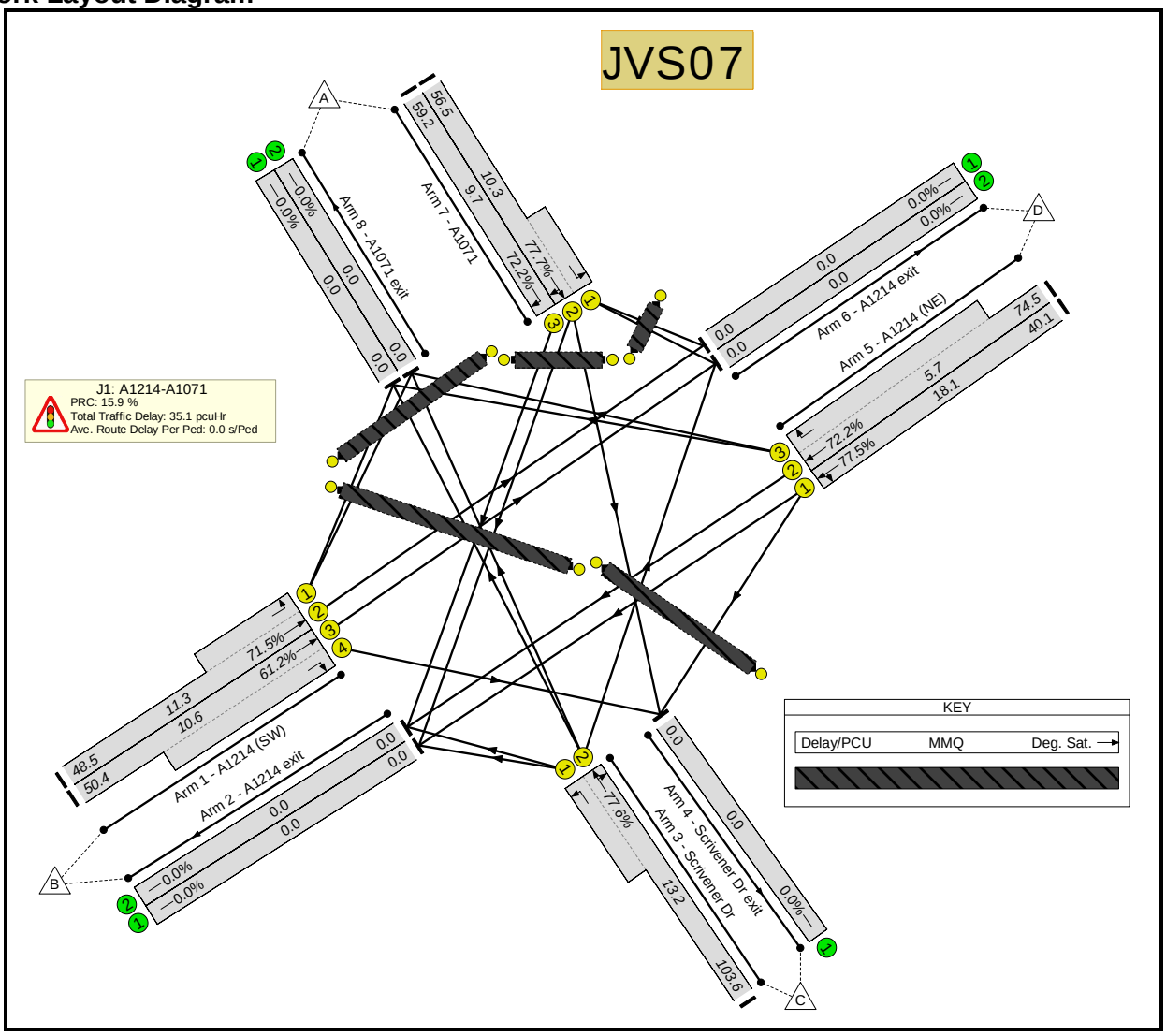
C1 PRC for Signalled Lanes (%): 11.6 Total Delay for Signalled Lanes (pcuHr): 30.40 Cycle Time (s): 238

PRC Over All Lanes (%): 11.6 Total Delay Over All Lanes(pcuHr): 30.40

Basic Results Summary

Scenario 3: 'Base 2022 PM 1630-1730' (FG3: 'Base 2022 PM 1630-1730', Plan 2: 'Stage 5 every 3rd')

Network Layout Diagram



Traffic Flows, Desired

Desired Flow :

Origin	Destination				
	A	B	C	D	Tot.
A	0	309	199	96	604
B	316	0	17	384	717
C	140	7	0	60	207
D	147	520	67	0	734
Tot.	603	836	283	540	2262

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
3: 'Base 2022 PM 1630-1730'	16:30	17:30	01:00	

Basic Results Summary

Network Results

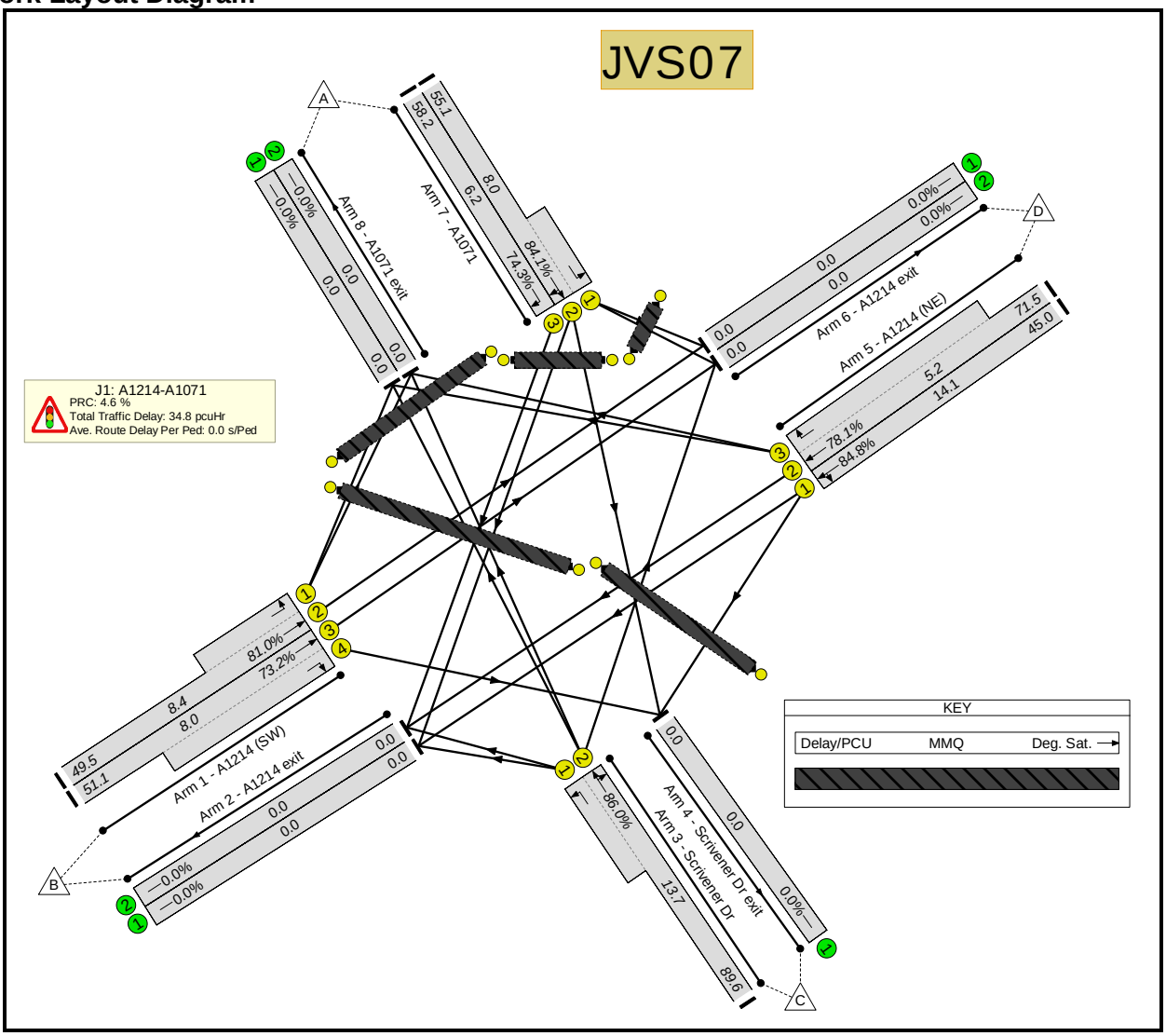
Item	Lane Description	Deg Sat (%)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	**-**	**77.7%**	**-**	**-**
J1: A1214-A1071	**-**	**77.7%**	**-**	**-**
1/2+1/1	A1214 (SW) Ahead Left	71.5%	48.5	11.3
1/3+1/4	A1214 (SW) Right Ahead	61.2%	50.4	10.6
3/2+3/1	Scrivener Dr Left Right Ahead	77.6%	103.6	13.2
5/1	A1214 (NE) Ahead Left	77.5%	40.1	18.1
5/2+5/3	A1214 (NE) Ahead Right	72.2%	74.5	5.7
7/2+7/1	A1071 Right Ahead Left	77.7%	56.5	10.3
7/3	A1071 Right	72.2%	59.2	9.7
Ped Link: P1	Unnamed Ped Link	0.0%	-	-
Ped Link: P2	Unnamed Ped Link	0.0%	-	-
Ped Link: P3	Unnamed Ped Link	0.0%	-	-
Ped Link: P4	Unnamed Ped Link	0.0%	-	-
Ped Link: P5	Unnamed Ped Link	0.0%	-	-

C1	PRC for Signalled Lanes (%):	15.9	Total Delay for Signalled Lanes (pcuHr):	35.13	Cycle Time (s):	328
	PRC Over All Lanes (%):	15.9	Total Delay Over All Lanes(pcuHr):	35.13		

Basic Results Summary

Scenario 4: 'Future Base 2025 AM 8-9' (FG9: 'Future Base 2025 AM 8-9', Plan 2: 'Stage 5 every 3rd')

Network Layout Diagram



Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	278	149	135	562
	B	261	0	9	429	699
	C	178	16	0	79	273
	D	146	433	84	0	663
	Tot.	585	727	242	643	2197

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
9: 'Future Base 2025 AM 8-9'	08:00	09:00	01:00	

Basic Results Summary

Network Results

Item	Lane Description	Deg Sat (%)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	**-**	**86.0%**	**-**	**-**
J1: A1214-A1071	**-**	**86.0%**	**-**	**-**
1/2+1/1	A1214 (SW) Ahead Left	81.0%	49.5	8.4
1/3+1/4	A1214 (SW) Right Ahead	73.2%	51.1	8.0
3/2+3/1	Scrivener Dr Left Right Ahead	86.0%	89.6	13.7
5/1	A1214 (NE) Ahead Left	84.8%	45.0	14.1
5/2+5/3	A1214 (NE) Ahead Right	78.1%	71.5	5.2
7/2+7/1	A1071 Right Ahead Left	84.1%	55.1	8.0
7/3	A1071 Right	74.3%	58.2	6.2
Ped Link: P1	Unnamed Ped Link	0.0%	-	-
Ped Link: P2	Unnamed Ped Link	0.0%	-	-
Ped Link: P3	Unnamed Ped Link	0.0%	-	-
Ped Link: P4	Unnamed Ped Link	0.0%	-	-
Ped Link: P5	Unnamed Ped Link	0.0%	-	-

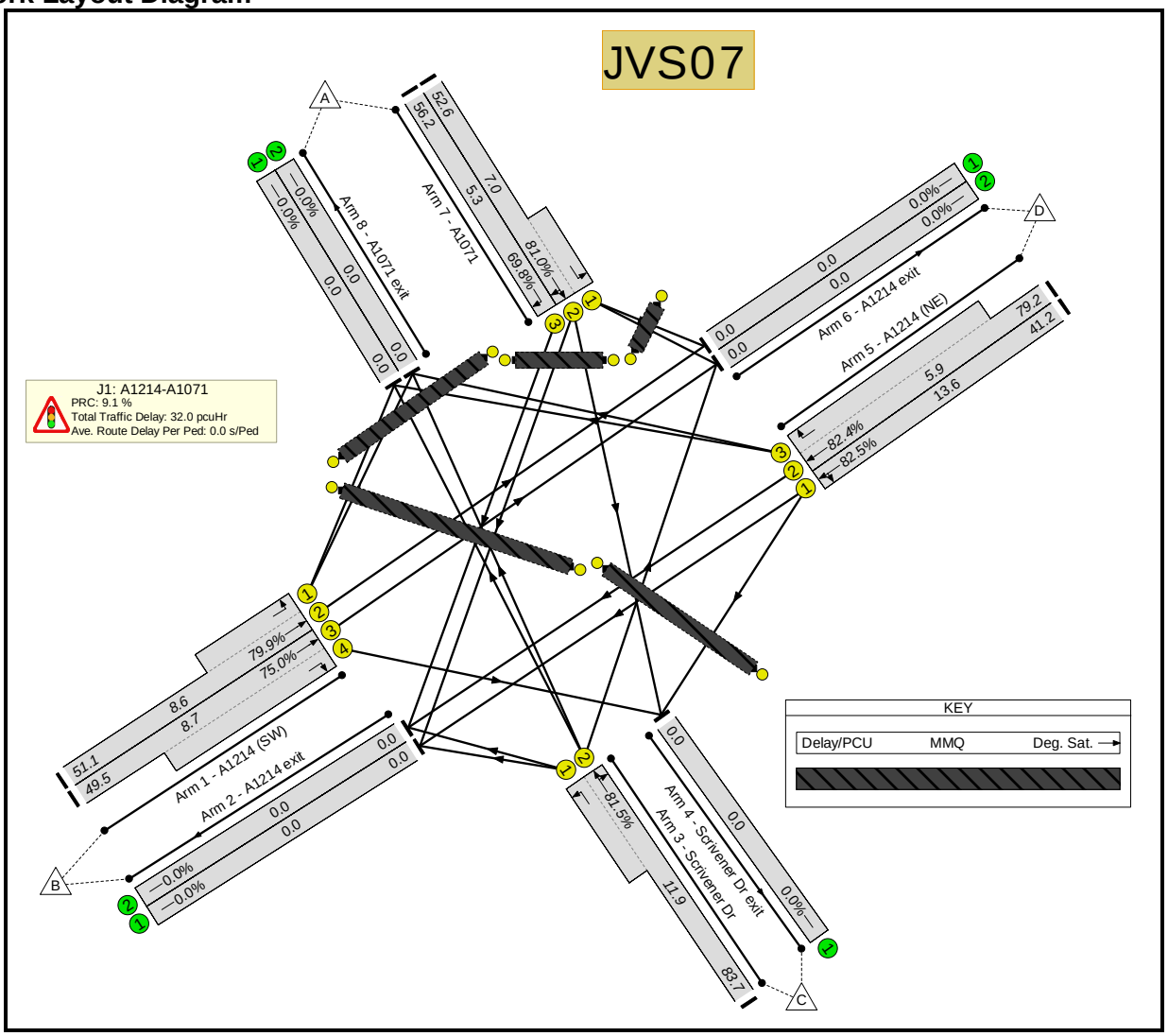
C1 PRC for Signalled Lanes (%): 4.6 Total Delay for Signalled Lanes (pcuHr): 34.78 Cycle Time (s): 238

PRC Over All Lanes (%): 4.6 Total Delay Over All Lanes(pcuHr): 34.78

Basic Results Summary

Scenario 5: 'Future Base 2025 AM 730-830' (FG10: 'Future Base 2025 AM 730-830', Plan 2: 'Stage 5 every 3rd')

Network Layout Diagram



Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	254	130	127	511
	B	278	0	4	369	651
	C	170	7	0	67	244
	D	154	460	65	0	679
	Tot.	602	721	199	563	2085

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
10: 'Future Base 2025 AM 730-830'	07:30	08:30	01:00	

Basic Results Summary

Network Results

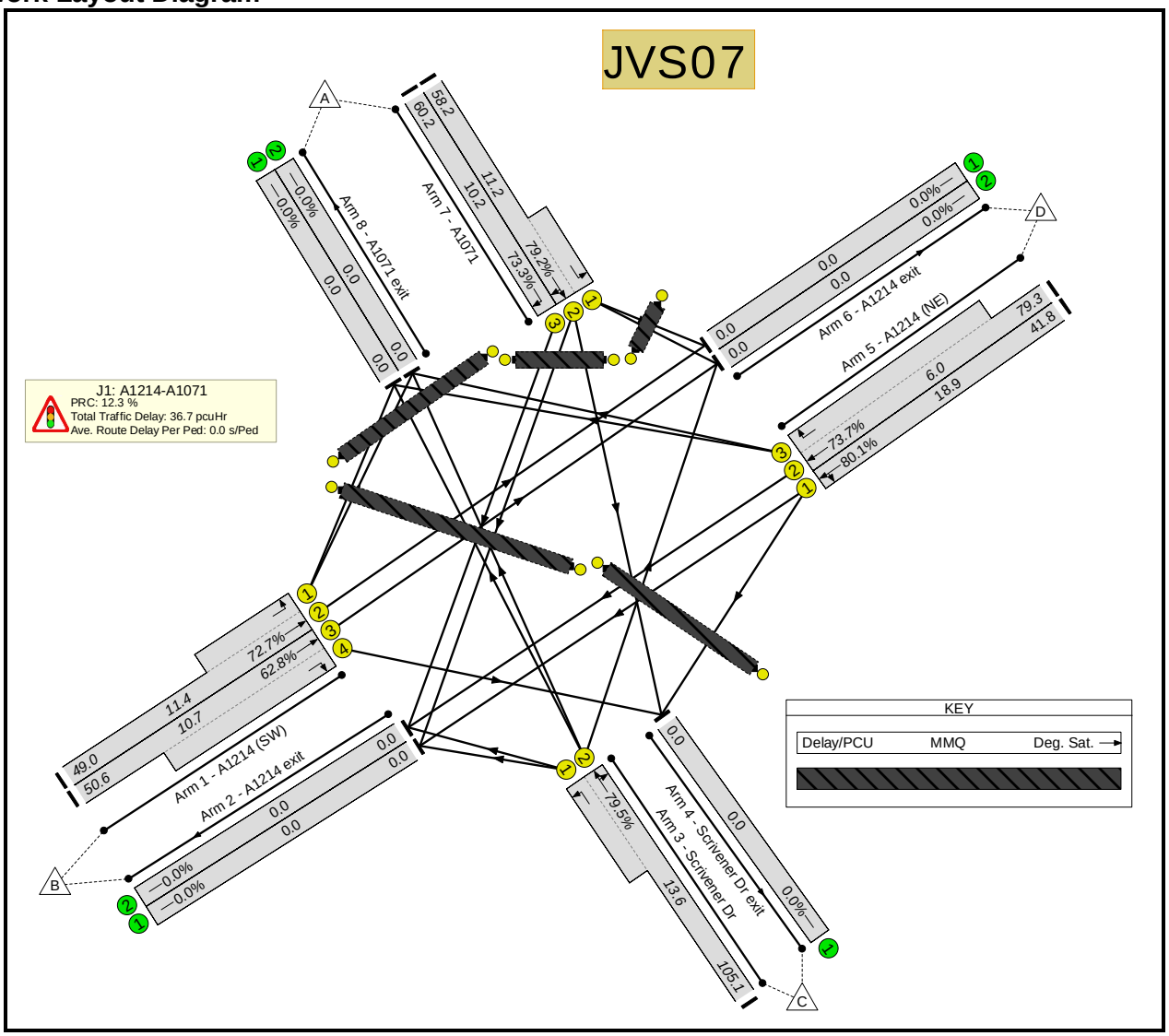
Item	Lane Description	Deg Sat (%)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	**-**	**82.5%**	**-**	**-**
J1: A1214-A1071	**-**	**82.5%**	**-**	**-**
1/2+1/1	A1214 (SW) Ahead Left	79.9%	51.1	8.6
1/3+1/4	A1214 (SW) Right Ahead	75.0%	49.5	8.7
3/2+3/1	Scrivener Dr Left Right Ahead	81.5%	83.7	11.9
5/1	A1214 (NE) Ahead Left	82.5%	41.2	13.6
5/2+5/3	A1214 (NE) Ahead Right	82.4%	79.2	5.9
7/2+7/1	A1071 Right Ahead Left	81.0%	52.6	7.0
7/3	A1071 Right	69.8%	56.2	5.3
Ped Link: P1	Unnamed Ped Link	0.0%	-	-
Ped Link: P2	Unnamed Ped Link	0.0%	-	-
Ped Link: P3	Unnamed Ped Link	0.0%	-	-
Ped Link: P4	Unnamed Ped Link	0.0%	-	-
Ped Link: P5	Unnamed Ped Link	0.0%	-	-

C1	PRC for Signalled Lanes (%):	9.1	Total Delay for Signalled Lanes (pcuHr):	31.95	Cycle Time (s):	238
	PRC Over All Lanes (%):	9.1	Total Delay Over All Lanes(pcuHr):	31.95		

Basic Results Summary

Scenario 6: 'Future Base 2025 PM 1630-1730' (FG11: 'Future Base 2025 PM 1630-1730', Plan 2: 'Stage 5 every 3rd')

Network Layout Diagram



Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	314	203	98	615
	B	322	0	17	391	730
	C	143	8	0	62	213
	D	150	529	69	0	748
	Tot.	615	851	289	551	2306

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
11: 'Future Base 2025 PM 1630-1730'	16:30	17:30	01:00	

Basic Results Summary

Network Results

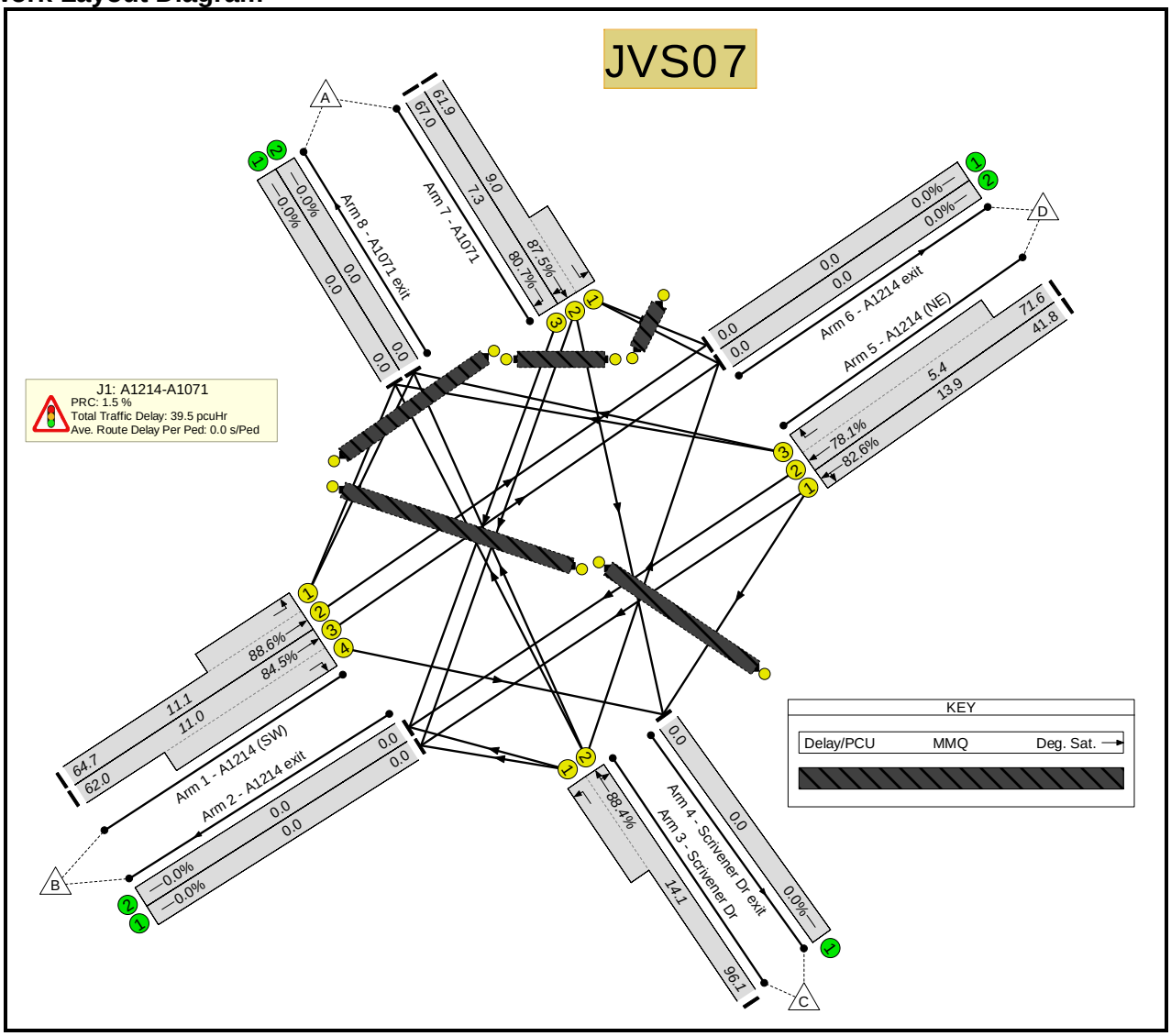
Item	Lane Description	Deg Sat (%)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	**-**	**80.1%**	**-**	**-**
J1: A1214-A1071	**-**	**80.1%**	**-**	**-**
1/2+1/1	A1214 (SW) Ahead Left	72.7%	49.0	11.4
1/3+1/4	A1214 (SW) Right Ahead	62.8%	50.6	10.7
3/2+3/1	Scrivener Dr Left Right Ahead	79.5%	105.1	13.6
5/1	A1214 (NE) Ahead Left	80.1%	41.8	18.9
5/2+5/3	A1214 (NE) Ahead Right	73.7%	79.3	6.0
7/2+7/1	A1071 Right Ahead Left	79.2%	58.2	11.2
7/3	A1071 Right	73.3%	60.2	10.2
Ped Link: P1	Unnamed Ped Link	0.0%	-	-
Ped Link: P2	Unnamed Ped Link	0.0%	-	-
Ped Link: P3	Unnamed Ped Link	0.0%	-	-
Ped Link: P4	Unnamed Ped Link	0.0%	-	-
Ped Link: P5	Unnamed Ped Link	0.0%	-	-

C1	PRC for Signalled Lanes (%):	12.3	Total Delay for Signalled Lanes (pcuHr):	36.66	Cycle Time (s):	328
	PRC Over All Lanes (%):	12.3	Total Delay Over All Lanes(pcuHr):	36.66		

Basic Results Summary

Scenario 7: '2025 AM 8-9 (Base+Tempro+con+Staff)' (FG4: '2025 AM 8-9 (Base+Tempro+con+Staff)', Plan 2: 'Stage 5 every 3rd')

Network Layout Diagram



Traffic Flows, Desired

Desired Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	292	149	135	576
	B	301	0	9	429	739
	C	178	16	0	79	273
	D	146	433	84	0	663
	Tot.	625	741	242	643	2251

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
4: '2025 AM 8-9 (Base+Tempro+con+Staff)'	08:00	09:00	01:00	

Basic Results Summary

Network Results

Item	Lane Description	Deg Sat (%)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	**-**	**88.6%**	**-**	**-**
J1: A1214-A1071	**-**	**88.6%**	**-**	**-**
1/2+1/1	A1214 (SW) Ahead Left	88.6%	64.7	11.1
1/3+1/4	A1214 (SW) Right Ahead	84.5%	62.0	11.0
3/2+3/1	Scrivener Dr Left Right Ahead	88.4%	96.1	14.1
5/1	A1214 (NE) Ahead Left	82.6%	41.8	13.9
5/2+5/3	A1214 (NE) Ahead Right	78.1%	71.6	5.4
7/2+7/1	A1071 Right Ahead Left	87.5%	61.9	9.0
7/3	A1071 Right	80.7%	67.0	7.3
Ped Link: P1	Unnamed Ped Link	0.0%	-	-
Ped Link: P2	Unnamed Ped Link	0.0%	-	-
Ped Link: P3	Unnamed Ped Link	0.0%	-	-
Ped Link: P4	Unnamed Ped Link	0.0%	-	-
Ped Link: P5	Unnamed Ped Link	0.0%	-	-

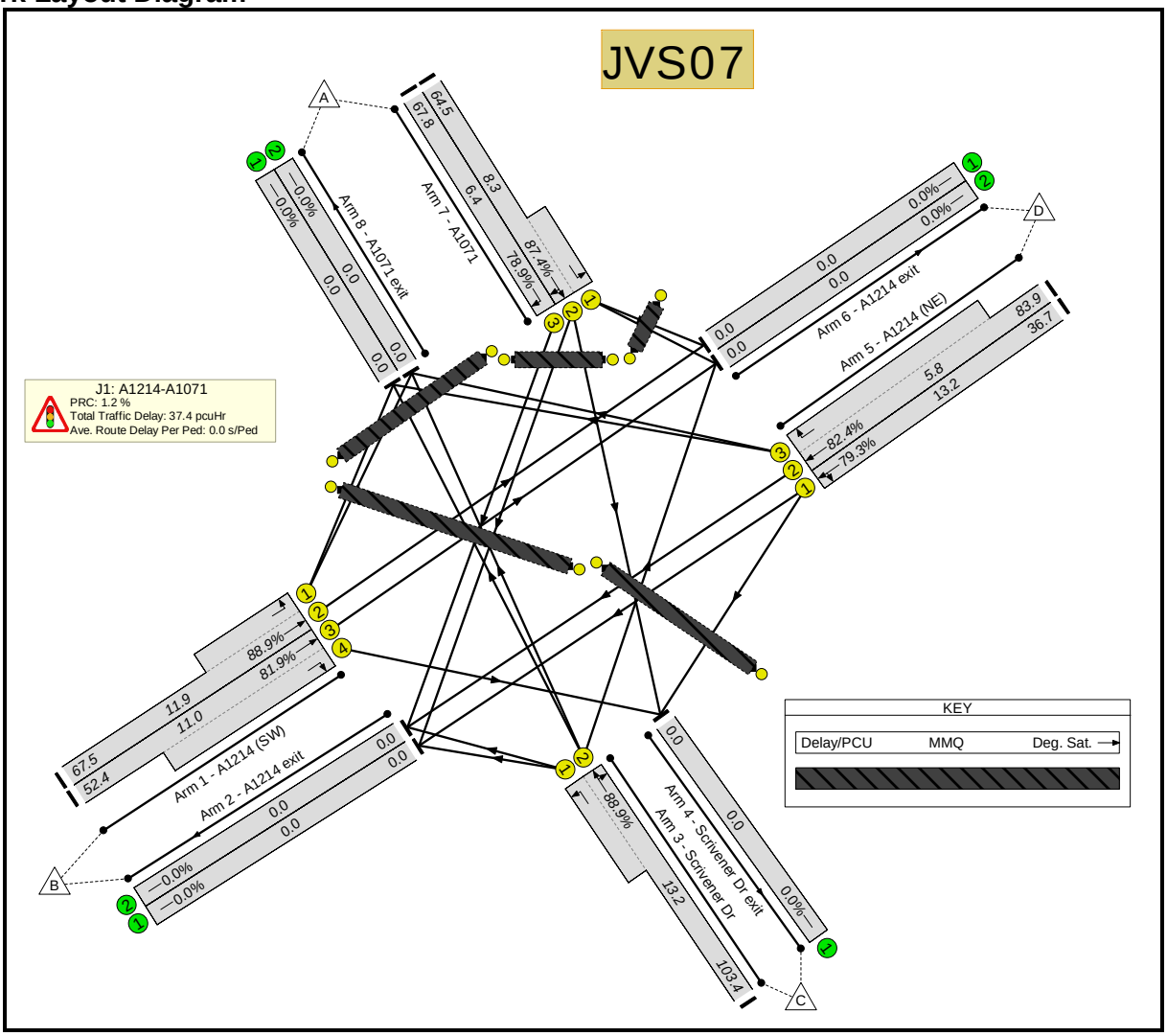
C1 PRC for Signalled Lanes (%): 1.5 Total Delay for Signalled Lanes (pcuHr): 39.54 Cycle Time (s): 238

PRC Over All Lanes (%): 1.5 Total Delay Over All Lanes(pcuHr): 39.54

Basic Results Summary

Scenario 8: '2025 AM 730-830 (Base+Tempro+con+Staff)' (FG5: '2025 AM 730-830 (Base+Tempro+con+Staff)', Plan 2: 'Stage 5 every 3rd')

Network Layout Diagram



Traffic Flows, Desired

Desired Flow :

	Destination					
		A	B	C	D	Tot.
Origin	A	0	268	130	127	525
	B	344	0	4	369	717
	C	170	7	0	67	244
	D	154	460	65	0	679
	Tot.	668	735	199	563	2165

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
5: '2025 AM 730-830 (Base+Tempro+con+Staff)'	07:30	08:30	01:00	

Basic Results Summary

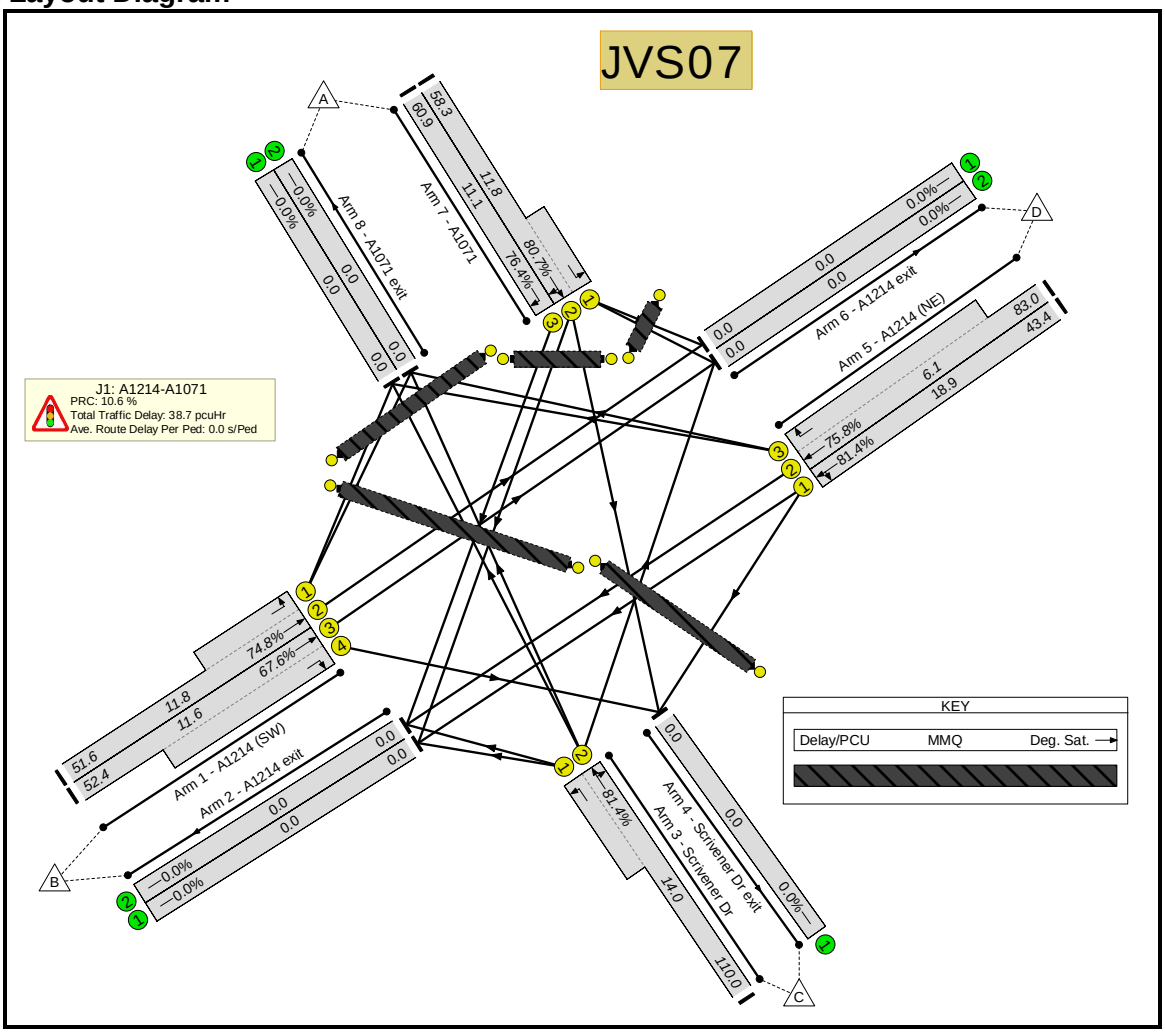
Network Results

Item	Lane Description	Deg Sat (%)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	**-**	**88.9%**	**-**	**-**
J1: A1214-A1071	**-**	**88.9%**	**-**	**-**
1/2+1/1	A1214 (SW) Ahead Left	88.9%	67.5	11.9
1/3+1/4	A1214 (SW) Right Ahead	81.9%	52.4	11.0
3/2+3/1	Scrivener Dr Left Right Ahead	88.9%	103.4	13.2
5/1	A1214 (NE) Ahead Left	79.3%	36.7	13.2
5/2+5/3	A1214 (NE) Ahead Right	82.4%	83.9	5.8
7/2+7/1	A1071 Right Ahead Left	87.4%	64.5	8.3
7/3	A1071 Right	78.9%	67.8	6.4
Ped Link: P1	Unnamed Ped Link	0.0%	-	-
Ped Link: P2	Unnamed Ped Link	0.0%	-	-
Ped Link: P3	Unnamed Ped Link	0.0%	-	-
Ped Link: P4	Unnamed Ped Link	0.0%	-	-
Ped Link: P5	Unnamed Ped Link	0.0%	-	-

C1	PRC for Signalled Lanes (%):	1.2	Total Delay for Signalled Lanes (pcuHr):	37.42	Cycle Time (s):	238
	PRC Over All Lanes (%):	1.2	Total Delay Over All Lanes(pcuHr):	37.42		

Basic Results Summary
Scenario 9: '2025 PM 1630-1730 (Base+Tempro+con+Staff)' (FG6: '2025 PM 1630-1730 (Base+Tempro+con+Staff)', Plan 2: 'Stage 5 every 3rd')

Network Layout Diagram



Traffic Flows, Desired

Desired Flow :

Origin	Destination				
	A	B	C	D	Tot.
A	0	354	203	98	655
B	336	0	17	391	744
C	143	8	0	62	213
D	150	529	69	0	748
Tot.	629	891	289	551	2360

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
6: '2025 PM 1630-1730 (Base+Tempro+con+Staff)'	16:30	17:30	01:00	

Basic Results Summary

Network Results

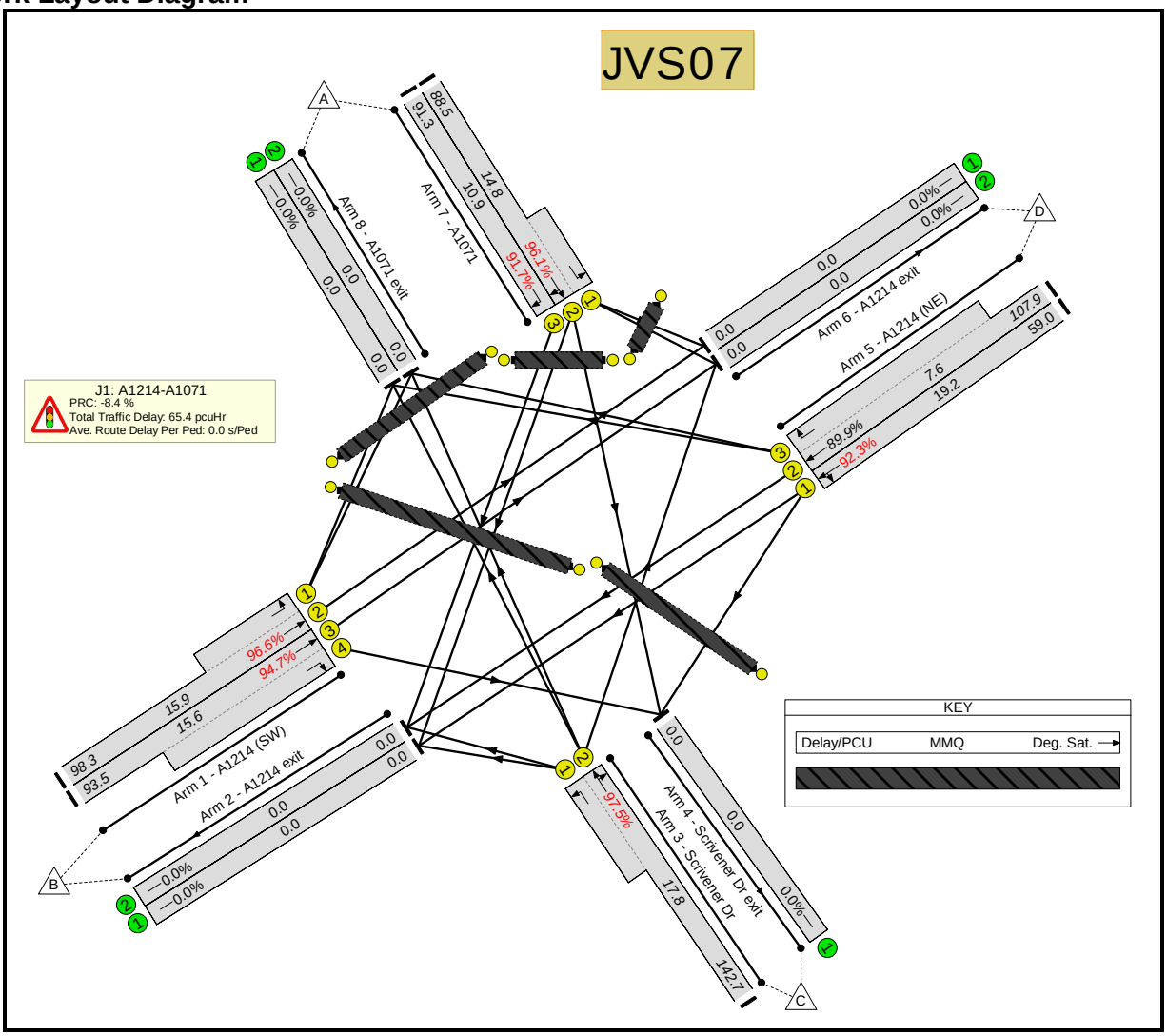
Item	Lane Description	Deg Sat (%)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	**-**	**81.4%**	**-**	**-**
J1: A1214-A1071	**-**	**81.4%**	**-**	**-**
1/2+1/1	A1214 (SW) Ahead Left	74.8%	51.6	11.8
1/3+1/4	A1214 (SW) Right Ahead	67.6%	52.4	11.6
3/2+3/1	Scrivener Dr Left Right Ahead	81.4%	110.0	14.0
5/1	A1214 (NE) Ahead Left	81.4%	43.4	18.9
5/2+5/3	A1214 (NE) Ahead Right	75.8%	83.0	6.1
7/2+7/1	A1071 Right Ahead Left	80.7%	58.3	11.8
7/3	A1071 Right	76.4%	60.9	11.1
Ped Link: P1	Unnamed Ped Link	0.0%	-	-
Ped Link: P2	Unnamed Ped Link	0.0%	-	-
Ped Link: P3	Unnamed Ped Link	0.0%	-	-
Ped Link: P4	Unnamed Ped Link	0.0%	-	-
Ped Link: P5	Unnamed Ped Link	0.0%	-	-

C1	PRC for Signalled Lanes (%):	10.6	Total Delay for Signalled Lanes (pcuHr):	38.74	Cycle Time (s): 328
	PRC Over All Lanes (%):	10.6	Total Delay Over All Lanes(pcuHr):	38.74	

Basic Results Summary

Scenario 10: '2025 AM 8-9 HG' (FG7: '2025 AM 8-9 HG', Plan 2: 'Stage 5 every 3rd')

Network Layout Diagram



Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	382	149	184	715
	B	336	0	21	462	819
	C	175	36	0	77	288
	D	168	489	82	0	739
	Tot.	679	907	252	723	2561

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
7: '2025 AM 8-9 HG'	08:00	09:00	01:00	

Basic Results Summary

Network Results

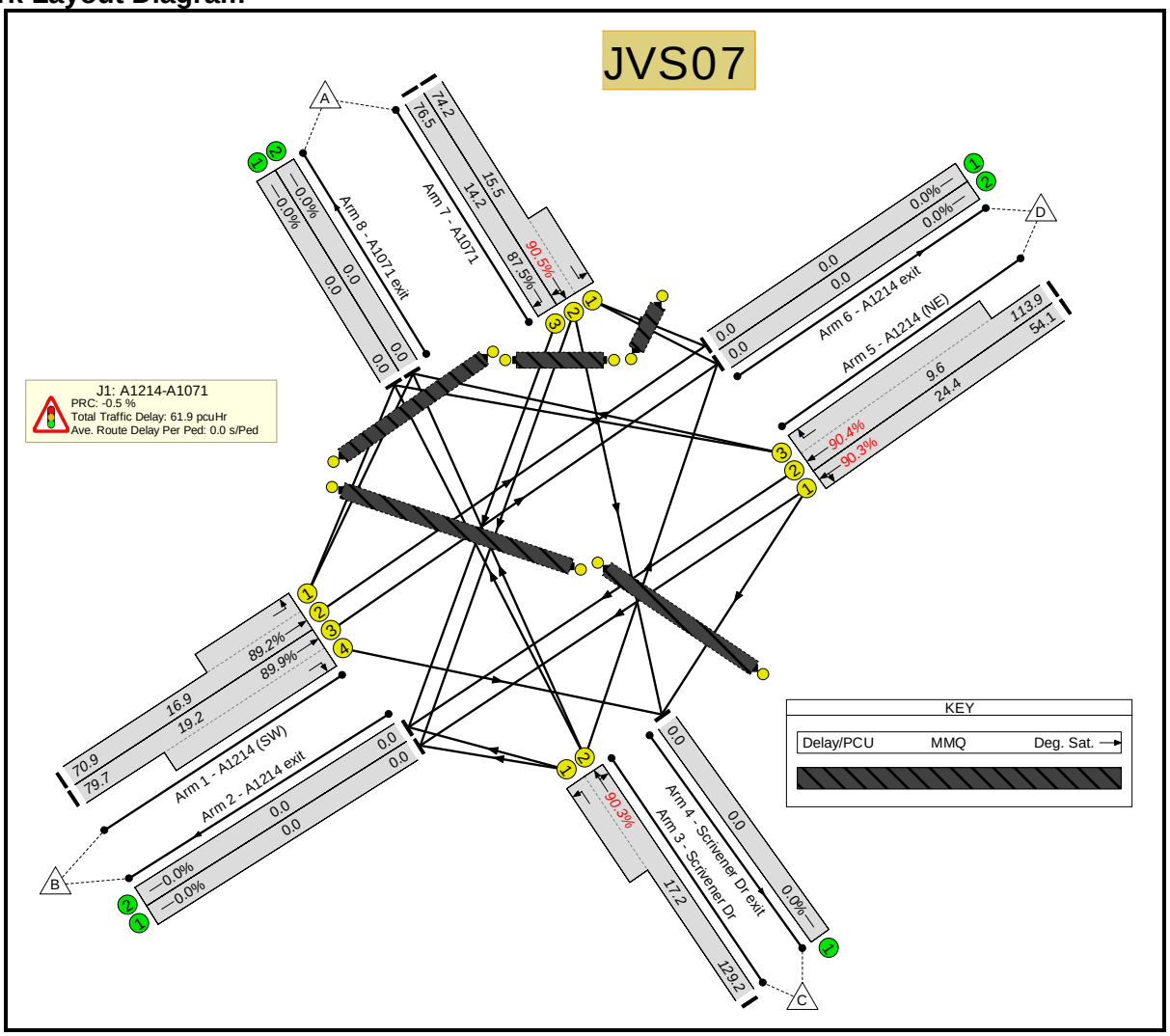
Item	Lane Description	Deg Sat (%)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	**-**	**97.5%**	**-**	**-**
J1: A1214-A1071	**-**	**97.5%**	**-**	**-**
1/2+1/1	A1214 (SW) Ahead Left	96.6%	98.3	15.9
1/3+1/4	A1214 (SW) Right Ahead	94.7%	93.5	15.6
3/2+3/1	Scrivener Dr Left Right Ahead	97.5%	142.7	17.8
5/1	A1214 (NE) Ahead Left	92.3%	59.0	19.2
5/2+5/3	A1214 (NE) Ahead Right	89.9%	107.9	7.6
7/2+7/1	A1071 Right Ahead Left	96.1%	88.5	14.8
7/3	A1071 Right	91.7%	91.3	10.9
Ped Link: P1	Unnamed Ped Link	0.0%	-	-
Ped Link: P2	Unnamed Ped Link	0.0%	-	-
Ped Link: P3	Unnamed Ped Link	0.0%	-	-
Ped Link: P4	Unnamed Ped Link	0.0%	-	-
Ped Link: P5	Unnamed Ped Link	0.0%	-	-

C1 PRC for Signalled Lanes (%): -8.4 Total Delay for Signalled Lanes (pcuHr): 65.42 Cycle Time (s): 238
PRC Over All Lanes (%): -8.4 Total Delay Over All Lanes(pcuHr): 65.42

Basic Results Summary

Scenario 11: '2025 PM 1630-1730 HG' (FG8: '2025 PM 1630-1730 HG', Plan 2: 'Stage 5 every 3rd')

Network Layout Diagram



Traffic Flows, Desired

Desired Flow :

	Destination					
		A	B	C	D	Tot.
Origin	A	0	427	200	123	750
	B	416	0	62	481	959
	C	142	73	0	60	275
	D	189	610	67	0	866
	Tot.	747	1110	329	664	2850

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
8: '2025 PM 1630-1730 HG'	16:30	17:30	01:00	

Basic Results Summary

Network Results

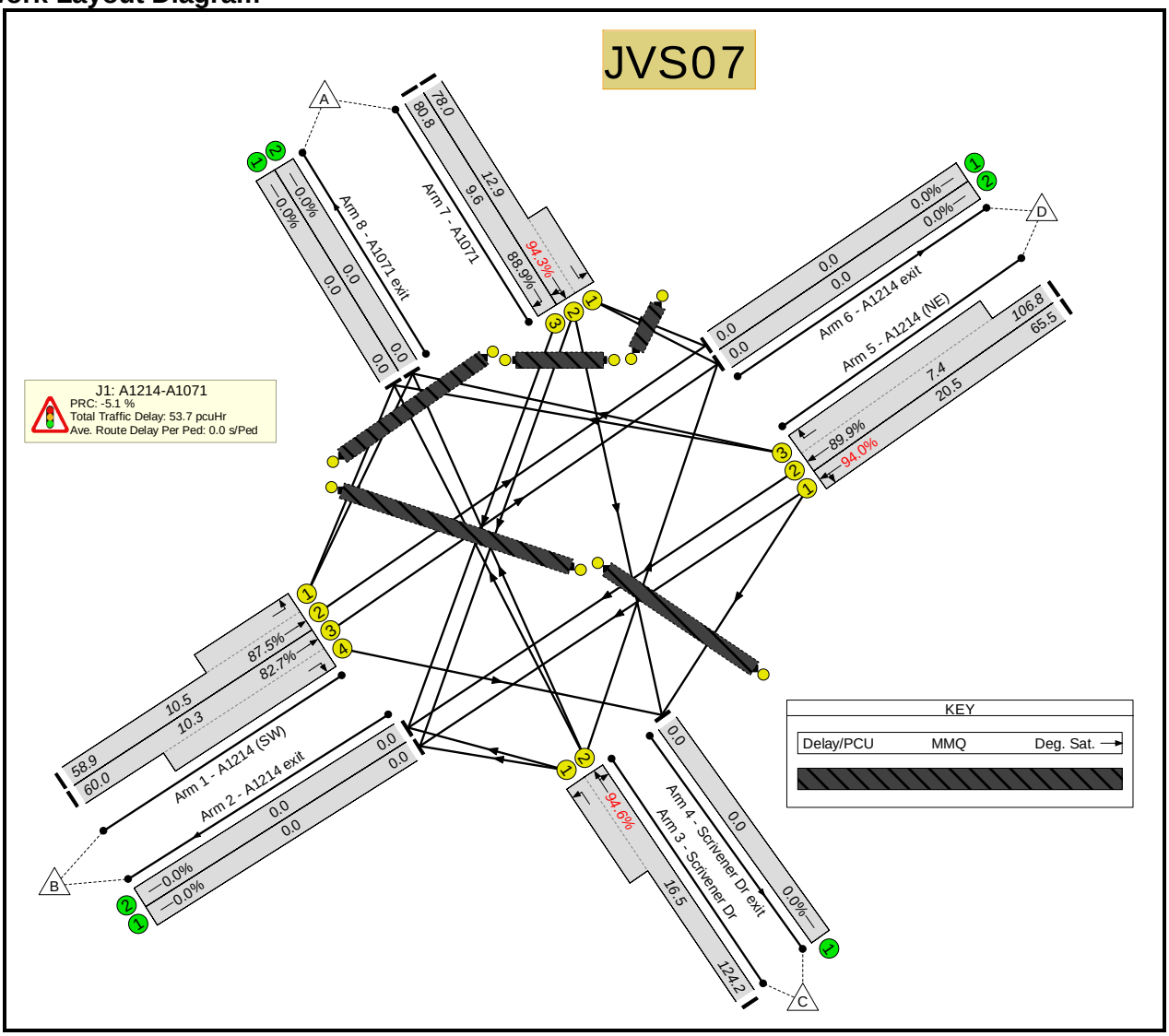
Item	Lane Description	Deg Sat (%)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	**-**	**90.5%**	**-**	**-**
J1: A1214-A1071	**-**	**90.5%**	**-**	**-**
1/2+1/1	A1214 (SW) Ahead Left	89.2%	70.9	16.9
1/3+1/4	A1214 (SW) Right Ahead	89.9%	79.7	19.2
3/2+3/1	Scrivener Dr Left Right Ahead	90.3%	129.2	17.2
5/1	A1214 (NE) Ahead Left	90.3%	54.1	24.4
5/2+5/3	A1214 (NE) Ahead Right	90.4%	113.9	9.6
7/2+7/1	A1071 Right Ahead Left	90.5%	74.2	15.5
7/3	A1071 Right	87.5%	76.5	14.2
Ped Link: P1	Unnamed Ped Link	0.0%	-	-
Ped Link: P2	Unnamed Ped Link	0.0%	-	-
Ped Link: P3	Unnamed Ped Link	0.0%	-	-
Ped Link: P4	Unnamed Ped Link	0.0%	-	-
Ped Link: P5	Unnamed Ped Link	0.0%	-	-

C1	PRC for Signalled Lanes (%):	-0.5	Total Delay for Signalled Lanes (pcuHr):	61.93	Cycle Time (s):	328
	PRC Over All Lanes (%):	-0.5	Total Delay Over All Lanes(pcuHr):	61.93		

Basic Results Summary

Scenario 12: 'Future Base 2025 HG AM 8-9' (FG12: 'Future Base 2025 AM 8-9 HG', Plan 2: 'Stage 5 every 3rd')

Network Layout Diagram



Traffic Flows, Desired

Desired Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	369	149	184	702
	B	296	0	21	468	785
	C	175	36	0	77	288
	D	168	492	82	0	742
	Tot.	639	897	252	729	2517

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
12: 'Future Base 2025 AM 8-9 HG'	08:00	09:00	01:00	

Basic Results Summary

Network Results

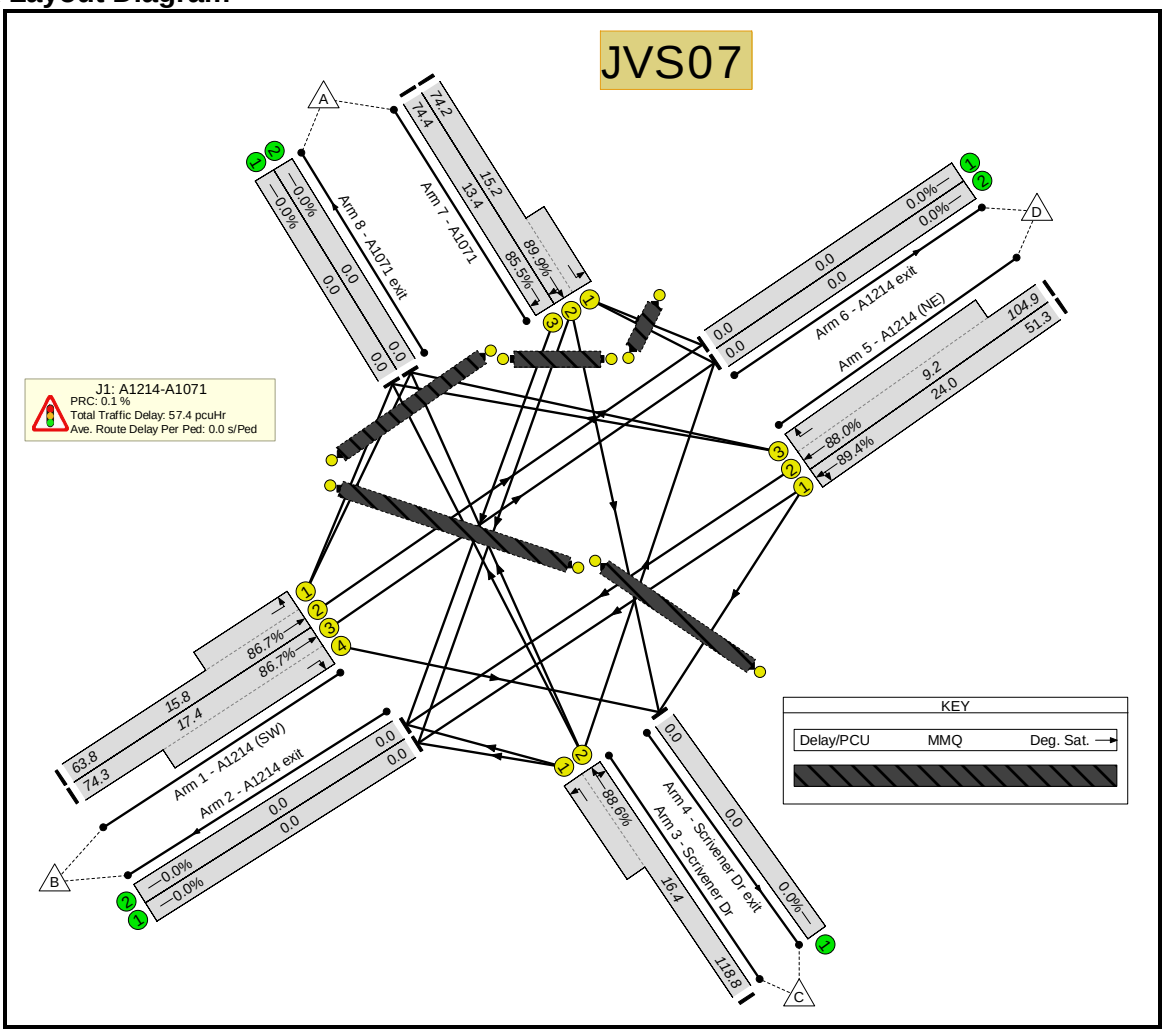
Item	Lane Description	Deg Sat (%)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	**-**	**94.6%**	**-**	**-**
J1: A1214-A1071	**-**	**94.6%**	**-**	**-**
1/2+1/1	A1214 (SW) Ahead Left	87.5%	58.9	10.5
1/3+1/4	A1214 (SW) Right Ahead	82.7%	60.0	10.3
3/2+3/1	Scrivener Dr Left Right Ahead	94.6%	124.2	16.5
5/1	A1214 (NE) Ahead Left	94.0%	65.5	20.5
5/2+5/3	A1214 (NE) Ahead Right	89.9%	106.8	7.4
7/2+7/1	A1071 Right Ahead Left	94.3%	78.0	12.9
7/3	A1071 Right	88.9%	80.8	9.6
Ped Link: P1	Unnamed Ped Link	0.0%	-	-
Ped Link: P2	Unnamed Ped Link	0.0%	-	-
Ped Link: P3	Unnamed Ped Link	0.0%	-	-
Ped Link: P4	Unnamed Ped Link	0.0%	-	-
Ped Link: P5	Unnamed Ped Link	0.0%	-	-

C1 PRC for Signalled Lanes (%): -5.1 Total Delay for Signalled Lanes (pcuHr): 53.73 Cycle Time (s): 238
PRC Over All Lanes (%): -5.1 Total Delay Over All Lanes(pcuHr): 53.73

Basic Results Summary

Scenario 13: 'Future Base 2025 HG PM 1630-1730' (FG14: 'Futuer Base 2025 PM 1630-1730 HG', Plan 2: 'Stage 5 every 3rd')

Network Layout Diagram



Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	391	200	123	714
	B	402	0	62	484	948
	C	142	73	0	60	275
	D	189	617	67	0	873
	Tot.	733	1081	329	667	2810

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
14: 'Futuer Base 2025 PM 1630-1730 HG'	16:30	17:30	01:00	

Basic Results Summary

Network Results

Item	Lane Description	Deg Sat (%)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	**-**	**89.9%**	**-**	**-**
J1: A1214-A1071	**-**	**89.9%**	**-**	**-**
1/2+1/1	A1214 (SW) Ahead Left	86.7%	63.8	15.8
1/3+1/4	A1214 (SW) Right Ahead	86.7%	74.3	17.4
3/2+3/1	Scrivener Dr Left Right Ahead	88.6%	118.8	16.4
5/1	A1214 (NE) Ahead Left	89.4%	51.3	24.0
5/2+5/3	A1214 (NE) Ahead Right	88.0%	104.9	9.2
7/2+7/1	A1071 Right Ahead Left	89.9%	74.2	15.2
7/3	A1071 Right	85.5%	74.4	13.4
Ped Link: P1	Unnamed Ped Link	0.0%	-	-
Ped Link: P2	Unnamed Ped Link	0.0%	-	-
Ped Link: P3	Unnamed Ped Link	0.0%	-	-
Ped Link: P4	Unnamed Ped Link	0.0%	-	-
Ped Link: P5	Unnamed Ped Link	0.0%	-	-

C1	PRC for Signalled Lanes (%):	0.1	Total Delay for Signalled Lanes (pcuHr):	57.37	Cycle Time (s):	328
	PRC Over All Lanes (%):	0.1	Total Delay Over All Lanes(pcuHr):	57.37		

Basic Results Summary

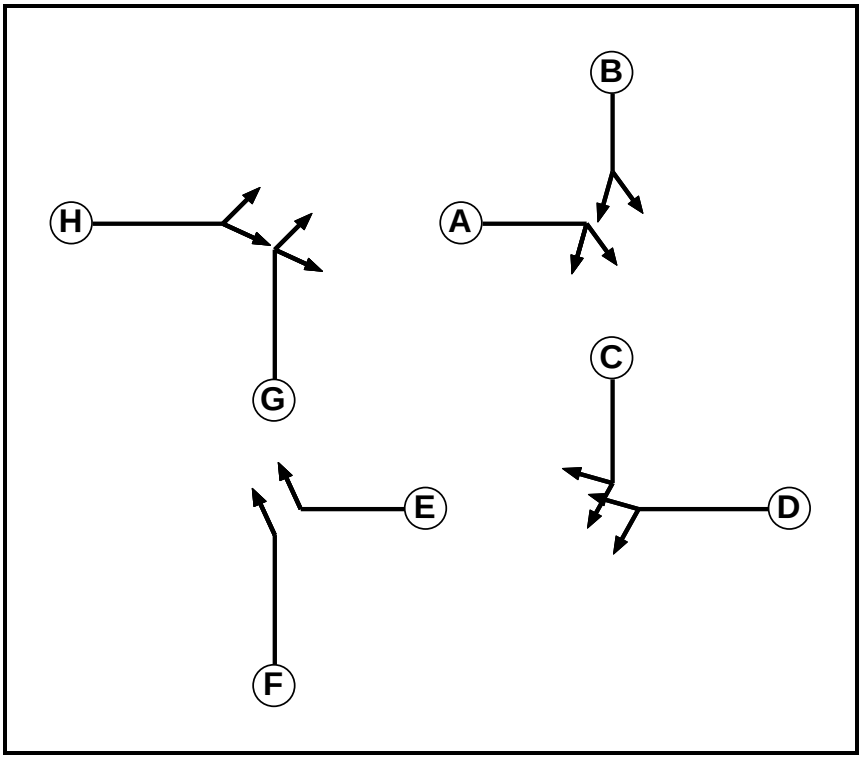
User and Project Details

Project:	**Bramford to Twinstead Reinforcement**
Title:	**TP14 - Junction Modelling**
Location:	Ipswich, UK
Additional detail:	-
File name:	J2_A14-A1214_R1.lsg3x
Author:	JP/SC
Company:	Jacobs UK Ltd.
Address:	Cottons Centre | Cottons Lane, London. SE1 2QG

Phase Input Data

Phase Name	Phase Type	Stage Stream	Assoc. Phase	Street Min	Cont Min
A	Traffic	1		7	7
B	Traffic	1		7	7
C	Traffic	2		7	7
D	Traffic	2		7	7
E	Traffic	3		7	7
F	Traffic	3		7	7
G	Traffic	4		7	7
H	Traffic	4		7	7

Phase Diagram



Basic Results Summary

Phase Intergreens Matrix

Terminating Phase \ Starting Phase	A	B	C	D	E	F	G	H
A		5	-	-	-	-	-	-
B	5		-	-	-	-	-	-
C	-	-		5	-	-	-	-
D	-	-	5		-	-	-	-
E	-	-	-	-		5	-	-
F	-	-	-	-	5		-	-
G	-	-	-	-	-	-		5
H	-	-	-	-	-	-	5	

Phase Delays

Stage Stream: 1

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Stage Stream: 2

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Stage Stream: 3

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Stage Stream: 4

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

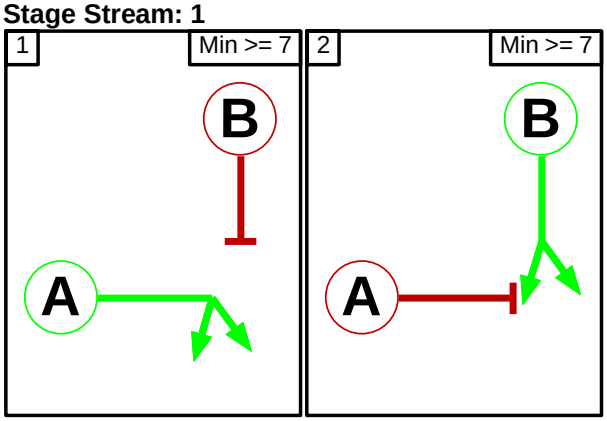
Phases in Stage

Stream	Stage No.	Phases in Stage
1	1	A
1	2	B
2	1	C
2	2	D
3	1	E
3	2	F
4	1	G
4	2	H

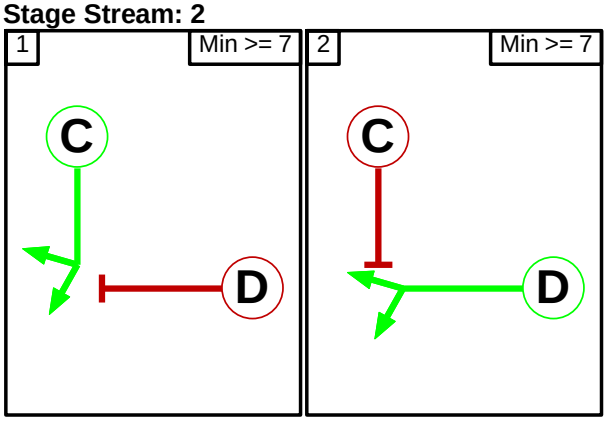
Basic Results Summary

Stage Diagram

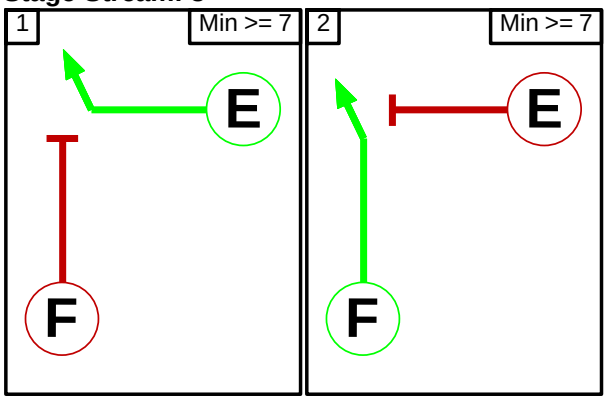
Stage Stream: 1



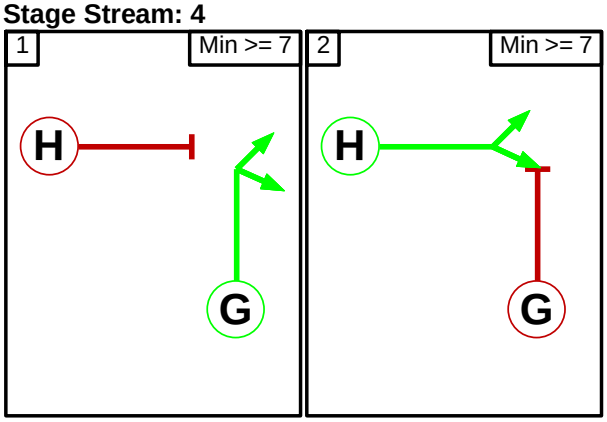
Stage Stream: 2



Stage Stream: 3



Stage Stream: 4



Basic Results Summary

Lane Input Data

Junction: J2_A14-A1214

Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (A14 EB off-slip)	U	H	2	3	20.0	Geom	-	3.40	0.00	Y	Arm 5 Left	53.00
1/2 (A14 EB off-slip)	U	H	2	3	60.0	Geom	-	3.40	0.00	N	Arm 5 Left	53.00
1/3 (A14 EB off-slip)	U	H	2	3	60.0	Geom	-	3.40	0.00	Y	Arm 3 Ahead	93.00
1/4 (A14 EB off-slip)	U	H	2	3	20.0	Geom	-	3.40	0.00	N	Arm 3 Ahead	93.00
2/1 (exit - A14 WB on-slip)	U		2	3	60.0	Inf	-	-	-	-	-	-
2/2 (exit - A14 WB on-slip)	U		2	3	60.0	Inf	-	-	-	-	-	-
3/1 (circulatory [N])	U	A	2	3	17.6	Geom	-	3.50	0.00	Y	Arm 6 Ahead	79.00
3/2 (circulatory [N])	U	A	2	3	17.6	Geom	-	3.50	0.00	Y	Arm 6 Ahead	79.00
											Arm 7 Right	74.00
3/3 (circulatory [N])	U	A	2	3	17.6	Geom	-	3.50	0.00	N	Arm 7 Right	74.00
4/1 (A1214 [N])	U	B	2	3	7.5	Geom	-	4.00	0.00	Y	Arm 6 Ahead	Inf
4/2 (A1214 [N])	U	B	2	3	60.0	Geom	-	4.00	0.00	Y	Arm 7 Ahead	Inf
4/3 (A1214 [N])	U	B	2	3	60.0	Geom	-	4.00	0.00	N	Arm 7 Ahead	Inf
5/1 (exit- A1214 [N])	U		2	3	60.0	Inf	-	-	-	-	-	-
5/2 (exit- A1214 [N])	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1 (exit - A14 EB on-slip)	U		2	3	60.0	Inf	-	-	-	-	-	-
6/2 (exit - A14 EB on-slip)	U		2	3	60.0	Inf	-	-	-	-	-	-

Basic Results Summary

7/1 (circulatory [E])	U	C	2	3	25.2	Geom	-	3.50	0.00	Y	Arm 9 Ahead	84.00
7/2 (circulatory [E])	U	C	2	3	25.2	Geom	-	3.50	0.00	Y	Arm 9 Ahead Arm 10 Right	Inf 84.00
8/1 (A14 WB off-slip)	U	D	2	3	60.0	Geom	-	3.80	0.00	Y	Arm 9 Left	65.00
8/2 (A14 WB off-slip)	U	D	2	3	60.0	Geom	-	3.80	0.00	Y	Arm 9 Left Arm 10 Ahead	65.00 65.00
8/3 (A14 WB off-slip)	U	D	2	3	29.4	Geom	-	3.80	0.00	N	Arm 10 Ahead	65.00
9/1 (exit - A12 [S])	U		2	3	60.0	Inf	-	-	-	-	-	-
9/2 (exit - A12 [S])	U		2	3	60.0	Inf	-	-	-	-	-	-
10/1 (circulatory [S])	U	E	2	3	15.1	Geom	-	3.80	0.00	Y	Arm 12 Right	92.00
10/2 (circulatory [S])	U	E	2	3	15.1	Geom	-	3.80	0.00	Y	Arm 12 Right	92.00
11/1 (A12 [S])	U	F	2	3	6.6	Geom	-	4.10	0.00	Y	Arm 12 Ahead	64.00
11/2 (A12 [S])	U	F	2	3	60.0	Geom	-	4.10	0.00	Y	Arm 12 Ahead	64.00
11/3 (A12 [S])	U	F	2	3	60.0	Geom	-	4.10	0.00	N	Arm 12 Ahead	64.00
12/1 (circulatory [W])	U		2	3	17.4	Inf	-	-	-	-	-	-
12/2 (circulatory [W])	U		2	3	17.4	Inf	-	-	-	-	-	-
12/3 (circulatory [W])	U		2	3	17.4	Inf	-	-	-	-	-	-
13/1 (cirsulatory [W])	U	G	2	3	16.3	Geom	-	4.00	0.00	Y	Arm 5 Ahead	98.00
13/2 (cirsulatory [W])	U	G	2	3	16.3	Geom	-	4.00	0.00	Y	Arm 3 Right Arm 5 Ahead	73.00 98.00

Give-Way Lane Input Data

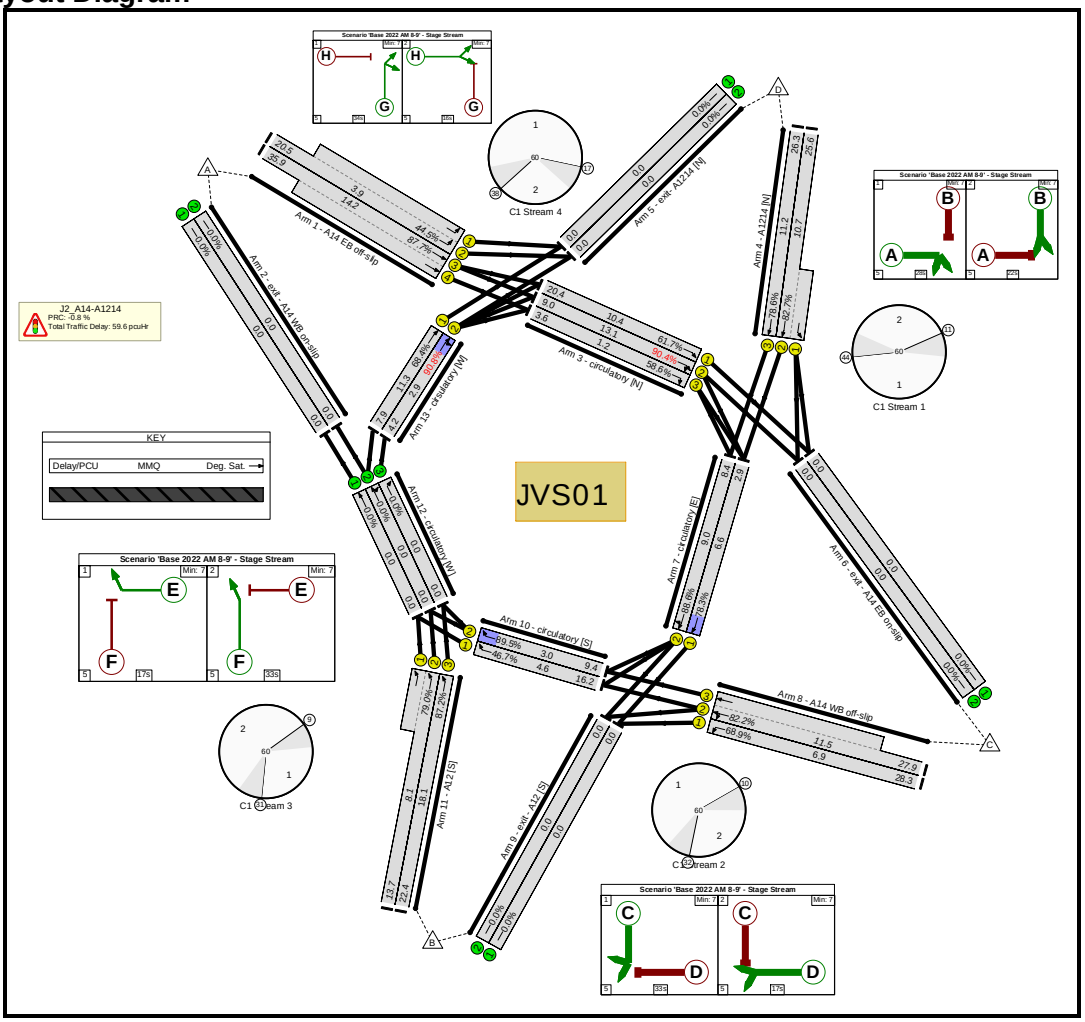
Junction: J2_A14-A1214

Basic Results Summary

There are no Opposed Lanes in this Junction

Scenario 1: 'Base 2022 AM 8-9' (FG1: 'Base 2022 AM 8-9', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	990	0	496	1486
	B	847	0	1045	363	2255
	C	0	969	0	429	1398
	D	373	507	561	0	1441
	Tot.	1220	2466	1606	1288	6580

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'Base 2022 AM 8-9'	08:00	09:00	01:00	

Basic Results Summary

Network Results

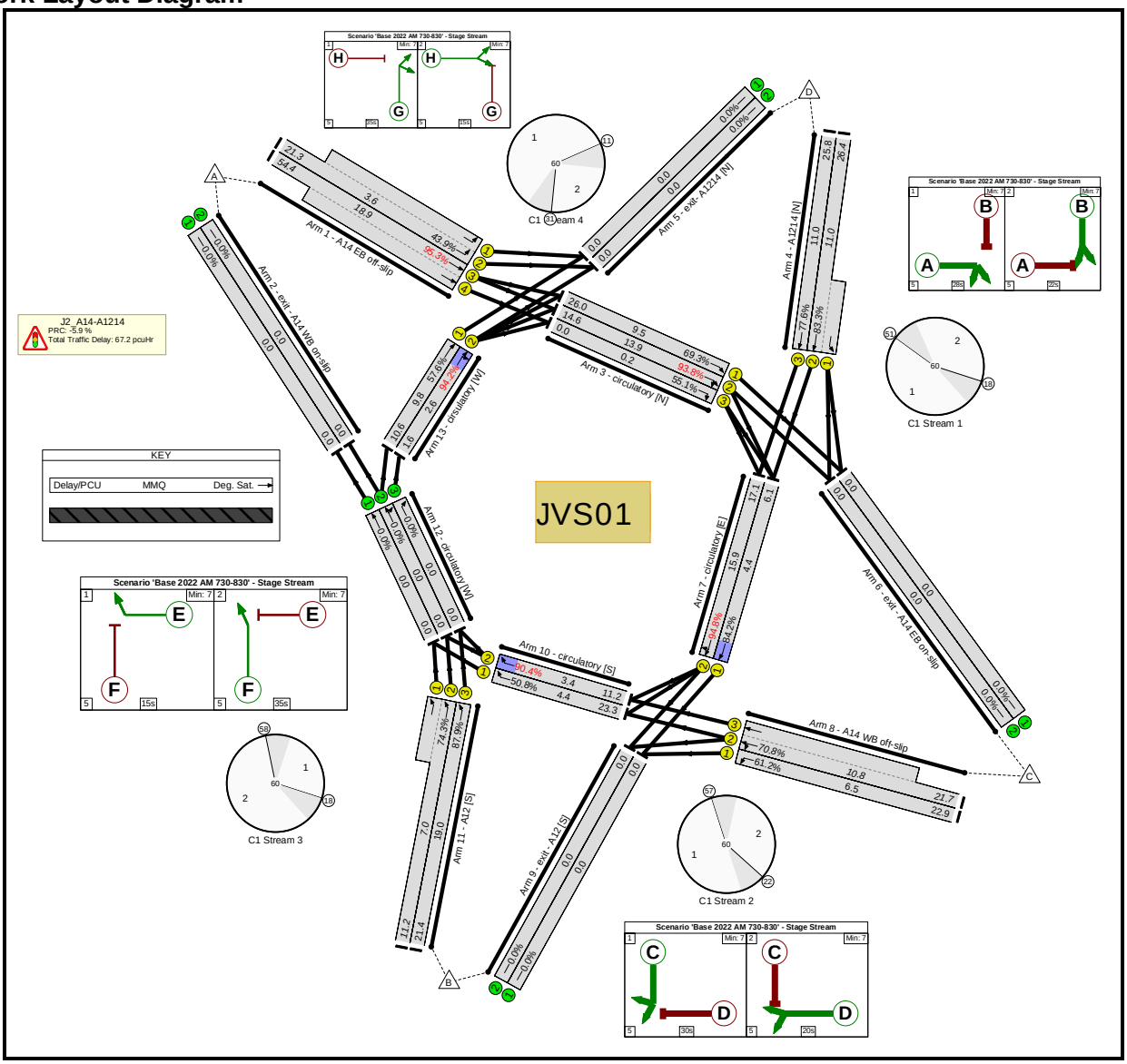
Item	Lane Description	Deg Sat (%)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	**-**	**90.8%**	**-**	**-**
J2_A14-A1214	**-**	**90.8%**	**-**	**-**
1/2+1/1	A14 EB off-slip Left	44.5%	20.5	3.9
1/3+1/4	A14 EB off-slip Ahead	87.7%	35.9	14.2
3/1	circulatory [N] Ahead	61.7%	20.4	10.4
3/2	circulatory [N] Ahead Right	90.4%	9.0	13.1
3/3	circulatory [N] Right	58.6%	3.6	1.2
4/2+4/1	A1214 [N] Ahead Ahead2	82.7%	25.6	10.7
4/3	A1214 [N] Ahead	78.6%	26.3	11.2
7/1	circulatory [E] Ahead	78.3%	2.9	6.6
7/2	circulatory [E] Ahead Right	88.6%	8.4	9.0
8/1	A14 WB off-slip Left	68.9%	28.3	6.9
8/2+8/3	A14 WB off-slip Left Ahead	82.2%	27.9	11.5
10/1	circulatory [S] Right	46.7%	16.2	4.6
10/2	circulatory [S] Right	89.5%	9.4	3.0
11/2+11/1	A12 [S] Ahead	79.0%	13.7	8.1
11/3	A12 [S] Ahead	87.2%	22.4	18.1
13/1	cirsulatory [W] Ahead	68.4%	7.9	11.3
13/2	cirsulatory [W] Right Ahead	90.8%	4.2	2.9

C1	Stream: 1 PRC for Signalled Lanes (%):	-0.4	Total Delay for Signalled Lanes (pcuHr):	16.33	Cycle Time (s):	60
C1	Stream: 2 PRC for Signalled Lanes (%):	1.6	Total Delay for Signalled Lanes (pcuHr):	13.86	Cycle Time (s):	60
C1	Stream: 3 PRC for Signalled Lanes (%):	0.6	Total Delay for Signalled Lanes (pcuHr):	13.70	Cycle Time (s):	60
C1	Stream: 4 PRC for Signalled Lanes (%):	-0.8	Total Delay for Signalled Lanes (pcuHr):	15.66	Cycle Time (s):	60
	PRC Over All Lanes (%):	-0.8	Total Delay Over All Lanes(pcuHr):	59.56		

Basic Results Summary

Scenario 2: 'Base 2022 AM 730-830' (FG2: 'Base 2022 AM 730-830', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Traffic Flows, Desired

Desired Flow :

Origin	Destination				
	A	B	C	D	Tot.
A	0	1013	0	461	1474
B	885	0	1116	301	2302
C	0	1033	0	385	1418
D	354	489	573	0	1416
Tot.	1239	2535	1689	1147	6610

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
2: 'Base 2022 AM 730-830'	07:30	08:30	01:00	

Basic Results Summary

Network Results

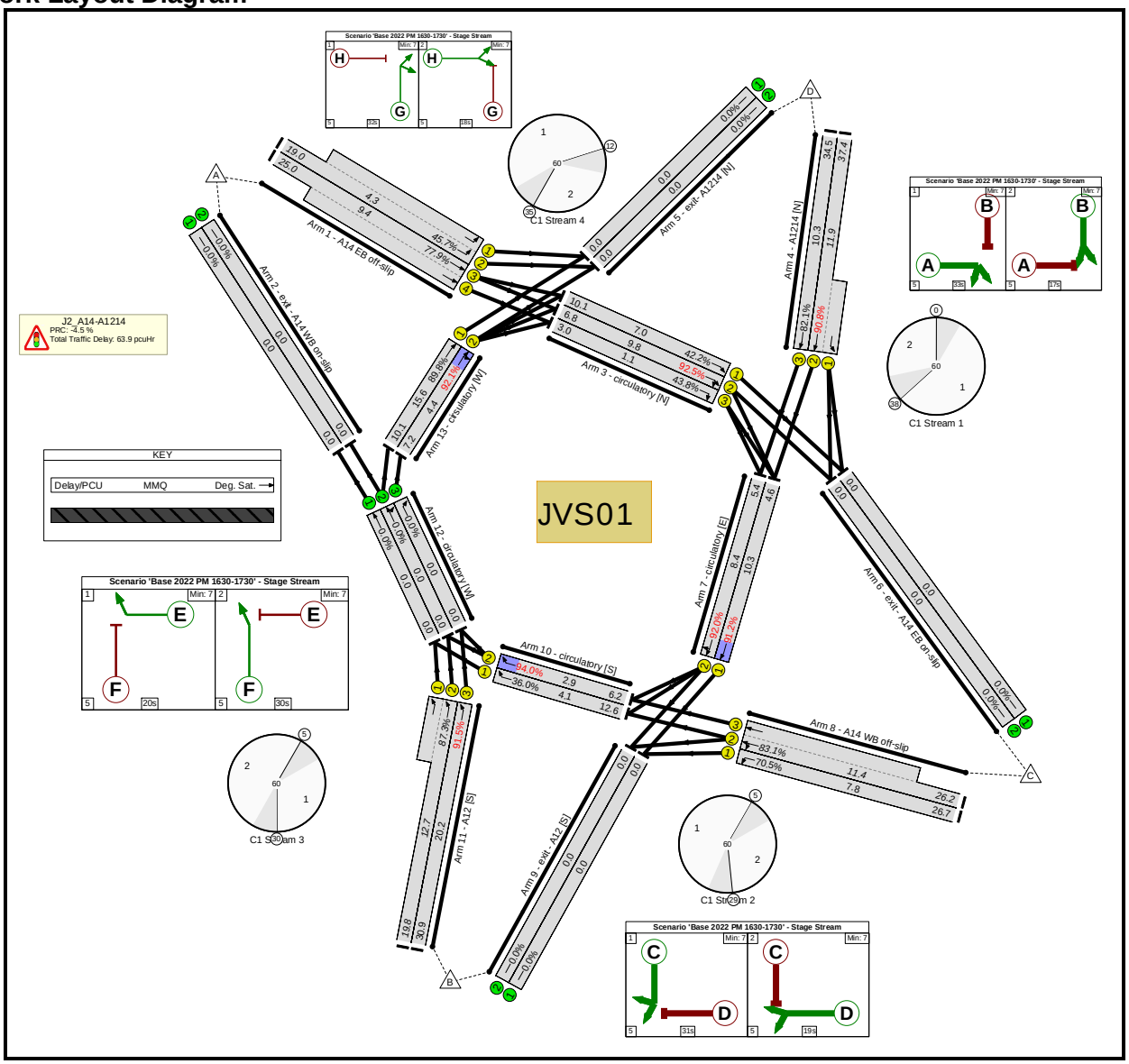
Item	Lane Description	Deg Sat (%)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	**-**	**95.3%**	**-**	**-**
J2_A14-A1214	**-**	**95.3%**	**-**	**-**
1/2+1/1	A14 EB off-slip Left	43.9%	21.3	3.6
1/3+1/4	A14 EB off-slip Ahead	95.3%	54.4	18.9
3/1	circulatory [N] Ahead	69.3%	26.0	9.5
3/2	circulatory [N] Ahead Right	93.8%	14.6	13.9
3/3	circulatory [N] Right	55.1%	0.0	0.2
4/2+4/1	A1214 [N] Ahead Ahead2	83.3%	26.4	11.0
4/3	A1214 [N] Ahead	77.6%	25.8	11.0
7/1	circulatory [E] Ahead	84.2%	6.1	4.4
7/2	circulatory [E] Ahead Right	94.8%	17.1	15.9
8/1	A14 WB off-slip Left	61.2%	22.9	6.5
8/2+8/3	A14 WB off-slip Left Ahead	70.8%	21.7	10.8
10/1	circulatory [S] Right	50.8%	23.3	4.4
10/2	circulatory [S] Right	90.4%	11.2	3.4
11/2+11/1	A12 [S] Ahead	74.3%	11.2	7.0
11/3	A12 [S] Ahead	87.9%	21.4	19.0
13/1	cirsulatory [W] Ahead	57.6%	10.6	9.8
13/2	cirsulatory [W] Right Ahead	94.2%	1.6	2.6

C1	Stream: 1 PRC for Signalled Lanes (%):	-4.3	Total Delay for Signalled Lanes (pcuHr):	18.49	Cycle Time (s):	60
C1	Stream: 2 PRC for Signalled Lanes (%):	-5.4	Total Delay for Signalled Lanes (pcuHr):	14.65	Cycle Time (s):	60
C1	Stream: 3 PRC for Signalled Lanes (%):	-0.4	Total Delay for Signalled Lanes (pcuHr):	13.52	Cycle Time (s):	60
C1	Stream: 4 PRC for Signalled Lanes (%):	-5.9	Total Delay for Signalled Lanes (pcuHr):	20.57	Cycle Time (s):	60
	PRC Over All Lanes (%):	-5.9	Total Delay Over All Lanes(pcuHr):	67.22		

Basic Results Summary

Scenario 3: 'Base 2022 PM 1630-1730' (FG3: 'Base 2022 PM 1630-1730', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	983	0	570	1553
	B	808	0	1000	442	2250
	C	0	1038	0	538	1576
	D	355	559	488	0	1402
	Tot.	1163	2580	1488	1550	6781

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
3: 'Base 2022 PM 1630-1730'	16:30	17:30	01:00	

Basic Results Summary

Network Results

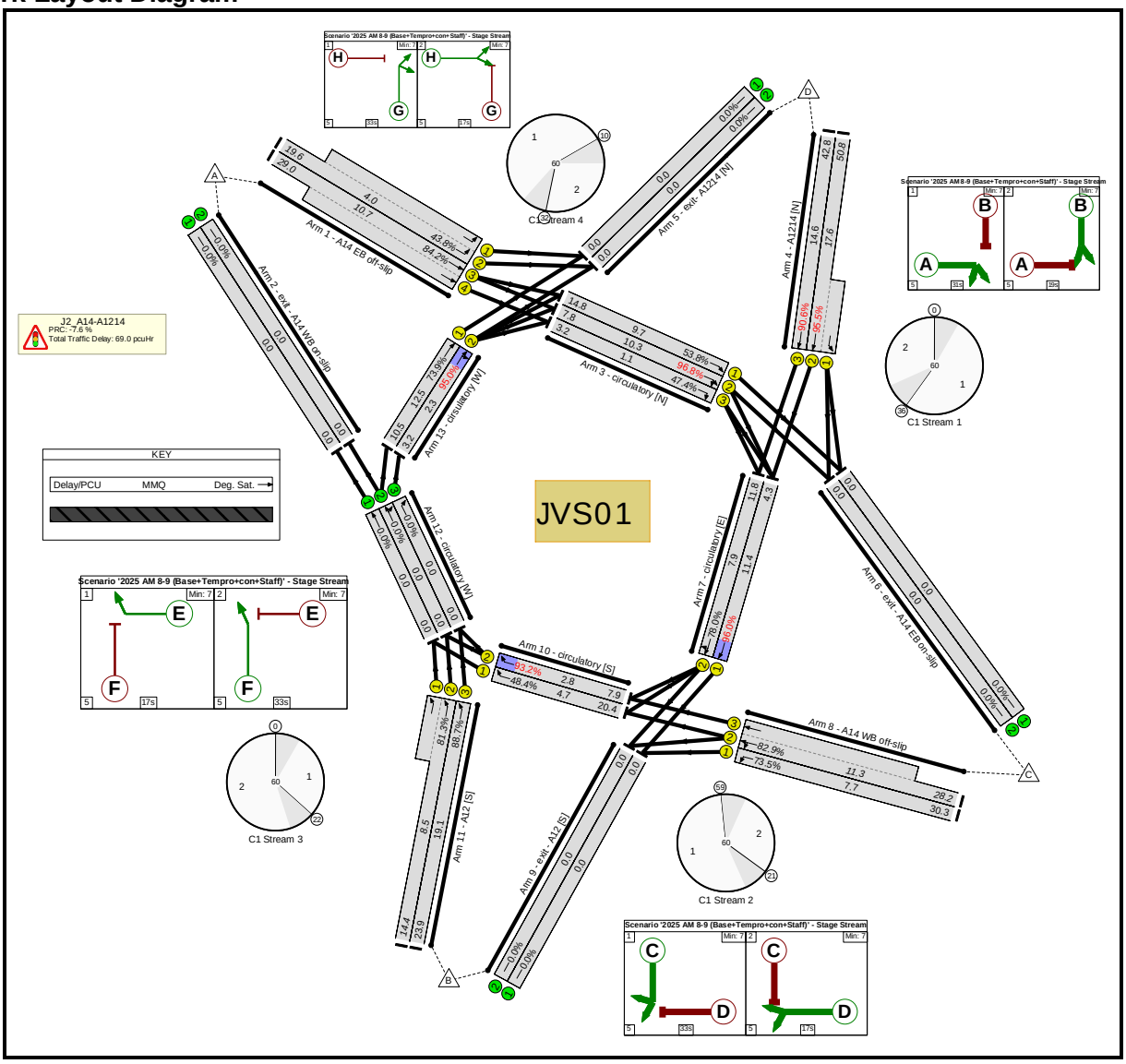
Item	Lane Description	Deg Sat (%)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	**-**	**94.0%**	**-**	**-**
J2_A14-A1214	**-**	**94.0%**	**-**	**-**
1/2+1/1	A14 EB off-slip Left	45.7%	19.0	4.3
1/3+1/4	A14 EB off-slip Ahead	77.9%	25.0	9.4
3/1	circulatory [N] Ahead	42.2%	10.1	7.0
3/2	circulatory [N] Ahead Right	92.5%	6.8	9.8
3/3	circulatory [N] Right	43.8%	3.0	1.1
4/2+4/1	A1214 [N] Ahead Ahead2	90.8%	37.4	11.9
4/3	A1214 [N] Ahead	82.1%	34.5	10.3
7/1	circulatory [E] Ahead	91.2%	4.6	10.3
7/2	circulatory [E] Ahead Right	92.0%	5.4	8.4
8/1	A14 WB off-slip Left	70.5%	26.7	7.8
8/2+8/3	A14 WB off-slip Left Ahead	83.1%	26.2	11.4
10/1	circulatory [S] Right	36.0%	12.6	4.1
10/2	circulatory [S] Right	94.0%	6.2	2.9
11/2+11/1	A12 [S] Ahead	87.3%	19.8	12.7
11/3	A12 [S] Ahead	91.5%	30.9	20.2
13/1	cirsulatory [W] Ahead	89.8%	10.1	15.6
13/2	cirsulatory [W] Right Ahead	92.1%	7.2	4.4

C1	Stream: 1 PRC for Signalled Lanes (%):	-2.8	Total Delay for Signalled Lanes (pcuHr):	17.77	Cycle Time (s):	60
C1	Stream: 2 PRC for Signalled Lanes (%):	-2.2	Total Delay for Signalled Lanes (pcuHr):	14.17	Cycle Time (s):	60
C1	Stream: 3 PRC for Signalled Lanes (%):	-4.5	Total Delay for Signalled Lanes (pcuHr):	17.43	Cycle Time (s):	60
C1	Stream: 4 PRC for Signalled Lanes (%):	-2.3	Total Delay for Signalled Lanes (pcuHr):	14.57	Cycle Time (s):	60
	PRC Over All Lanes (%):	-4.5	Total Delay Over All Lanes(pcuHr):	63.93		

Basic Results Summary

Scenario 4: '2025 AM 8-9 (Base+Tempro+con+Staff)' (FG4: '2025 AM 8-9 (Base+Tempro+con+Staff)', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Traffic Flows, Desired

Desired Flow :

Origin	Destination				
	A	B	C	D	Tot.
A	0	1007	0	518	1525
B	862	0	1063	382	2307
C	0	985	0	449	1434
D	385	521	576	0	1482
Tot.	1247	2513	1639	1349	6748

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
4: '2025 AM 8-9 (Base+Tempro+con+Staff)'	08:00	09:00	01:00	

Basic Results Summary

Network Results

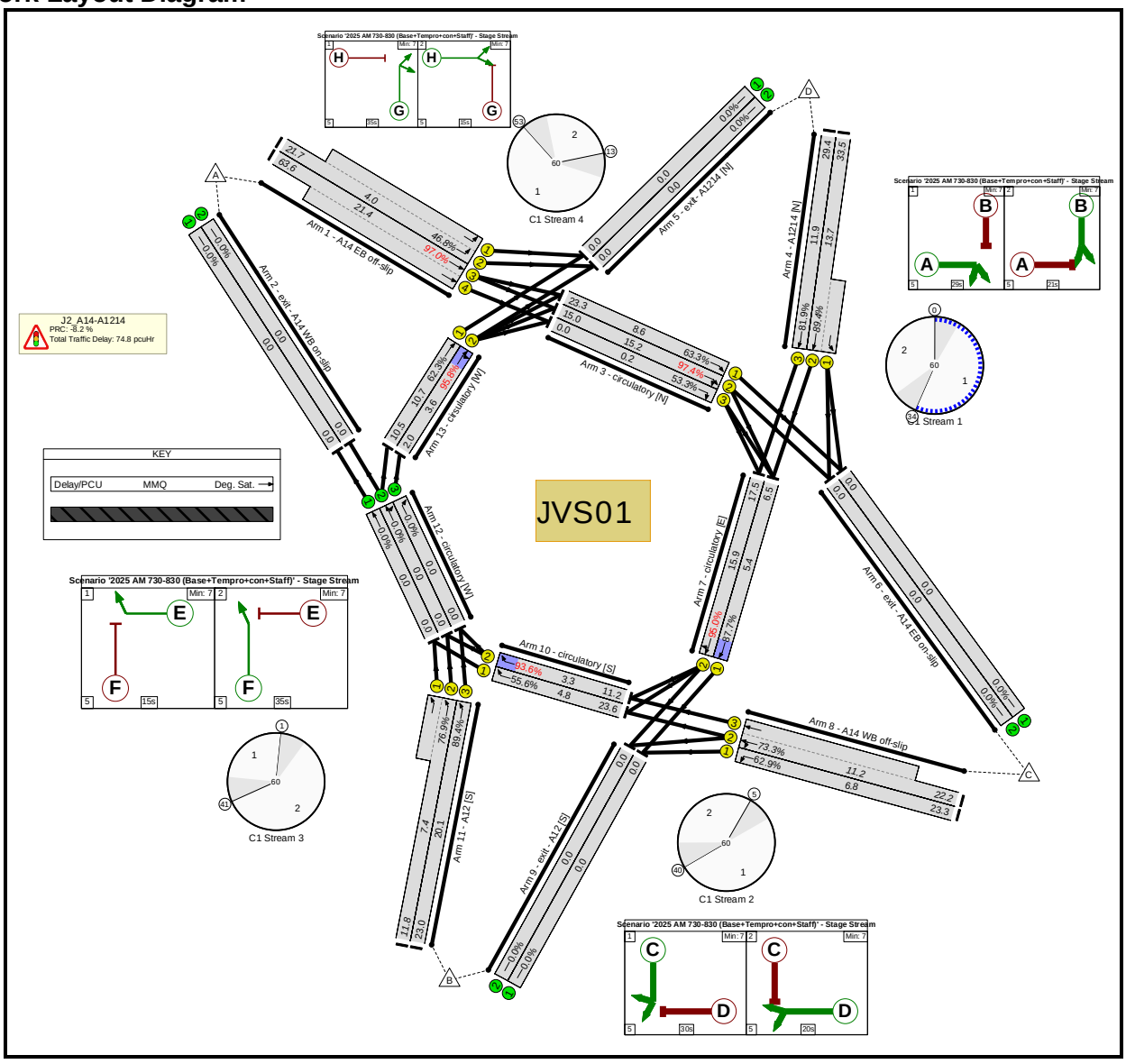
Item	Lane Description	Deg Sat (%)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	**-**	**96.8%**	**-**	**-**
J2_A14-A1214	**-**	**96.8%**	**-**	**-**
1/2+1/1	A14 EB off-slip Left	43.8%	19.6	4.0
1/3+1/4	A14 EB off-slip Ahead	84.2%	29.0	10.7
3/1	circulatory [N] Ahead	53.8%	14.8	9.7
3/2	circulatory [N] Ahead Right	96.8%	7.8	10.3
3/3	circulatory [N] Right	47.4%	3.2	1.1
4/2+4/1	A1214 [N] Ahead Ahead2	95.5%	50.8	17.6
4/3	A1214 [N] Ahead	90.6%	42.8	14.6
7/1	circulatory [E] Ahead	96.0%	4.3	11.4
7/2	circulatory [E] Ahead Right	78.0%	11.8	7.9
8/1	A14 WB off-slip Left	73.5%	30.3	7.7
8/2+8/3	A14 WB off-slip Left Ahead	82.9%	28.2	11.3
10/1	circulatory [S] Right	48.4%	20.4	4.7
10/2	circulatory [S] Right	93.2%	7.9	2.8
11/2+11/1	A12 [S] Ahead	81.3%	14.4	8.5
11/3	A12 [S] Ahead	88.7%	23.9	19.1
13/1	cirsulatory [W] Ahead	73.9%	10.5	12.5
13/2	cirsulatory [W] Right Ahead	95.0%	3.2	2.3

C1	Stream: 1 PRC for Signalled Lanes (%):	-7.6	Total Delay for Signalled Lanes (pcuHr):	24.34	Cycle Time (s):	60
C1	Stream: 2 PRC for Signalled Lanes (%):	-6.7	Total Delay for Signalled Lanes (pcuHr):	15.56	Cycle Time (s):	60
C1	Stream: 3 PRC for Signalled Lanes (%):	-3.6	Total Delay for Signalled Lanes (pcuHr):	14.86	Cycle Time (s):	60
C1	Stream: 4 PRC for Signalled Lanes (%):	-5.6	Total Delay for Signalled Lanes (pcuHr):	14.29	Cycle Time (s):	60
	PRC Over All Lanes (%):	-7.6	Total Delay Over All Lanes(pcuHr):	69.05		

Basic Results Summary

Scenario 5: '2025 AM 730-830 (Base+Tempro+con+Staff)' (FG5: '2025 AM 730-830 (Base+Tempro+con+Staff)', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	1031	0	491	1522
	B	900	0	1135	328	2363
	C	0	1050	0	414	1464
	D	367	504	589	0	1460
	Tot.	1267	2585	1724	1233	6809

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
5: '2025 AM 730-830 (Base+Tempro+con+Staff)'	07:30	08:30	01:00	

Basic Results Summary

Network Results

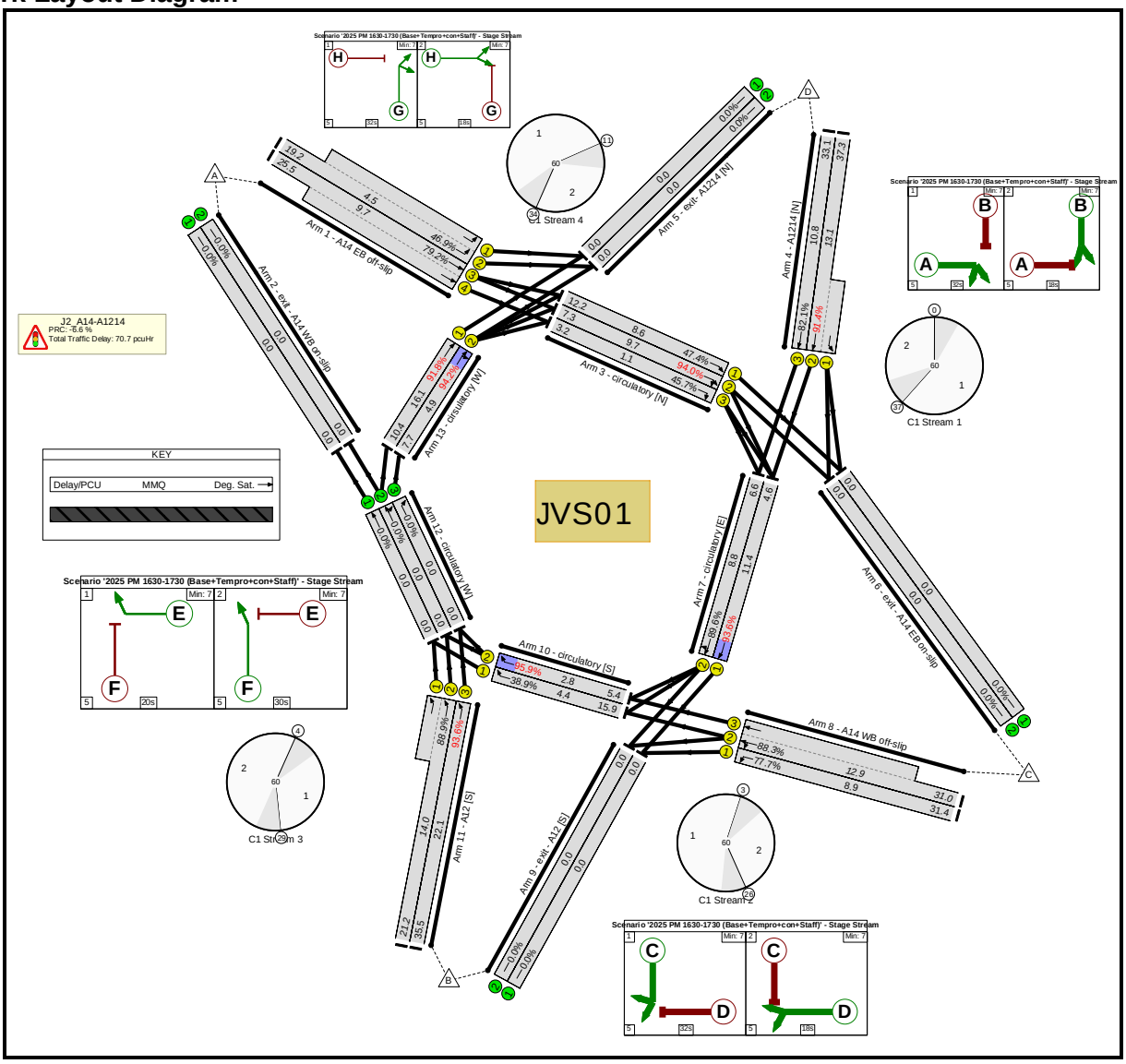
Item	Lane Description	Deg Sat (%)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	**97.4%**	-	-
J2_A14-A1214	-	**97.4%**	-	-
1/2+1/1	A14 EB off-slip Left	46.8%	21.7	4.0
1/3+1/4	A14 EB off-slip Ahead	97.0%	63.6	21.4
3/1	circulatory [N] Ahead	63.3%	23.3	8.6
3/2	circulatory [N] Ahead Right	97.4%	15.0	15.2
3/3	circulatory [N] Right	53.3%	0.0	0.2
4/2+4/1	A1214 [N] Ahead Ahead2	89.4%	33.5	13.7
4/3	A1214 [N] Ahead	81.9%	29.4	11.9
7/1	circulatory [E] Ahead	87.7%	6.5	5.4
7/2	circulatory [E] Ahead Right	95.0%	17.5	15.9
8/1	A14 WB off-slip Left	62.9%	23.3	6.8
8/2+8/3	A14 WB off-slip Left Ahead	73.3%	22.2	11.2
10/1	circulatory [S] Right	55.6%	23.6	4.8
10/2	circulatory [S] Right	93.6%	11.2	3.3
11/2+11/1	A12 [S] Ahead	76.9%	11.8	7.4
11/3	A12 [S] Ahead	89.4%	23.0	20.1
13/1	cirsulatory [W] Ahead	62.3%	10.5	10.7
13/2	cirsulatory [W] Right Ahead	95.8%	2.0	3.6

C1	Stream: 1 PRC for Signalled Lanes (%):	-8.2	Total Delay for Signalled Lanes (pcuHr):	20.72	Cycle Time (s):	60
C1	Stream: 2 PRC for Signalled Lanes (%):	-5.6	Total Delay for Signalled Lanes (pcuHr):	15.40	Cycle Time (s):	60
C1	Stream: 3 PRC for Signalled Lanes (%):	-4.0	Total Delay for Signalled Lanes (pcuHr):	14.72	Cycle Time (s):	60
C1	Stream: 4 PRC for Signalled Lanes (%):	-7.8	Total Delay for Signalled Lanes (pcuHr):	23.97	Cycle Time (s):	60
	PRC Over All Lanes (%):	-8.2	Total Delay Over All Lanes(pcuHr):	74.80		

Basic Results Summary

Scenario 6: '2025 PM 1630-1730 (Base+Tempro+con+Staff)' (FG6: '2025 PM 1630-1730 (Base+Tempro+con+Staff)', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Traffic Flows, Desired

Desired Flow :

Origin	Destination				
	A	B	C	D	Tot.
A	0	1000	0	585	1585
B	823	0	1018	455	2296
C	0	1057	0	552	1609
D	374	581	509	0	1464
Tot.	1197	2638	1527	1592	6954

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
6: '2025 PM 1630-1730 (Base+Tempro+con+Staff)'	16:30	17:30	01:00	

Basic Results Summary

Network Results

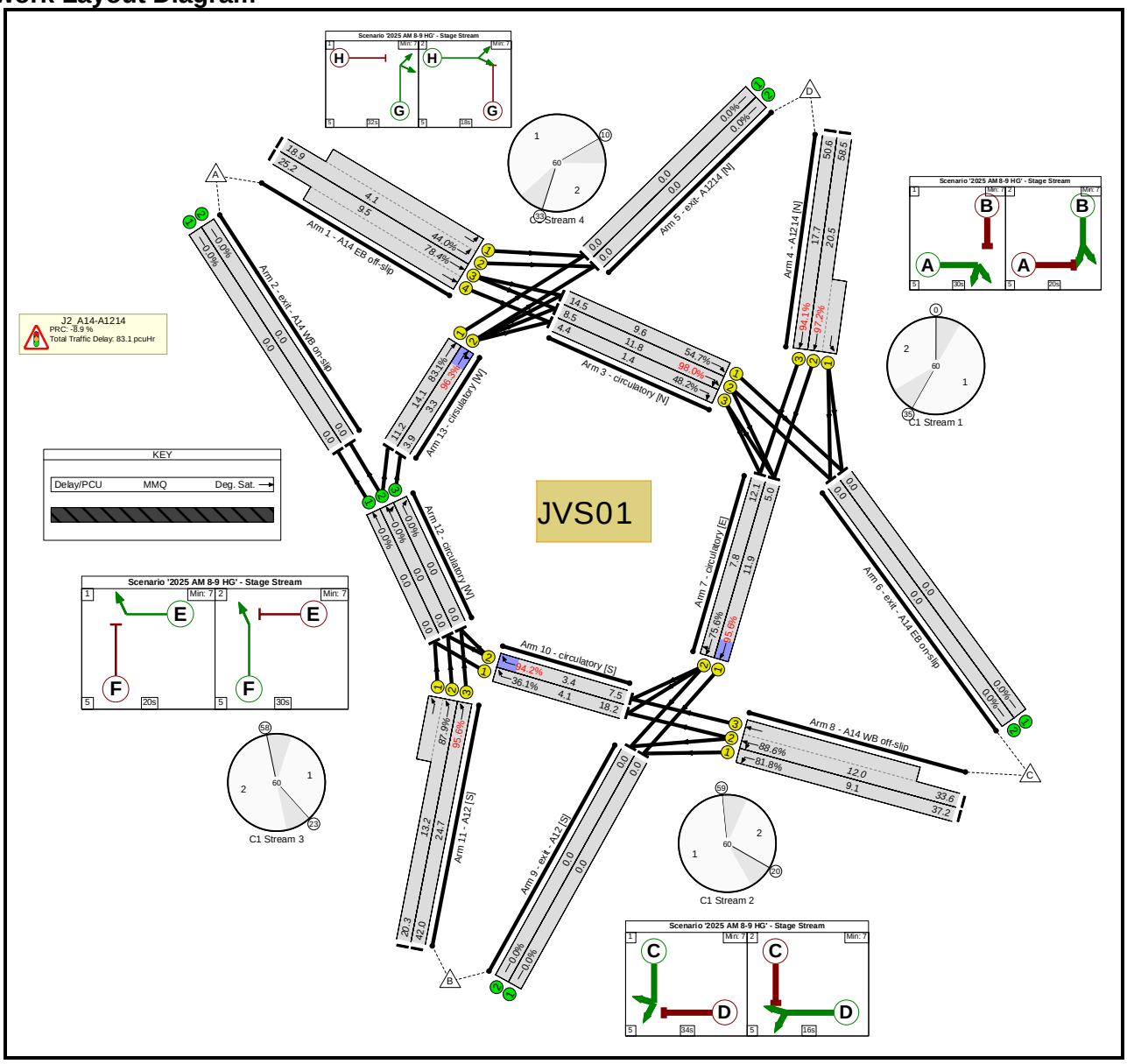
Item	Lane Description	Deg Sat (%)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	**-**	**95.9%**	**-**	**-**
J2_A14-A1214	**-**	**95.9%**	**-**	**-**
1/2+1/1	A14 EB off-slip Left	46.9%	19.2	4.5
1/3+1/4	A14 EB off-slip Ahead	79.2%	25.5	9.7
3/1	circulatory [N] Ahead	47.4%	12.2	8.6
3/2	circulatory [N] Ahead Right	94.0%	7.3	9.7
3/3	circulatory [N] Right	45.7%	3.2	1.1
4/2+4/1	A1214 [N] Ahead Ahead2	91.4%	37.3	13.1
4/3	A1214 [N] Ahead	82.1%	33.1	10.8
7/1	circulatory [E] Ahead	93.6%	4.6	11.4
7/2	circulatory [E] Ahead Right	89.6%	6.6	8.8
8/1	A14 WB off-slip Left	77.7%	31.4	8.9
8/2+8/3	A14 WB off-slip Left Ahead	88.3%	31.0	12.9
10/1	circulatory [S] Right	38.9%	15.9	4.4
10/2	circulatory [S] Right	95.9%	5.4	2.8
11/2+11/1	A12 [S] Ahead	88.9%	21.2	14.0
11/3	A12 [S] Ahead	93.6%	35.5	22.1
13/1	cirsulatory [W] Ahead	91.8%	10.4	16.1
13/2	cirsulatory [W] Right Ahead	94.2%	7.7	4.9

C1	Stream: 1 PRC for Signalled Lanes (%):	-4.4	Total Delay for Signalled Lanes (pcuHr):	18.69	Cycle Time (s):	60
C1	Stream: 2 PRC for Signalled Lanes (%):	-4.0	Total Delay for Signalled Lanes (pcuHr):	16.93	Cycle Time (s):	60
C1	Stream: 3 PRC for Signalled Lanes (%):	-6.6	Total Delay for Signalled Lanes (pcuHr):	19.77	Cycle Time (s):	60
C1	Stream: 4 PRC for Signalled Lanes (%):	-4.7	Total Delay for Signalled Lanes (pcuHr):	15.27	Cycle Time (s):	60
	PRC Over All Lanes (%):	-6.6	Total Delay Over All Lanes(pcuHr):	70.67		

Basic Results Summary

Scenario 7: '2025 AM 8-9 HG' (FG7: '2025 AM 8-9 HG', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	990	0	549	1539
	B	847	0	1045	411	2303
	C	0	969	0	496	1465
	D	399	548	616	0	1563
	Tot.	1246	2507	1661	1456	6870

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
7: '2025 AM 8-9 HG'	08:00	09:00	01:00	

Basic Results Summary

Network Results

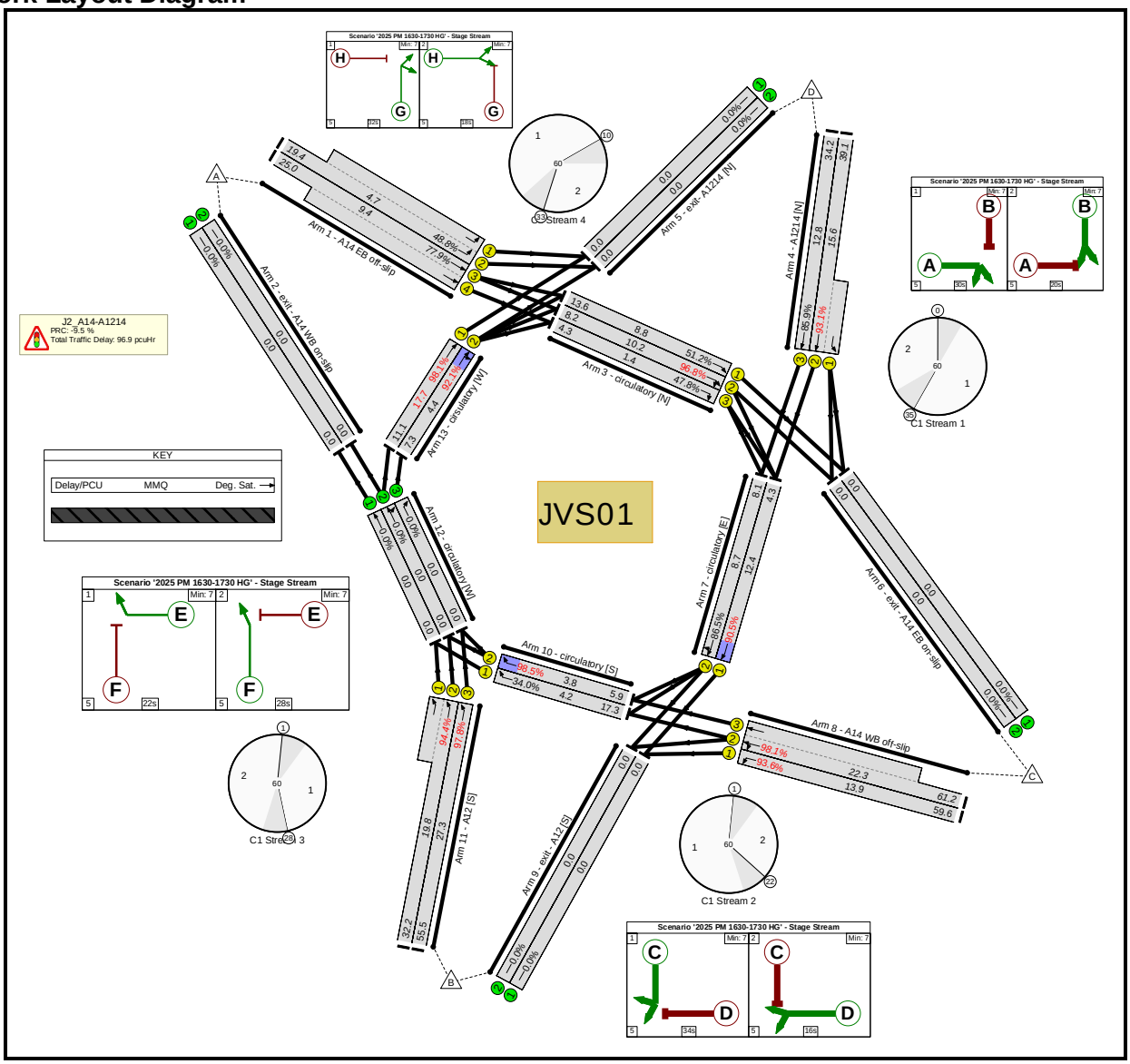
Item	Lane Description	Deg Sat (%)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	**98.0%**	-	-
J2_A14-A1214	-	**98.0%**	-	-
1/2+1/1	A14 EB off-slip Left	44.0%	18.9	4.1
1/3+1/4	A14 EB off-slip Ahead	78.4%	25.2	9.5
3/1	circulatory [N] Ahead	54.7%	14.5	9.6
3/2	circulatory [N] Ahead Right	98.0%	8.5	11.8
3/3	circulatory [N] Right	48.2%	4.4	1.4
4/2+4/1	A1214 [N] Ahead Ahead2	97.2%	58.5	20.5
4/3	A1214 [N] Ahead	94.1%	50.6	17.7
7/1	circulatory [E] Ahead	95.6%	5.0	11.9
7/2	circulatory [E] Ahead Right	75.6%	12.1	7.8
8/1	A14 WB off-slip Left	81.8%	37.2	9.1
8/2+8/3	A14 WB off-slip Left Ahead	88.6%	33.6	12.0
10/1	circulatory [S] Right	36.1%	18.2	4.1
10/2	circulatory [S] Right	94.2%	7.5	3.4
11/2+11/1	A12 [S] Ahead	87.9%	20.3	13.2
11/3	A12 [S] Ahead	95.6%	42.0	24.7
13/1	cirsulatory [W] Ahead	83.1%	11.2	14.1
13/2	cirsulatory [W] Right Ahead	96.3%	3.9	3.3

C1	Stream: 1 PRC for Signalled Lanes (%):	-8.9	Total Delay for Signalled Lanes (pcuHr):	28.96	Cycle Time (s):	60
C1	Stream: 2 PRC for Signalled Lanes (%):	-6.2	Total Delay for Signalled Lanes (pcuHr):	18.53	Cycle Time (s):	60
C1	Stream: 3 PRC for Signalled Lanes (%):	-6.3	Total Delay for Signalled Lanes (pcuHr):	21.87	Cycle Time (s):	60
C1	Stream: 4 PRC for Signalled Lanes (%):	-6.9	Total Delay for Signalled Lanes (pcuHr):	13.77	Cycle Time (s):	60
	PRC Over All Lanes (%):	-8.9	Total Delay Over All Lanes(pcuHr):	83.13		

Basic Results Summary

Scenario 8: '2025 PM 1630-1730 HG' (FG8: '2025 PM 1630-1730 HG', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Traffic Flows, Desired

Desired Flow :

Origin \ Destination	A	B	C	D	Tot.
A	0	983	0	609	1592
B	808	0	1000	480	2288
C	0	1038	0	601	1639
D	406	615	562	0	1583
Tot.	1214	2636	1562	1690	7102

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
8: '2025 PM 1630-1730 HG'	16:30	17:30	01:00	

Basic Results Summary

Network Results

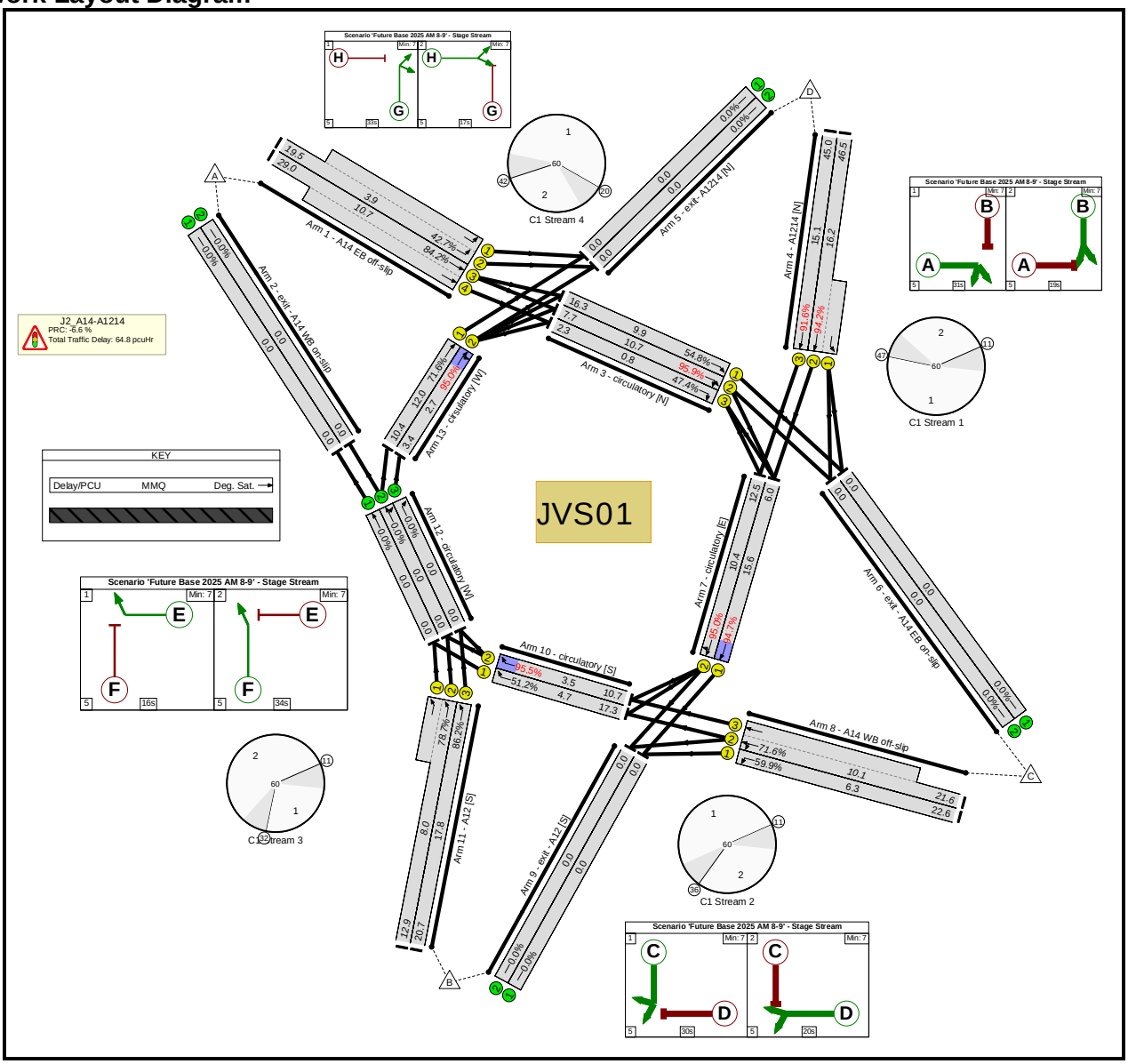
Item	Lane Description	Deg Sat (%)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	**98.5%**	-	-
J2_A14-A1214	-	**98.5%**	-	-
1/2+1/1	A14 EB off-slip Left	48.8%	19.4	4.7
1/3+1/4	A14 EB off-slip Ahead	77.9%	25.0	9.4
3/1	circulatory [N] Ahead	51.2%	13.6	8.8
3/2	circulatory [N] Ahead Right	96.8%	8.2	10.2
3/3	circulatory [N] Right	47.8%	4.3	1.4
4/2+4/1	A1214 [N] Ahead Ahead2	93.1%	39.1	15.6
4/3	A1214 [N] Ahead	85.9%	34.2	12.8
7/1	circulatory [E] Ahead	90.5%	4.3	12.4
7/2	circulatory [E] Ahead Right	86.5%	8.1	8.7
8/1	A14 WB off-slip Left	93.6%	59.6	13.9
8/2+8/3	A14 WB off-slip Left Ahead	98.1%	61.2	22.3
10/1	circulatory [S] Right	34.0%	17.3	4.2
10/2	circulatory [S] Right	98.5%	5.9	3.8
11/2+11/1	A12 [S] Ahead	94.4%	32.2	19.8
11/3	A12 [S] Ahead	97.8%	55.5	27.3
13/1	cirsulatory [W] Ahead	98.1%	11.1	17.7
13/2	cirsulatory [W] Right Ahead	92.1%	7.3	4.4

C1	Stream: 1 PRC for Signalled Lanes (%):	-7.6	Total Delay for Signalled Lanes (pcuHr):	21.04	Cycle Time (s):	60
C1	Stream: 2 PRC for Signalled Lanes (%):	-9.0	Total Delay for Signalled Lanes (pcuHr):	31.05	Cycle Time (s):	60
C1	Stream: 3 PRC for Signalled Lanes (%):	-9.5	Total Delay for Signalled Lanes (pcuHr):	29.36	Cycle Time (s):	60
C1	Stream: 4 PRC for Signalled Lanes (%):	-9.0	Total Delay for Signalled Lanes (pcuHr):	15.42	Cycle Time (s):	60
	PRC Over All Lanes (%):	-9.5	Total Delay Over All Lanes(pcuHr):	96.87		

Basic Results Summary

Scenario 9: 'Future Base 2025 AM 8-9' (FG9: 'Future Base 2025 AM 8-9', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Traffic Flows, Desired

Desired Flow :

Origin	Destination				
	A	B	C	D	Tot.
A	0	1007	0	505	1512
B	862	0	1063	369	2294
C	0	985	0	436	1421
D	380	516	571	0	1467
Tot.	1242	2508	1634	1310	6694

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
9: 'Future Base 2025 AM 8-9'	08:00	09:00	01:00	

Basic Results Summary

Network Results

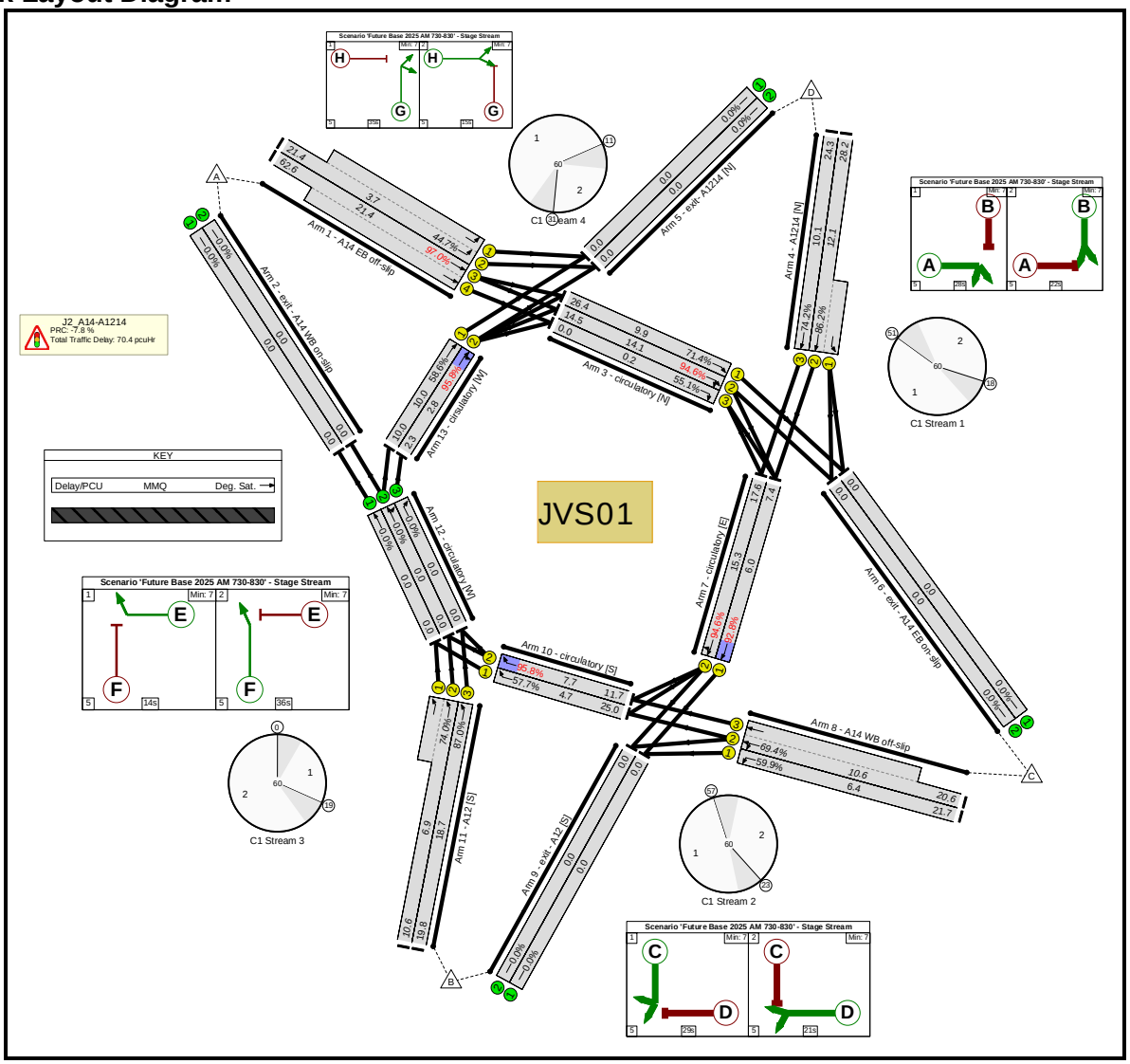
Item	Lane Description	Deg Sat (%)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	**-**	**95.9%**	**-**	**-**
J2_A14-A1214	**-**	**95.9%**	**-**	**-**
1/2+1/1	A14 EB off-slip Left	42.7%	19.5	3.9
1/3+1/4	A14 EB off-slip Ahead	84.2%	29.0	10.7
3/1	circulatory [N] Ahead	54.8%	16.3	9.9
3/2	circulatory [N] Ahead Right	95.9%	7.7	10.7
3/3	circulatory [N] Right	47.4%	2.3	0.8
4/2+4/1	A1214 [N] Ahead Ahead2	94.2%	46.5	16.2
4/3	A1214 [N] Ahead	91.6%	45.0	15.1
7/1	circulatory [E] Ahead	94.7%	6.0	15.6
7/2	circulatory [E] Ahead Right	95.0%	12.5	10.4
8/1	A14 WB off-slip Left	59.9%	22.6	6.3
8/2+8/3	A14 WB off-slip Left Ahead	71.6%	21.6	10.1
10/1	circulatory [S] Right	51.2%	17.3	4.7
10/2	circulatory [S] Right	95.5%	10.7	3.5
11/2+11/1	A12 [S] Ahead	78.7%	12.9	8.0
11/3	A12 [S] Ahead	86.2%	20.7	17.8
13/1	cirsulatory [W] Ahead	71.6%	10.4	12.0
13/2	cirsulatory [W] Right Ahead	95.0%	3.4	2.7

C1	Stream: 1 PRC for Signalled Lanes (%):	-6.6	Total Delay for Signalled Lanes (pcuHr):	23.66	Cycle Time (s):	60
C1	Stream: 2 PRC for Signalled Lanes (%):	-5.6	Total Delay for Signalled Lanes (pcuHr):	13.52	Cycle Time (s):	60
C1	Stream: 3 PRC for Signalled Lanes (%):	-6.1	Total Delay for Signalled Lanes (pcuHr):	13.46	Cycle Time (s):	60
C1	Stream: 4 PRC for Signalled Lanes (%):	-5.6	Total Delay for Signalled Lanes (pcuHr):	14.16	Cycle Time (s):	60
	PRC Over All Lanes (%):	-6.6	Total Delay Over All Lanes(pcuHr):	64.80		

Basic Results Summary

Scenario 10: 'Future Base 2025 AM 730-830' (FG10: 'Future Base 2025 AM 730-830', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	1031	0	469	1500
	B	900	0	1135	306	2341
	C	0	1050	0	392	1442
	D	361	498	583	0	1442
	Tot.	1261	2579	1718	1167	6725

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
10: 'Future Base 2025 AM 730-830'	07:30	08:30	01:00	

Basic Results Summary

Network Results

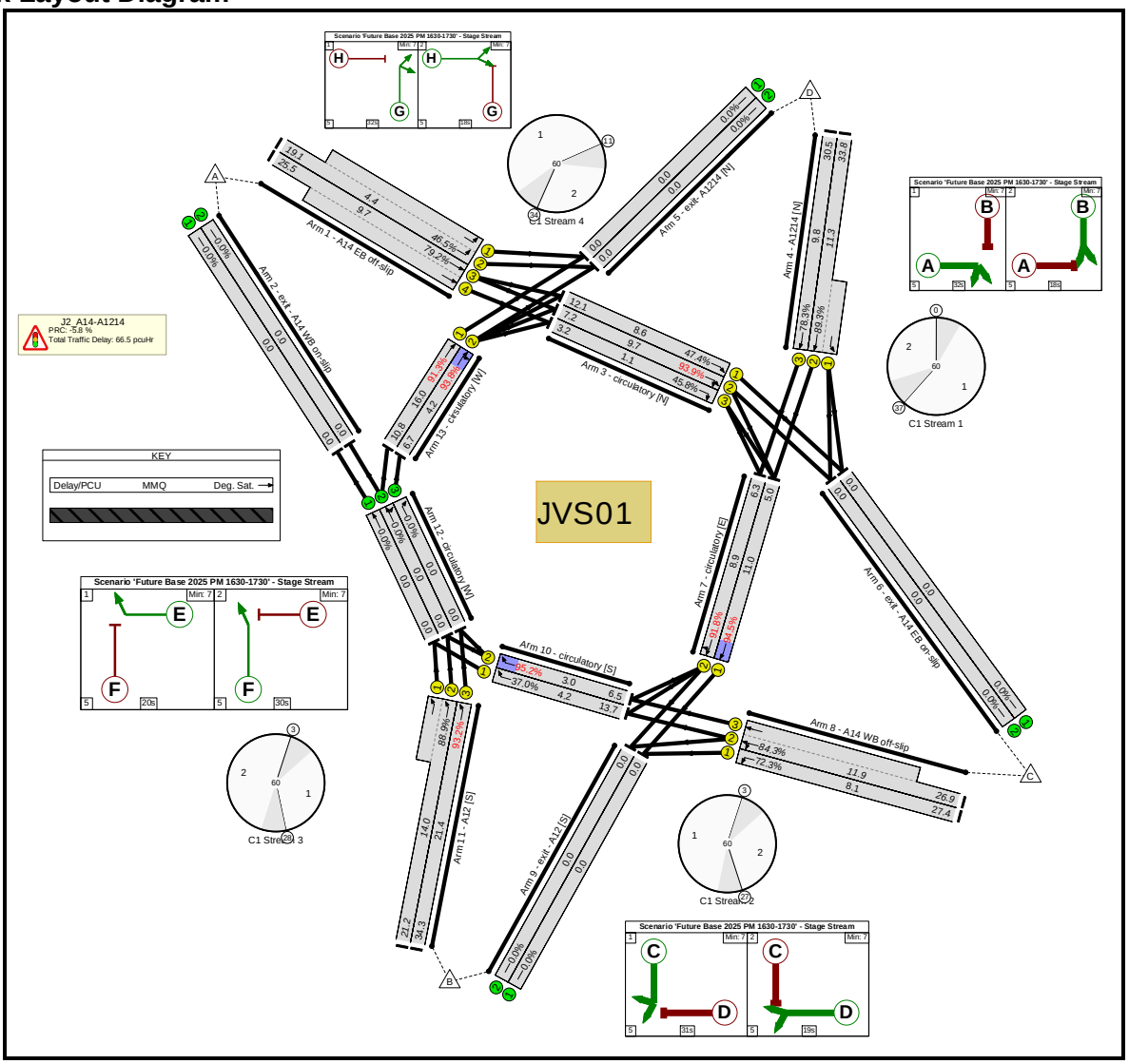
Item	Lane Description	Deg Sat (%)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	**-**	**97.0%**	**-**	**-**
J2_A14-A1214	**-**	**97.0%**	**-**	**-**
1/2+1/1	A14 EB off-slip Left	44.7%	21.4	3.7
1/3+1/4	A14 EB off-slip Ahead	97.0%	62.6	21.4
3/1	circulatory [N] Ahead	71.4%	26.4	9.9
3/2	circulatory [N] Ahead Right	94.6%	14.5	14.1
3/3	circulatory [N] Right	55.1%	0.0	0.2
4/2+4/1	A1214 [N] Ahead Ahead2	86.2%	28.2	12.1
4/3	A1214 [N] Ahead	74.2%	24.3	10.1
7/1	circulatory [E] Ahead	92.8%	7.4	6.0
7/2	circulatory [E] Ahead Right	94.6%	17.6	15.3
8/1	A14 WB off-slip Left	59.9%	21.7	6.4
8/2+8/3	A14 WB off-slip Left Ahead	69.4%	20.6	10.6
10/1	circulatory [S] Right	57.7%	25.0	4.7
10/2	circulatory [S] Right	95.8%	11.7	7.7
11/2+11/1	A12 [S] Ahead	74.0%	10.6	6.9
11/3	A12 [S] Ahead	87.0%	19.8	18.7
13/1	cirsulatory [W] Ahead	58.6%	10.0	10.0
13/2	cirsulatory [W] Right Ahead	95.8%	2.3	2.8

C1	Stream: 1 PRC for Signalled Lanes (%):	-5.1	Total Delay for Signalled Lanes (pcuHr):	19.06	Cycle Time (s):	60
C1	Stream: 2 PRC for Signalled Lanes (%):	-5.1	Total Delay for Signalled Lanes (pcuHr):	14.72	Cycle Time (s):	60
C1	Stream: 3 PRC for Signalled Lanes (%):	-6.4	Total Delay for Signalled Lanes (pcuHr):	13.26	Cycle Time (s):	60
C1	Stream: 4 PRC for Signalled Lanes (%):	-7.8	Total Delay for Signalled Lanes (pcuHr):	23.38	Cycle Time (s):	60
	PRC Over All Lanes (%):	-7.8	Total Delay Over All Lanes(pcuHr):	70.43		

Basic Results Summary

Scenario 11: 'Future Base 2025 PM 1630-1730' (FG11: 'Future Base 2025 PM 1630-1730', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	1000	0	580	1580
	B	823	0	1018	450	2291
	C	0	1057	0	547	1604
	D	361	568	496	0	1425
	Tot.	1184	2625	1514	1577	6900

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
11: 'Future Base 2025 PM 1630-1730'	16:30	17:30	01:00	

Basic Results Summary

Network Results

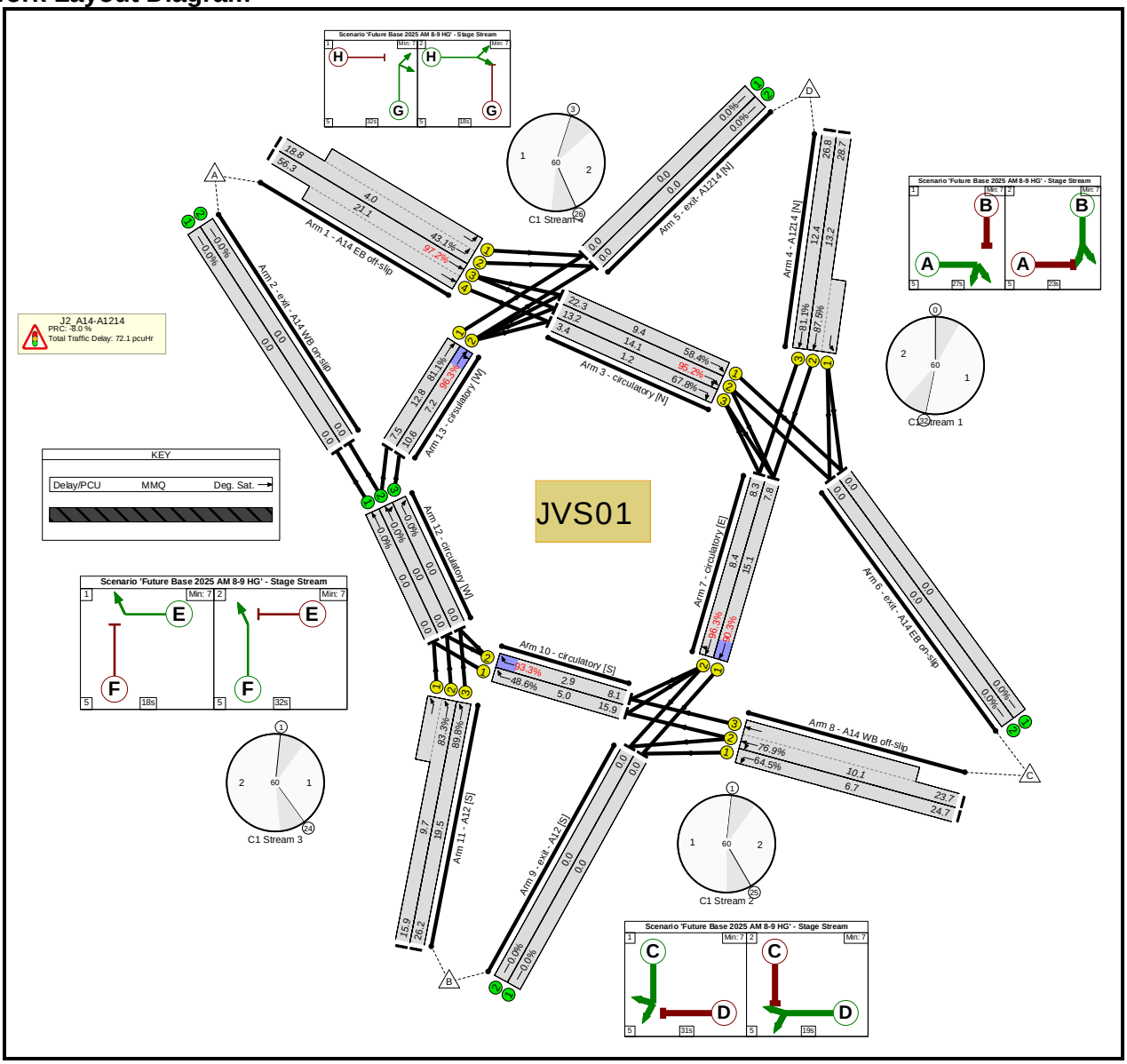
Item	Lane Description	Deg Sat (%)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	**95.2%**	-	-
J2_A14-A1214	-	**95.2%**	-	-
1/2+1/1	A14 EB off-slip Left	46.5%	19.1	4.4
1/3+1/4	A14 EB off-slip Ahead	79.2%	25.5	9.7
3/1	circulatory [N] Ahead	47.4%	12.1	8.6
3/2	circulatory [N] Ahead Right	93.9%	7.2	9.7
3/3	circulatory [N] Right	45.8%	3.2	1.1
4/2+4/1	A1214 [N] Ahead Ahead2	89.3%	33.8	11.3
4/3	A1214 [N] Ahead	78.3%	30.5	9.8
7/1	circulatory [E] Ahead	94.5%	5.0	11.0
7/2	circulatory [E] Ahead Right	91.8%	6.3	8.9
8/1	A14 WB off-slip Left	72.3%	27.4	8.1
8/2+8/3	A14 WB off-slip Left Ahead	84.3%	26.9	11.9
10/1	circulatory [S] Right	37.0%	13.7	4.2
10/2	circulatory [S] Right	95.2%	6.5	3.0
11/2+11/1	A12 [S] Ahead	88.9%	21.2	14.0
11/3	A12 [S] Ahead	93.2%	34.3	21.4
13/1	cirsulatory [W] Ahead	91.3%	10.8	16.0
13/2	cirsulatory [W] Right Ahead	93.8%	6.7	4.2

C1	Stream: 1 PRC for Signalled Lanes (%):	-4.3	Total Delay for Signalled Lanes (pcuHr):	17.03	Cycle Time (s):	60
C1	Stream: 2 PRC for Signalled Lanes (%):	-5.0	Total Delay for Signalled Lanes (pcuHr):	15.08	Cycle Time (s):	60
C1	Stream: 3 PRC for Signalled Lanes (%):	-5.8	Total Delay for Signalled Lanes (pcuHr):	19.36	Cycle Time (s):	60
C1	Stream: 4 PRC for Signalled Lanes (%):	-4.2	Total Delay for Signalled Lanes (pcuHr):	15.04	Cycle Time (s):	60
	PRC Over All Lanes (%):	-5.8	Total Delay Over All Lanes(pcuHr):	66.51		

Basic Results Summary

Scenario 12: 'Future Base 2025 AM 8-9 HG' (FG12: 'Future Base 2025 AM 8-9 HG', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Traffic Flows, Desired

Desired Flow :

Origin	Destination				
	A	B	C	D	Tot.
A	0	990	0	538	1528
B	847	0	1045	400	2292
C	0	969	0	485	1454
D	397	547	616	0	1560
Tot.	1244	2506	1661	1423	6834

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
12: 'Future Base 2025 AM 8-9 HG'	08:00	09:00	01:00	

Basic Results Summary

Network Results

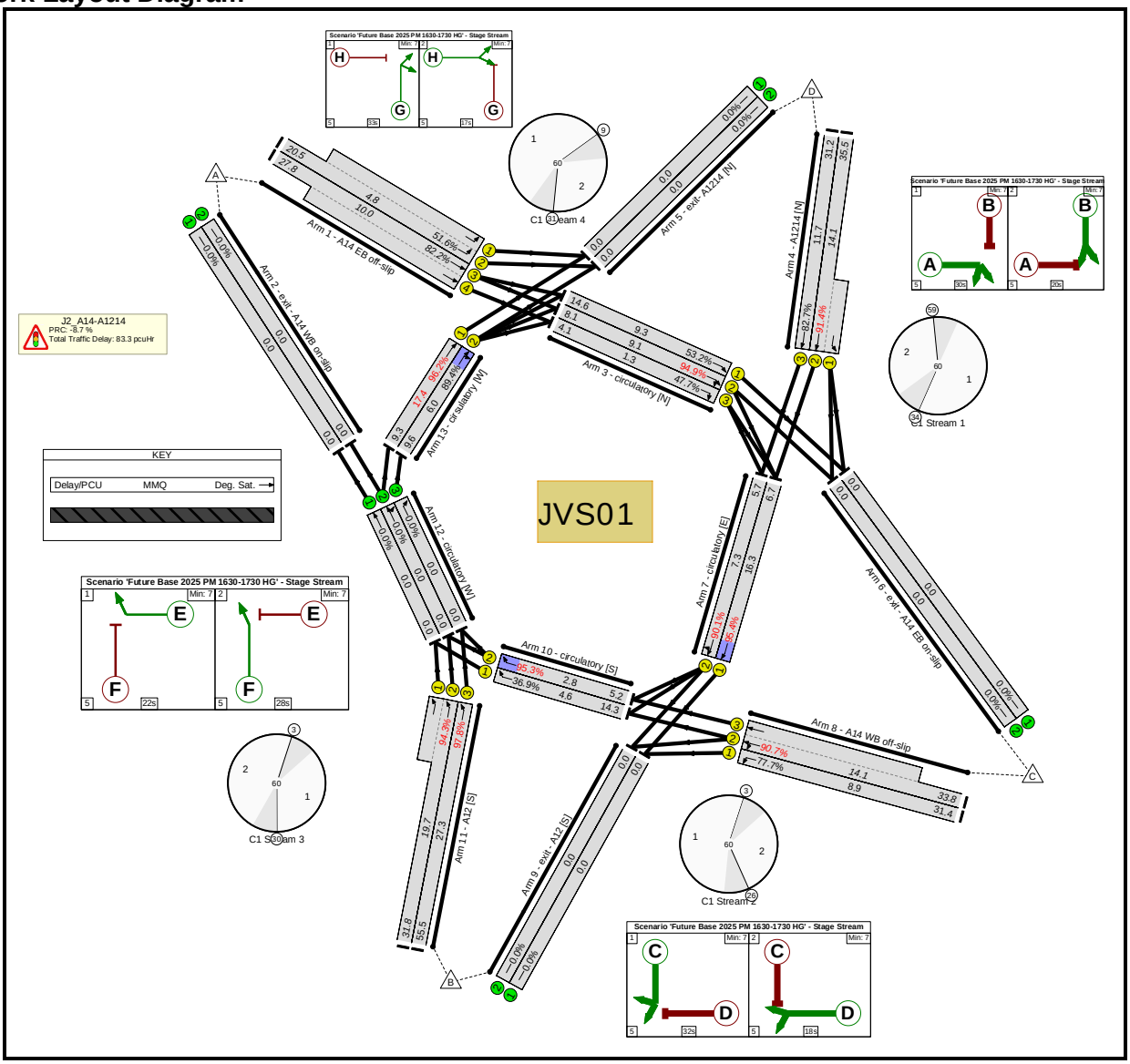
Item	Lane Description	Deg Sat (%)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	**97.2%**	-	-
J2_A14-A1214	-	**97.2%**	-	-
1/2+1/1	A14 EB off-slip Left	43.1%	18.8	4.0
1/3+1/4	A14 EB off-slip Ahead	97.2%	56.3	21.1
3/1	circulatory [N] Ahead	58.4%	22.3	9.4
3/2	circulatory [N] Ahead Right	95.2%	13.2	14.1
3/3	circulatory [N] Right	67.8%	3.4	1.2
4/2+4/1	A1214 [N] Ahead Ahead2	87.5%	28.7	13.2
4/3	A1214 [N] Ahead	81.1%	26.8	12.4
7/1	circulatory [E] Ahead	90.3%	7.8	15.1
7/2	circulatory [E] Ahead Right	96.3%	8.3	8.4
8/1	A14 WB off-slip Left	64.5%	24.7	6.7
8/2+8/3	A14 WB off-slip Left Ahead	76.9%	23.7	10.1
10/1	circulatory [S] Right	48.6%	15.9	5.0
10/2	circulatory [S] Right	93.3%	8.1	2.9
11/2+11/1	A12 [S] Ahead	83.3%	15.9	9.7
11/3	A12 [S] Ahead	89.8%	26.2	19.5
13/1	cirsulatory [W] Ahead	81.1%	7.5	12.8
13/2	cirsulatory [W] Right Ahead	96.3%	10.6	7.2

C1	Stream: 1 PRC for Signalled Lanes (%):	-5.8	Total Delay for Signalled Lanes (pcuHr):	19.05	Cycle Time (s):	60
C1	Stream: 2 PRC for Signalled Lanes (%):	-7.1	Total Delay for Signalled Lanes (pcuHr):	14.05	Cycle Time (s):	60
C1	Stream: 3 PRC for Signalled Lanes (%):	-3.7	Total Delay for Signalled Lanes (pcuHr):	15.76	Cycle Time (s):	60
C1	Stream: 4 PRC for Signalled Lanes (%):	-8.0	Total Delay for Signalled Lanes (pcuHr):	23.22	Cycle Time (s):	60
	PRC Over All Lanes (%):	-8.0	Total Delay Over All Lanes(pcuHr):	72.09		

Basic Results Summary

Scenario 13: 'Future Base 2025 PM 1630-1730 HG' (FG14: 'Future Base 2025 PM 1630-1730 HG', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	983	0	610	1593
	B	808	0	1000	480	2288
	C	0	1038	0	602	1640
	D	393	604	551	0	1548
	Tot.	1201	2625	1551	1692	7069

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
14: 'Future Base 2025 PM 1630-1730 HG'	16:30	17:30	01:00	

Basic Results Summary

Network Results

Item	Lane Description	Deg Sat (%)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	**97.8%**	-	-
J2_A14-A1214	-	**97.8%**	-	-
1/2+1/1	A14 EB off-slip Left	51.6%	20.5	4.8
1/3+1/4	A14 EB off-slip Ahead	82.2%	27.8	10.0
3/1	circulatory [N] Ahead	53.2%	14.6	9.3
3/2	circulatory [N] Ahead Right	94.9%	8.1	9.1
3/3	circulatory [N] Right	47.7%	4.1	1.3
4/2+4/1	A1214 [N] Ahead Ahead2	91.4%	35.5	14.1
4/3	A1214 [N] Ahead	82.7%	31.2	11.7
7/1	circulatory [E] Ahead	95.4%	6.7	16.3
7/2	circulatory [E] Ahead Right	90.1%	5.7	7.3
8/1	A14 WB off-slip Left	77.7%	31.4	8.9
8/2+8/3	A14 WB off-slip Left Ahead	90.7%	33.8	14.1
10/1	circulatory [S] Right	36.9%	14.3	4.6
10/2	circulatory [S] Right	95.3%	5.2	2.8
11/2+11/1	A12 [S] Ahead	94.3%	31.8	19.7
11/3	A12 [S] Ahead	97.8%	55.5	27.3
13/1	cirsulatory [W] Ahead	96.2%	9.3	17.4
13/2	cirsulatory [W] Right Ahead	89.4%	9.6	6.0

C1	Stream: 1 PRC for Signalled Lanes (%):	-5.5	Total Delay for Signalled Lanes (pcuHr):	19.37	Cycle Time (s):	60
C1	Stream: 2 PRC for Signalled Lanes (%):	-6.0	Total Delay for Signalled Lanes (pcuHr):	18.49	Cycle Time (s):	60
C1	Stream: 3 PRC for Signalled Lanes (%):	-8.7	Total Delay for Signalled Lanes (pcuHr):	28.95	Cycle Time (s):	60
C1	Stream: 4 PRC for Signalled Lanes (%):	-6.9	Total Delay for Signalled Lanes (pcuHr):	16.54	Cycle Time (s):	60
	PRC Over All Lanes (%):	-8.7	Total Delay Over All Lanes(pcuHr):	83.34		

Basic Results Summary

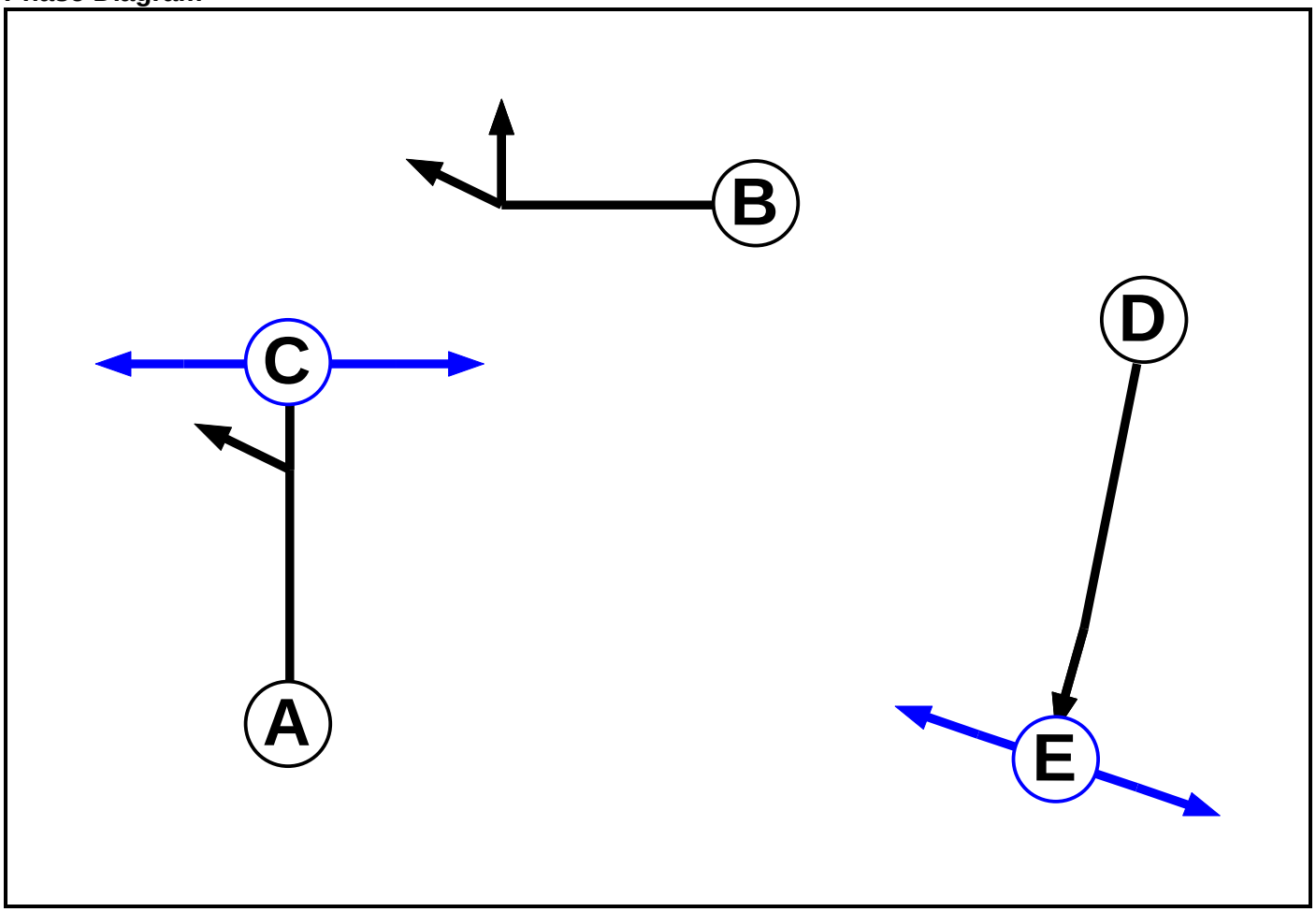
User and Project Details

Project:	**Bramford to Twinstead Reinforcement**
Title:	**TP14 - Junction Modelling**
Location:	Ipswich, UK
Additional detail:	-
File name:	J3_A1214-Scrivener Dr AM.lsg3x
Author:	JP/SC
Company:	Jacobs UK Ltd.
Address:	Cottons Centre | Cottons Lane, London. SE1 2QG

Phase Input Data

Phase Name	Phase Type	Stage Stream	Assoc. Phase	Street Min	Cont Min
A	Traffic	1		7	7
B	Traffic	1		7	7
C	Pedestrian	1		5	5
D	Traffic	2		7	7
E	Pedestrian	2		5	5

Phase Diagram



Basic Results Summary

Phase Intergreens Matrix

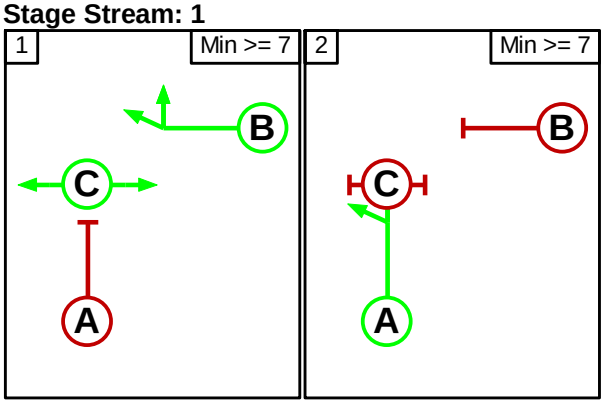
Terminating Phase	Starting Phase A	B	C	D	E
A		6	5	-	-
B	5		-	-	-
C	10	-		-	-
D	-	-	-		5
E	-	-	-	10	

Phases in Stage

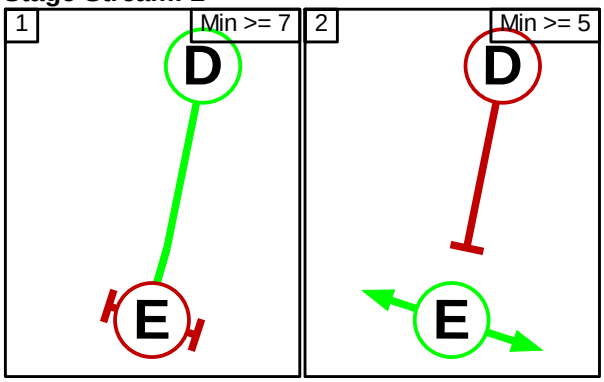
Stream	Stage No.	Phases in Stage
1	1	B C
1	2	A
2	1	D
2	2	E

Stage Diagram

Stage Stream: 1



Stage Stream: 2



Basic Results Summary

Lane Input Data

Junction: J3_A1214-Scrivener Dr

Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (A1214 [N])	O		2	3	60.0	Geom	-	4.00	0.00	Y	Arm 4 Ahead	44.00
											Arm 6 Ahead	56.00
1/2 (A1214 [N])	O		2	3	60.0	Geom	-	4.00	0.00	Y	Arm 6 Ahead	56.00
2/1 (exit - A1214 [N])	U		2	3	60.0	Inf	-	-	-	-	-	-
2/2 (exit - A1214 [N])	U		2	3	60.0	Inf	-	-	-	-	-	-
3/1 (circulatory [N])	U		2	3	8.0	Inf	-	-	-	-	-	-
3/2 (circulatory [N])	U		2	3	8.0	Inf	-	-	-	-	-	-
4/1 (exit - Scrivener Dr [E])	U		2	3	60.0	Inf	-	-	-	-	-	-
5/1 (Scrivener Dr [E])	O		2	3	60.0	Geom	-	3.40	0.00	Y	Arm 8 Left	43.00
5/2 (Scrivener Dr [E])	O		2	3	7.7	Geom	-	3.40	0.00	Y	Arm 9 Ahead	Inf
6/1 (circulatory [E])	U		2	3	7.1	Inf	-	-	-	-	-	-
6/2 (circulatory [E])	U		2	3	7.1	Inf	-	-	-	-	-	-
6/3 (circulatory [E])	U		2	3	7.1	Inf	-	-	-	-	-	-
7/1 (A1214 [S])	U	A	2	3	6.1	Geom	-	3.65	0.00	Y	Arm 12 Left	66.60
7/2 (A1214 [S])	U	A	2	3	60.0	Geom	-	3.65	0.00	Y	Arm 10 Ahead	Inf
7/3 (A1214 [S])	U	A	2	3	60.0	Geom	-	3.65	0.00	Y	Arm 10 Ahead	Inf
8/1 (exit - A1214 [S])	U	D	2	3	7.3	Geom	-	4.00	0.00	Y	Arm 13 Ahead	Inf

Basic Results Summary

8/2 (exit - A1214 [S])	U	D	2	3	7.3	Geom	-	4.00	0.00	Y	Arm 13 Ahead	Inf
9/1 (circulatory [S])	U	B	2	3	7.3	Geom	-	4.00	0.00	Y	Arm 12 Ahead	Inf
9/2 (circulatory [S])	U	B	2	3	2.6	Geom	-	4.00	0.00	Y	Arm 10 Right	26.00
10/1 (circulatory [W])	U		2	3	9.7	Inf	-	-	-	-	-	-
10/2 (circulatory [W])	U		2	3	9.7	Inf	-	-	-	-	-	-
11/1 (Tesco [W])	O		2	3	15.7	Geom	-	3.50	0.00	Y	Arm 2 Ahead	43.00
11/2 (Tesco [W])	O		2	3	28.0	Geom	-	3.50	0.00	Y	Arm 3 Ahead	Inf
12/1 (exit - Tesco [W])	U		2	3	60.0	Inf	-	-	-	-	-	-
13/1 (exit - A1214 [S])	U		2	3	60.0	Inf	-	-	-	-	-	-
13/2 (exit - A1214 [S])	U		2	3	60.0	Inf	-	-	-	-	-	-

Give-Way Lane Input Data

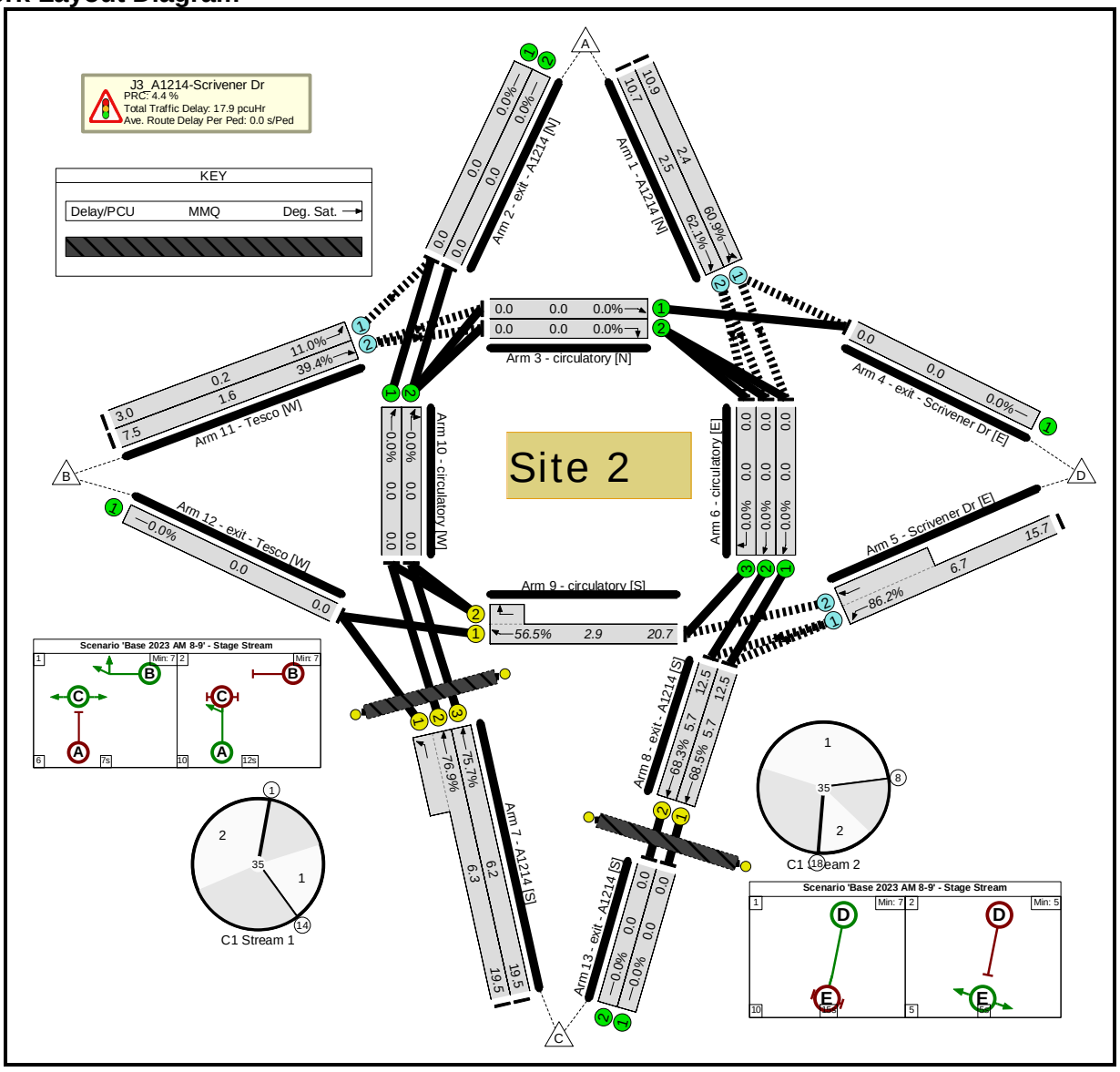
Junction: J3_A1214-Scrivener Dr

Lane	Movement	Max Flow when Giving Way (PCU/Hr)	Min Flow when Giving Way (PCU/Hr)	Opposing Lane	Opp. Lane Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	Non-Blocking Storage (PCU)	RTF	Right Turn Move up (s)	Max Turns in Intergreen (PCU)
1/1 (A1214 [N])	4/1 (Ahead)	1082	0	3/1	0.65	All	-	-	-	-	-
	6/1 (Ahead)	900	0	3/1	0.65	All					
				3/2	0.65	To 6/1 (Right)					
1/2 (A1214 [N])	6/2 (Ahead)	1082	0	3/1	0.65	All					
				3/2	0.65	To 6/1 (Right) To 6/2 (Right)					
	6/3 (Ahead)	900	0	3/1	0.65	All					
				3/2	0.65	All					
5/1 (Scrivener Dr [E])	8/1 (Left)	996	0	6/1	0.59	All					
	8/2 (Left)	996	0	6/1	0.59	All					
				6/2	0.59	To 8/2 (Ahead)					
5/2 (Scrivener Dr [E])	9/1 (Ahead)	996	0	6/1	0.59	All					
				6/2	0.59	All					
11/1 (Tesco [W])	2/1 (Ahead)	1129	0	10/1	0.62	All					
11/2 (Tesco [W])	3/1 (Ahead)	1129	0	10/1	0.62	All					
				10/2	0.62	To 2/2 (Ahead) To 3/1 (Right)					
	3/2 (Ahead)	1129	0	10/1	0.62	All					
				10/2	0.62	All					

Basic Results Summary

Scenario 1: 'Base 2023 AM 8-9' (FG1: 'Base 2023 AM 8-9', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Traffic Flows, Desired

Desired Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	113	519	8	640
	B	86	0	180	82	348
	C	657	32	0	461	1150
	D	19	141	561	0	721
	Tot.	762	286	1260	551	2859

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'Base 2023 AM 8-9'	08:00	09:00	01:00	

Basic Results Summary

Network Results

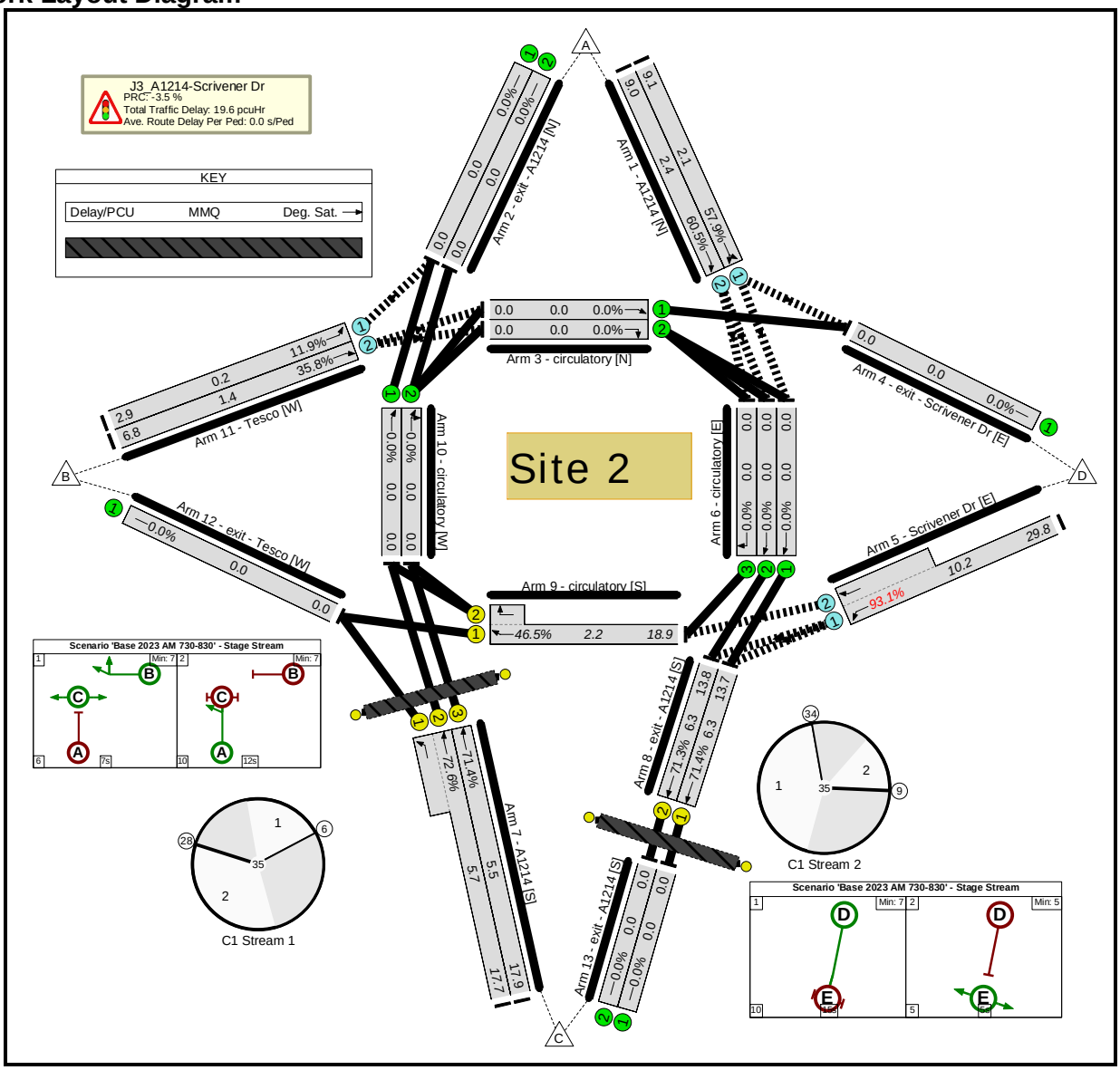
Item	Lane Description	Deg Sat (%)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	**-**	**86.2%**	**-**	**-**
J3_A1214-Scrivener Dr	**-**	**86.2%**	**-**	**-**
1/1	A1214 [N] Ahead Ahead2	60.9%	10.9	2.4
1/2	A1214 [N] Ahead	62.1%	10.7	2.5
5/1+5/2	Scrivener Dr [E] Left Ahead	86.2%	15.7	6.7
7/2+7/1	A1214 [S] Ahead Left	76.9%	19.5	6.3
7/3	A1214 [S] Ahead	75.7%	19.5	6.2
8/1	exit - A1214 [S] Ahead	68.5%	12.5	5.7
8/2	exit - A1214 [S] Ahead	68.3%	12.5	5.7
9/1+9/2	circulatory [S] Right Ahead	56.5%	20.7	2.9
11/1	Tesco [W] Ahead	11.0%	3.0	0.2
11/2	Tesco [W] Ahead	39.4%	7.5	1.6
Ped Link: P1	Unnamed Ped Link	0.0%	-	-
Ped Link: P2	Unnamed Ped Link	0.0%	-	-

C1	Stream: 1 PRC for Signalled Lanes (%):	17.0	Total Delay for Signalled Lanes (pcuHr):	7.80	Cycle Time (s):	35
C1	Stream: 2 PRC for Signalled Lanes (%):	31.4	Total Delay for Signalled Lanes (pcuHr):	4.37	Cycle Time (s):	35
	PRC Over All Lanes (%):	4.4	Total Delay Over All Lanes(pcuHr):	17.86		

Basic Results Summary

Scenario 2: 'Base 2023 AM 730-830' (FG2: 'Base 2023 AM 730-830', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Traffic Flows, Desired

Desired Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	120	538	5	663
	B	95	0	179	63	337
	C	641	32	0	413	1086
	D	21	87	598	0	706
	Tot.	757	239	1315	481	2792

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
2: 'Base 2023 AM 730-830'	07:30	08:30	01:00	

Basic Results Summary

Network Results

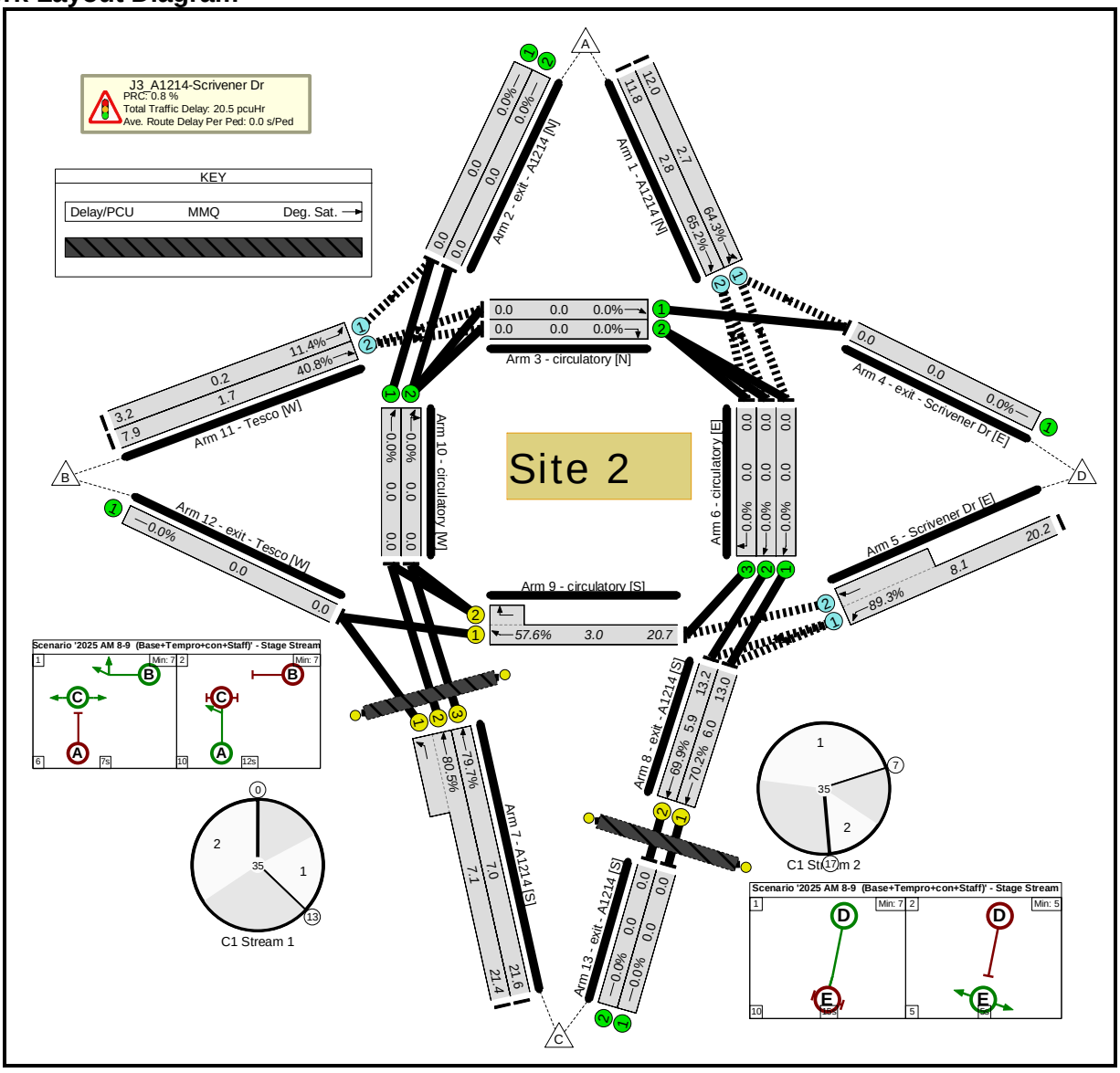
Item	Lane Description	Deg Sat (%)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	**-**	**93.1%**	**-**	**-**
J3_A1214-Scrivener Dr	**-**	**93.1%**	**-**	**-**
1/1	A1214 [N] Ahead Ahead2	57.9%	9.1	2.1
1/2	A1214 [N] Ahead	60.5%	9.0	2.4
5/1+5/2	Scrivener Dr [E] Left Ahead	93.1%	29.8	10.2
7/2+7/1	A1214 [S] Ahead Left	72.6%	17.7	5.7
7/3	A1214 [S] Ahead	71.4%	17.9	5.5
8/1	exit - A1214 [S] Ahead	71.4%	13.7	6.3
8/2	exit - A1214 [S] Ahead	71.3%	13.8	6.3
9/1+9/2	circulatory [S] Right Ahead	46.5%	18.9	2.2
11/1	Tesco [W] Ahead	11.9%	2.9	0.2
11/2	Tesco [W] Ahead	35.8%	6.8	1.4
Ped Link: P1	Unnamed Ped Link	0.0%	-	-
Ped Link: P2	Unnamed Ped Link	0.0%	-	-

C1	Stream: 1 PRC for Signalled Lanes (%):	24.0	Total Delay for Signalled Lanes (pcuHr):	6.56	Cycle Time (s):	35
C1	Stream: 2 PRC for Signalled Lanes (%):	26.0	Total Delay for Signalled Lanes (pcuHr):	5.03	Cycle Time (s):	35
	PRC Over All Lanes (%):	-3.5	Total Delay Over All Lanes(pcuHr):	19.63		

Basic Results Summary

Scenario 3: '2025 AM 8-9 (Base+Tempro+con+Staff)' (FG4: '2025 AM 8-9 (Base+Tempro+con+Staff)', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	115	539	9	663
	B	87	0	183	84	354
	C	706	33	0	467	1206
	D	20	144	569	0	733
	Tot.	813	292	1291	560	2956

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
4: '2025 AM 8-9 (Base+Tempro+con+Staff)'	08:00	09:00	01:00	

Basic Results Summary

Network Results

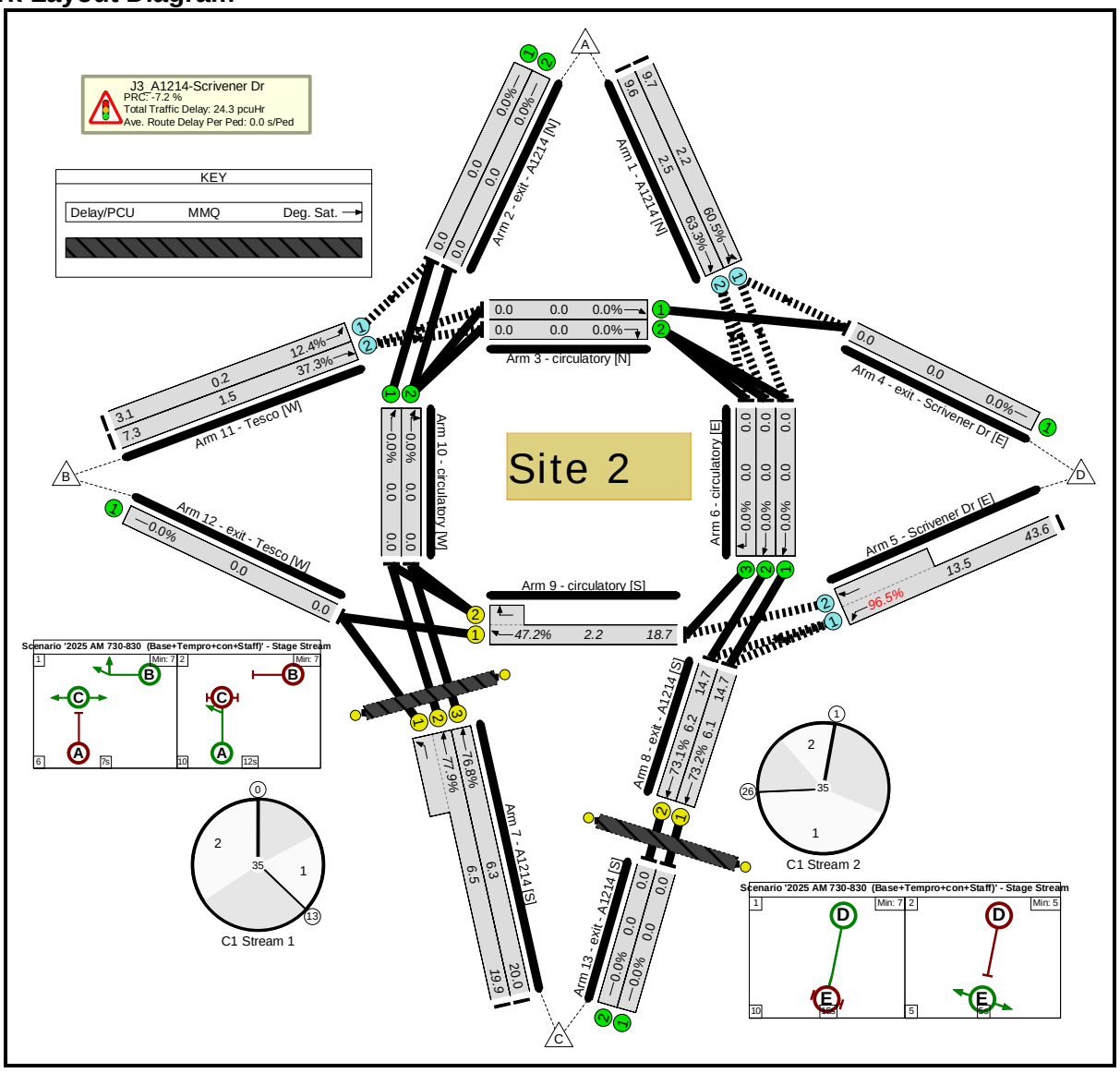
Item	Lane Description	Deg Sat (%)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	**-**	**89.3%**	**-**	**-**
J3_A1214-Scrivener Dr	**-**	**89.3%**	**-**	**-**
1/1	A1214 [N] Ahead Ahead2	64.3%	12.0	2.7
1/2	A1214 [N] Ahead	65.2%	11.8	2.8
5/1+5/2	Scrivener Dr [E] Left Ahead	89.3%	20.2	8.1
7/2+7/1	A1214 [S] Ahead Left	80.5%	21.4	7.1
7/3	A1214 [S] Ahead	79.7%	21.6	7.0
8/1	exit - A1214 [S] Ahead	70.2%	13.0	6.0
8/2	exit - A1214 [S] Ahead	69.9%	13.2	5.9
9/1+9/2	circulatory [S] Right Ahead	57.6%	20.7	3.0
11/1	Tesco [W] Ahead	11.4%	3.2	0.2
11/2	Tesco [W] Ahead	40.8%	7.9	1.7
Ped Link: P1	Unnamed Ped Link	0.0%	-	-
Ped Link: P2	Unnamed Ped Link	0.0%	-	-

C1	Stream: 1 PRC for Signalled Lanes (%):	11.8	Total Delay for Signalled Lanes (pcuHr):	8.80	Cycle Time (s):	35
C1	Stream: 2 PRC for Signalled Lanes (%):	28.1	Total Delay for Signalled Lanes (pcuHr):	4.70	Cycle Time (s):	35
	PRC Over All Lanes (%):	0.8	Total Delay Over All Lanes(pcuHr):	20.47		

Basic Results Summary

Scenario 4: '2025 AM 730-830 (Base+Tempro+con+Staff)' (FG5: '2025 AM 730-830 (Base+Tempro+con+Staff)', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	122	559	5	686
	B	96	0	182	64	342
	C	715	33	0	418	1166
	D	22	88	606	0	716
	Tot.	833	243	1347	487	2910

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
5: '2025 AM 730-830 (Base+Tempro+con+Staff)'	07:30	08:30	01:00	

Basic Results Summary

Network Results

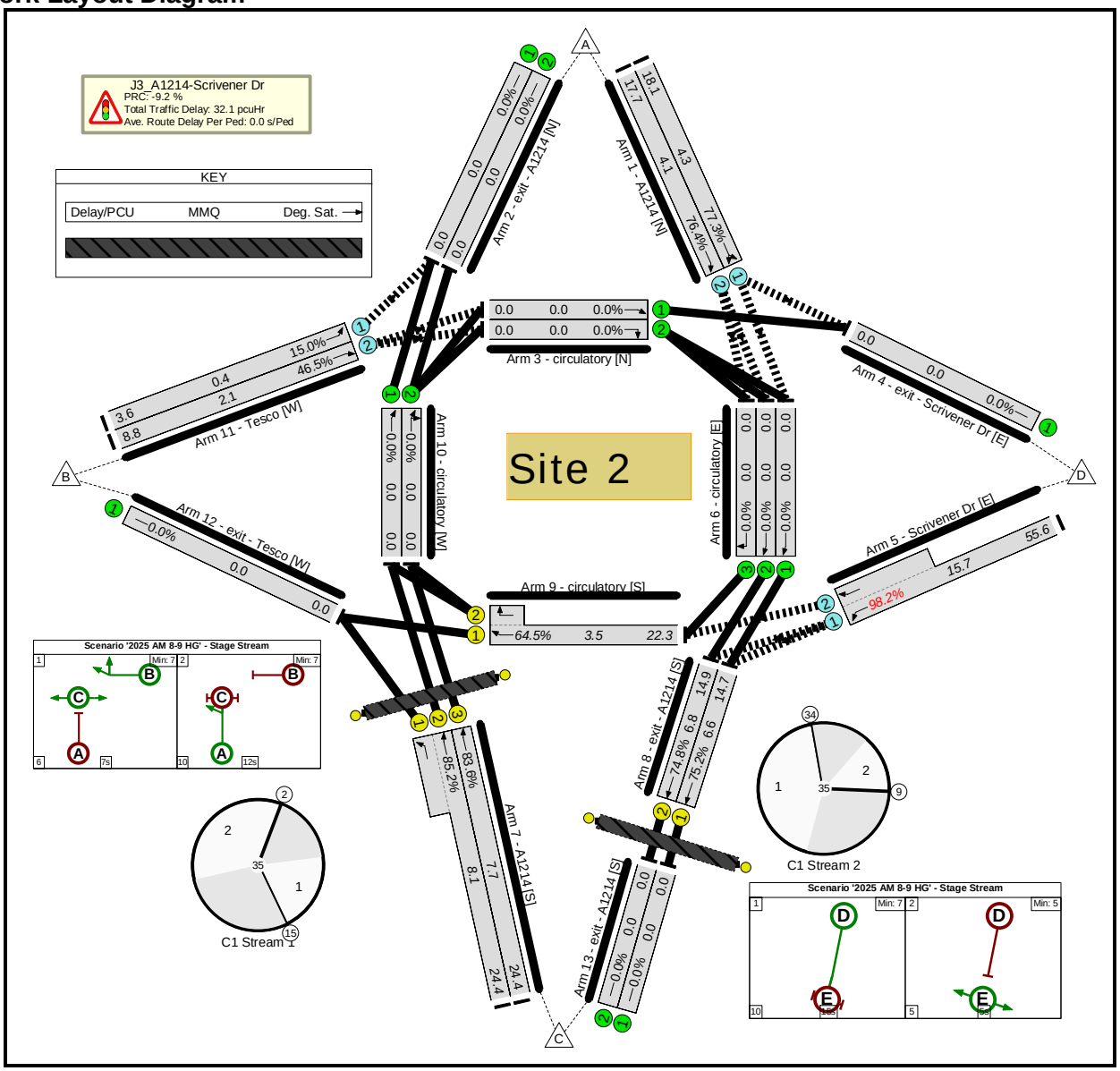
Item	Lane Description	Deg Sat (%)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	**-**	**96.5%**	**-**	**-**
J3_A1214-Scrivener Dr	**-**	**96.5%**	**-**	**-**
1/1	A1214 [N] Ahead Ahead2	60.5%	9.7	2.2
1/2	A1214 [N] Ahead	63.3%	9.6	2.5
5/1+5/2	Scrivener Dr [E] Left Ahead	96.5%	43.6	13.5
7/2+7/1	A1214 [S] Ahead Left	77.9%	19.9	6.5
7/3	A1214 [S] Ahead	76.8%	20.0	6.3
8/1	exit - A1214 [S] Ahead	73.2%	14.7	6.1
8/2	exit - A1214 [S] Ahead	73.1%	14.7	6.2
9/1+9/2	circulatory [S] Right Ahead	47.2%	18.7	2.2
11/1	Tesco [W] Ahead	12.4%	3.1	0.2
11/2	Tesco [W] Ahead	37.3%	7.3	1.5
Ped Link: P1	Unnamed Ped Link	0.0%	-	-
Ped Link: P2	Unnamed Ped Link	0.0%	-	-

C1	Stream: 1 PRC for Signalled Lanes (%):	15.5	Total Delay for Signalled Lanes (pcuHr):	7.68	Cycle Time (s):	35
C1	Stream: 2 PRC for Signalled Lanes (%):	23.0	Total Delay for Signalled Lanes (pcuHr):	5.51	Cycle Time (s):	35
	PRC Over All Lanes (%):	-7.2	Total Delay Over All Lanes(pcuHr):	24.28		

Basic Results Summary

Scenario 5: '2025 AM 8-9 HG' (FG7: '2025 AM 8-9 HG', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Traffic Flows, Desired

Desired Flow :

Origin	Destination				
	A	B	C	D	Tot.
A	0	150	603	8	761
B	112	0	218	82	412
C	772	59	0	461	1292
D	19	141	561	0	721
Tot.	903	350	1382	551	3186

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
7: '2025 AM 8-9 HG'	08:00	09:00	01:00	

Basic Results Summary

Network Results

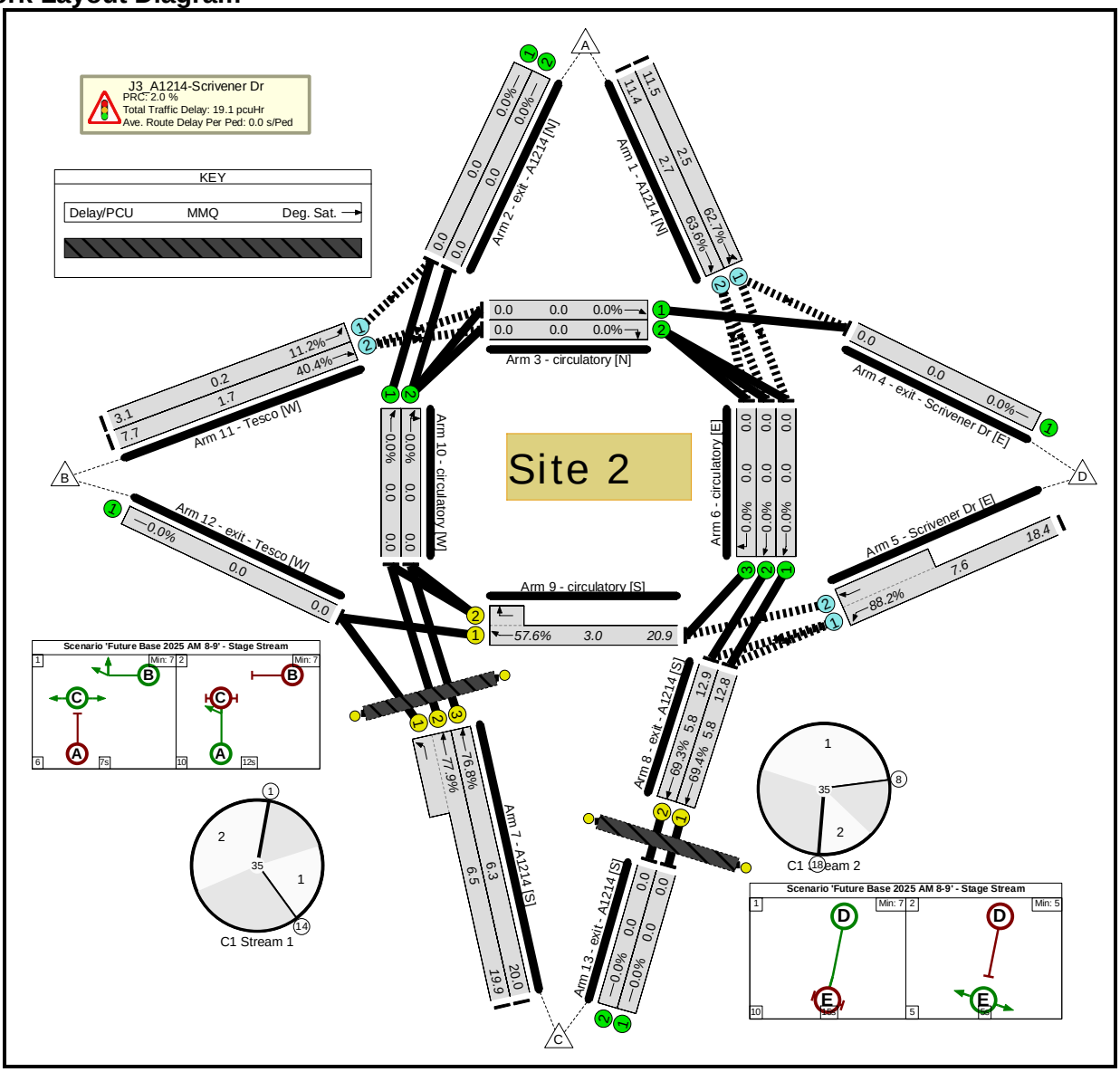
Item	Lane Description	Deg Sat (%)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	**-**	**98.2%**	**-**	**-**
J3_A1214-Scrivener Dr	**-**	**98.2%**	**-**	**-**
1/1	A1214 [N] Ahead Ahead2	77.3%	18.1	4.3
1/2	A1214 [N] Ahead	76.4%	17.7	4.1
5/1+5/2	Scrivener Dr [E] Left Ahead	98.2%	55.6	15.7
7/2+7/1	A1214 [S] Ahead Left	85.2%	24.4	8.1
7/3	A1214 [S] Ahead	83.6%	24.4	7.7
8/1	exit - A1214 [S] Ahead	75.2%	14.7	6.6
8/2	exit - A1214 [S] Ahead	74.8%	14.9	6.8
9/1+9/2	circulatory [S] Right Ahead	64.5%	22.3	3.5
11/1	Tesco [W] Ahead	15.0%	3.6	0.4
11/2	Tesco [W] Ahead	46.5%	8.8	2.1
Ped Link: P1	Unnamed Ped Link	0.0%	-	-
Ped Link: P2	Unnamed Ped Link	0.0%	-	-

C1	Stream: 1 PRC for Signalled Lanes (%):	5.7	Total Delay for Signalled Lanes (pcuHr):	10.68	Cycle Time (s):	35
C1	Stream: 2 PRC for Signalled Lanes (%):	19.6	Total Delay for Signalled Lanes (pcuHr):	5.69	Cycle Time (s):	35
	PRC Over All Lanes (%):	-9.2	Total Delay Over All Lanes(pcuHr):	32.13		

Basic Results Summary

Scenario 6: 'Future Base 2025 AM 8-9' (FG9: 'Future Base 2025 AM 8-9', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Traffic Flows, Desired

Desired Flow :

Origin	Destination				
	A	B	C	D	Tot.
A	0	115	525	9	649
B	87	0	183	84	354
C	666	33	0	467	1166
D	20	144	569	0	733
Tot.	773	292	1277	560	2902

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
9: 'Future Base 2025 AM 8-9'	08:00	09:00	01:00	

Basic Results Summary

Network Results

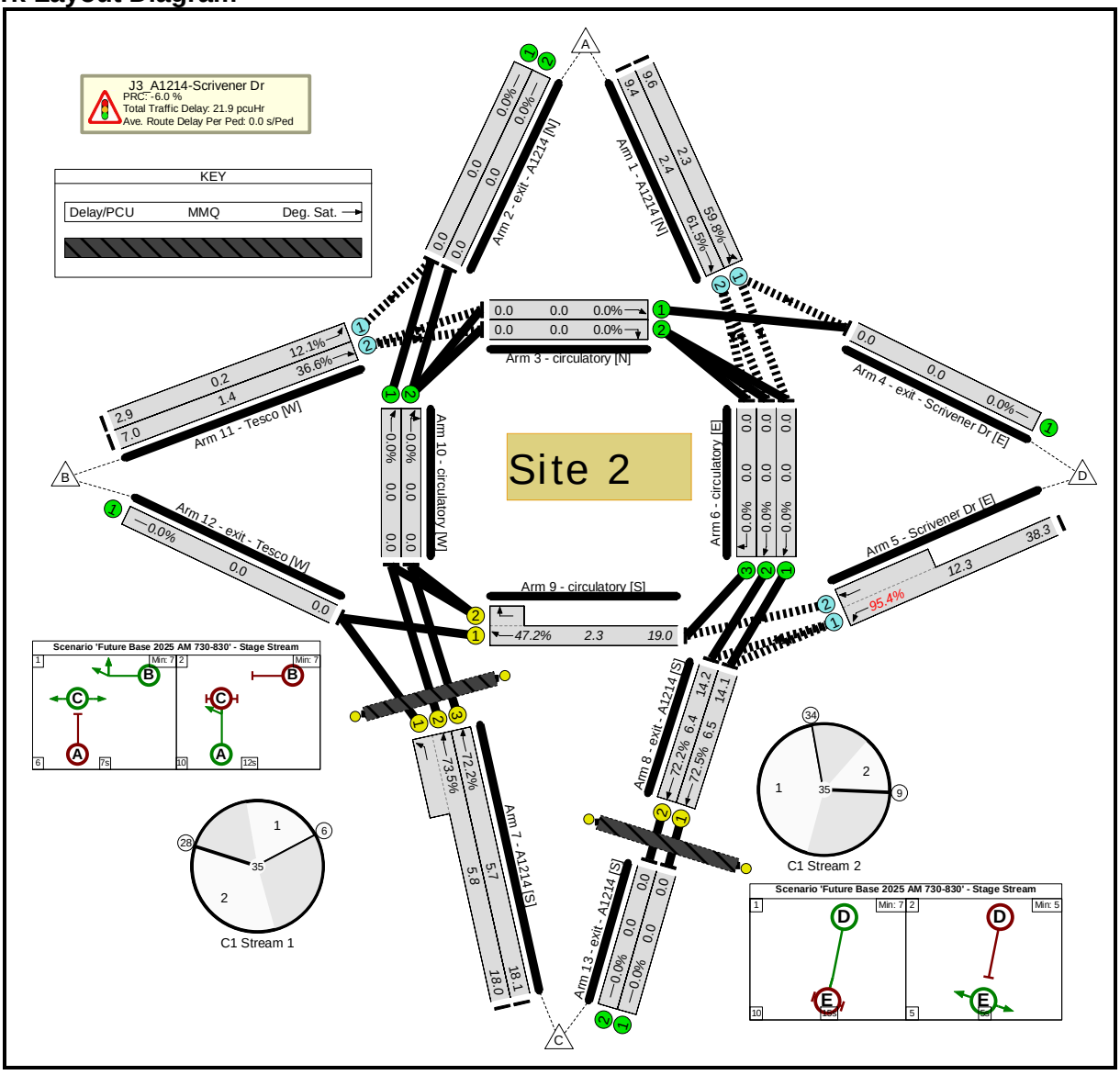
Item	Lane Description	Deg Sat (%)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	**-**	**88.2%**	**-**	**-**
J3_A1214-Scrivener Dr	**-**	**88.2%**	**-**	**-**
1/1	A1214 [N] Ahead Ahead2	62.7%	11.5	2.5
1/2	A1214 [N] Ahead	63.6%	11.4	2.7
5/1+5/2	Scrivener Dr [E] Left Ahead	88.2%	18.4	7.6
7/2+7/1	A1214 [S] Ahead Left	77.9%	19.9	6.5
7/3	A1214 [S] Ahead	76.8%	20.0	6.3
8/1	exit - A1214 [S] Ahead	69.4%	12.8	5.8
8/2	exit - A1214 [S] Ahead	69.3%	12.9	5.8
9/1+9/2	circulatory [S] Right Ahead	57.6%	20.9	3.0
11/1	Tesco [W] Ahead	11.2%	3.1	0.2
11/2	Tesco [W] Ahead	40.4%	7.7	1.7
Ped Link: P1	Unnamed Ped Link	0.0%	-	-
Ped Link: P2	Unnamed Ped Link	0.0%	-	-

C1	Stream: 1 PRC for Signalled Lanes (%):	15.5	Total Delay for Signalled Lanes (pcuHr):	8.09	Cycle Time (s):	35
C1	Stream: 2 PRC for Signalled Lanes (%):	29.7	Total Delay for Signalled Lanes (pcuHr):	4.55	Cycle Time (s):	35
	PRC Over All Lanes (%):	2.0	Total Delay Over All Lanes(pcuHr):	19.08		

Basic Results Summary

Scenario 7: 'Future Base 2025 AM 730-830' (FG10: 'Future Base 2025 AM 730-830', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Traffic Flows, Desired

Desired Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	122	545	5	672
	B	96	0	182	64	342
	C	649	33	0	418	1100
	D	22	88	606	0	716
	Tot.	767	243	1333	487	2830

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
10: 'Future Base 2025 AM 730-830'	07:30	08:30	01:00	

Basic Results Summary

Network Results

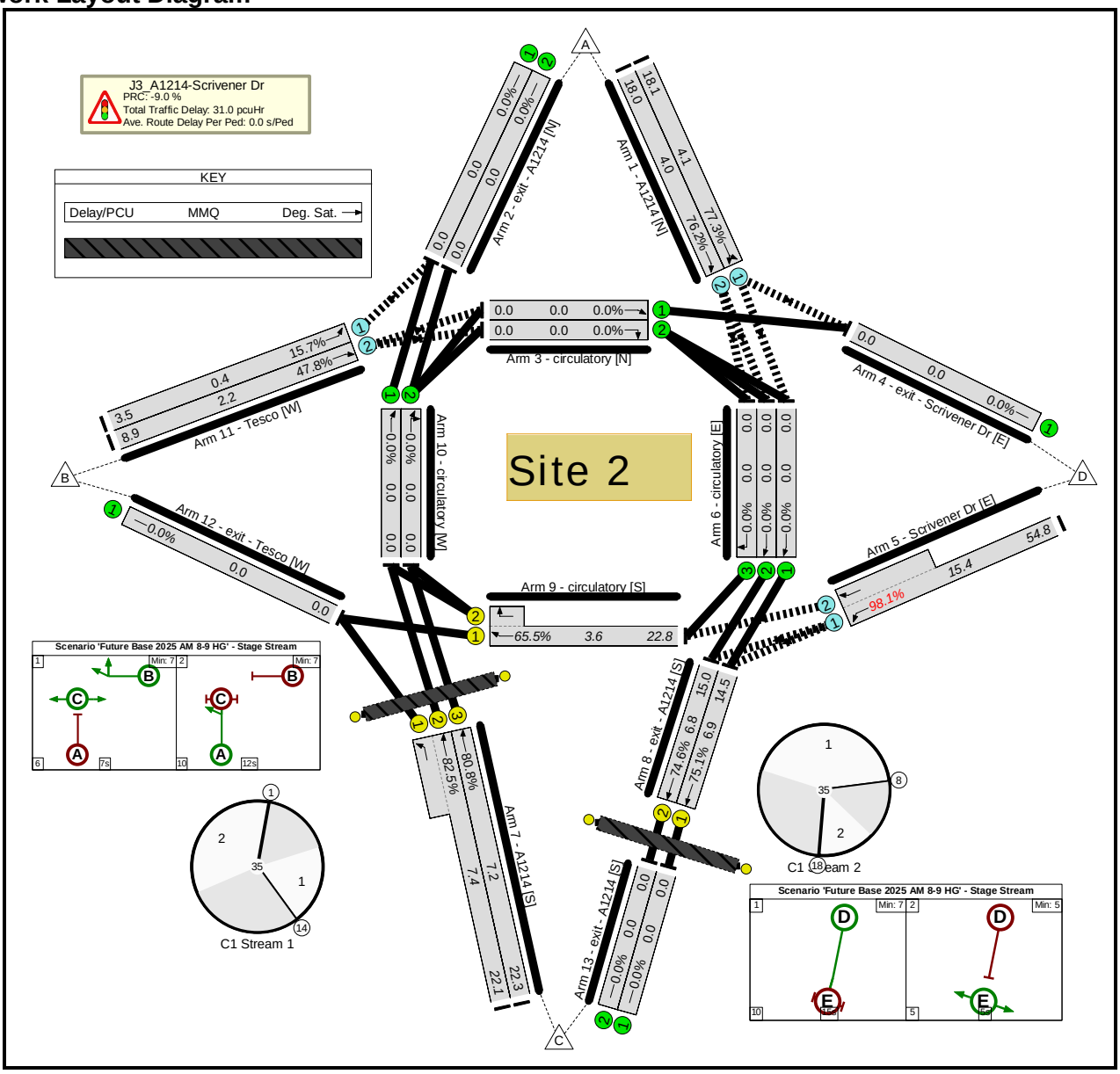
Item	Lane Description	Deg Sat (%)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	**-**	**95.4%**	**-**	**-**
J3_A1214-Scrivener Dr	**-**	**95.4%**	**-**	**-**
1/1	A1214 [N] Ahead Ahead2	59.8%	9.6	2.3
1/2	A1214 [N] Ahead	61.5%	9.4	2.4
5/1+5/2	Scrivener Dr [E] Left Ahead	95.4%	38.3	12.3
7/2+7/1	A1214 [S] Ahead Left	73.5%	18.0	5.8
7/3	A1214 [S] Ahead	72.2%	18.1	5.7
8/1	exit - A1214 [S] Ahead	72.5%	14.1	6.5
8/2	exit - A1214 [S] Ahead	72.2%	14.2	6.4
9/1+9/2	circulatory [S] Right Ahead	47.2%	19.0	2.3
11/1	Tesco [W] Ahead	12.1%	2.9	0.2
11/2	Tesco [W] Ahead	36.6%	7.0	1.4
Ped Link: P1	Unnamed Ped Link	0.0%	-	-
Ped Link: P2	Unnamed Ped Link	0.0%	-	-

C1	Stream: 1 PRC for Signalled Lanes (%):	22.4	Total Delay for Signalled Lanes (pcuHr):	6.75	Cycle Time (s):	35
C1	Stream: 2 PRC for Signalled Lanes (%):	24.1	Total Delay for Signalled Lanes (pcuHr):	5.23	Cycle Time (s):	35
	PRC Over All Lanes (%):	-6.0	Total Delay Over All Lanes(pcuHr):	21.92		

Basic Results Summary

Scenario 8: 'Future Base 2025 AM 8-9 HG' (FG11: 'Future Base 2025 AM 8-9 HG', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	155	589	8	752
	B	119	0	229	82	430
	C	731	62	0	461	1254
	D	19	141	561	0	721
	Tot.	869	358	1379	551	3157

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
11: 'Future Base 2025 AM 8-9 HG'	08:00	09:00	01:00	

Basic Results Summary

Network Results

Item	Lane Description	Deg Sat (%)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	**-**	**98.1%**	**-**	**-**
J3_A1214-Scrivener Dr	**-**	**98.1%**	**-**	**-**
1/1	A1214 [N] Ahead Ahead2	77.3%	18.1	4.1
1/2	A1214 [N] Ahead	76.2%	18.0	4.0
5/1+5/2	Scrivener Dr [E] Left Ahead	98.1%	54.8	15.4
7/2+7/1	A1214 [S] Ahead Left	82.5%	22.1	7.4
7/3	A1214 [S] Ahead	80.8%	22.3	7.2
8/1	exit - A1214 [S] Ahead	75.1%	14.5	6.9
8/2	exit - A1214 [S] Ahead	74.6%	15.0	6.8
9/1+9/2	circulatory [S] Right Ahead	65.5%	22.8	3.6
11/1	Tesco [W] Ahead	15.7%	3.5	0.4
11/2	Tesco [W] Ahead	47.8%	8.9	2.2
Ped Link: P1	Unnamed Ped Link	0.0%	-	-
Ped Link: P2	Unnamed Ped Link	0.0%	-	-

C1	Stream: 1 PRC for Signalled Lanes (%):	9.1	Total Delay for Signalled Lanes (pcuHr):	9.72	Cycle Time (s):	35
C1	Stream: 2 PRC for Signalled Lanes (%):	19.8	Total Delay for Signalled Lanes (pcuHr):	5.65	Cycle Time (s):	35
	PRC Over All Lanes (%):	-9.0	Total Delay Over All Lanes(pcuHr):	30.98		

Basic Results Summary

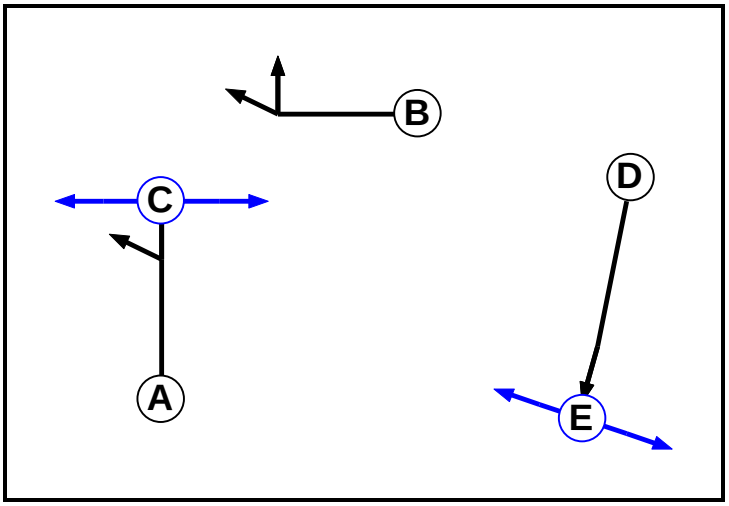
User and Project Details

Project:	**Bramford to Twinstead Reinforcement**
Title:	**TP14 - Junction Modelling**
Location:	Ipswich, UK
Additional detail:	-
File name:	J3_A1214-Scrivener Dr PM.lsg3x
Author:	JP/SC
Company:	Jacobs UK Ltd.
Address:	Cottons Centre | Cottons Lane, London. SE1 2QG

Phase Input Data

Phase Name	Phase Type	Stage Stream	Assoc. Phase	Street Min	Cont Min
A	Traffic	1		7	7
B	Traffic	1		7	0
C	Pedestrian	1		5	5
D	Traffic	2		7	7
E	Pedestrian	2		5	5

Phase Diagram



Basic Results Summary

Phase Intergreens Matrix

Terminating Phase	Starting Phase A	B	C	D	E
A		6	5	-	-
B	5		-	-	-
C	12	-		-	-
D	-	-	-		5
E	-	-	-	10	

Phase Delays

Stage Stream: 1

Term. Stage	Start Stage	Phase	Type	Value	Cont value
1	2	B	Losing	7	7

Stage Stream: 2

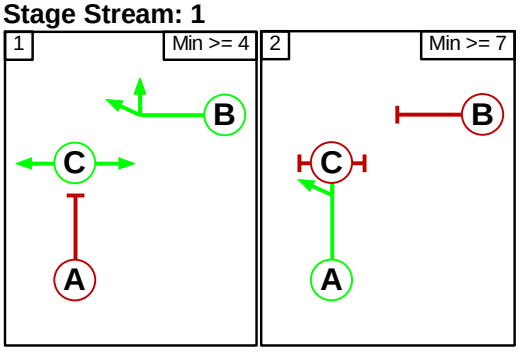
Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Phases in Stage

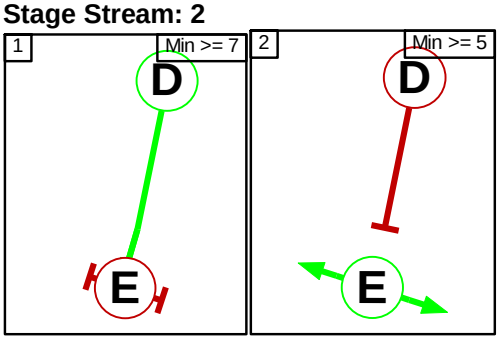
Stream	Stage No.	Phases in Stage
1	1	B C
1	2	A
2	1	D
2	2	E

Stage Diagram

Stage Stream: 1



Stage Stream: 2



Basic Results Summary

Lane Input Data

Junction: J3_A1214-Scrivener Dr

Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (A1214 [N])	O		2	3	60.0	Geom	-	4.00	0.00	Y	Arm 4 Ahead	44.00
											Arm 6 Ahead	56.00
1/2 (A1214 [N])	O		2	3	60.0	Geom	-	4.00	0.00	Y	Arm 6 Ahead	56.00
2/1 (exit - A1214 [N])	U		2	3	60.0	Inf	-	-	-	-	-	-
2/2 (exit - A1214 [N])	U		2	3	60.0	Inf	-	-	-	-	-	-
3/1 (circulatory [N])	U		2	3	8.0	Inf	-	-	-	-	-	-
3/2 (circulatory [N])	U		2	3	8.0	Inf	-	-	-	-	-	-
4/1 (exit - Scrivener Dr [E])	U		2	3	60.0	Inf	-	-	-	-	-	-
5/1 (Scrivener Dr [E])	O		2	3	60.0	Geom	-	3.40	0.00	Y	Arm 8 Left	43.00
5/2 (Scrivener Dr [E])	O		2	3	7.5	Geom	-	3.40	0.00	Y	Arm 9 Ahead	Inf
6/1 (circulatory [E])	U		2	3	7.1	Inf	-	-	-	-	-	-
6/2 (circulatory [E])	U		2	3	7.1	Inf	-	-	-	-	-	-
6/3 (circulatory [E])	U		2	3	7.1	Inf	-	-	-	-	-	-
7/1 (A1214 [S])	U	A	2	3	6.1	Geom	-	3.65	0.00	Y	Arm 12 Left	66.60
7/2 (A1214 [S])	U	A	2	3	60.0	Geom	-	3.65	0.00	Y	Arm 10 Ahead	Inf
7/3 (A1214 [S])	U	A	2	3	60.0	Geom	-	3.65	0.00	Y	Arm 10 Ahead	Inf
8/1 (exit - A1214 [S])	U	D	2	3	7.3	Geom	-	4.00	0.00	Y	Arm 13 Ahead	Inf

Basic Results Summary

8/2 (exit - A1214 [S])	U	D	2	3	7.3	Geom	-	4.00	0.00	Y	Arm 13 Ahead	Inf
9/1 (circulatory [S])	U	B	2	3	7.3	Geom	-	4.00	0.00	Y	Arm 12 Ahead	Inf
9/2 (circulatory [S])	U	B	2	3	2.6	Geom	-	4.00	0.00	Y	Arm 10 Right	26.00
10/1 (circulatory [W])	U		2	3	9.7	Inf	-	-	-	-	-	-
10/2 (circulatory [W])	U		2	3	9.7	Inf	-	-	-	-	-	-
11/1 (Tesco [W])	O		2	3	15.7	Geom	-	3.50	0.00	Y	Arm 2 Ahead	43.00
11/2 (Tesco [W])	O		2	3	28.0	Geom	-	3.50	0.00	Y	Arm 3 Ahead	Inf
12/1 (exit - Tesco [W])	U		2	3	60.0	Inf	-	-	-	-	-	-
13/1 (exit - A1214 [S])	U		2	3	60.0	Inf	-	-	-	-	-	-
13/2 (exit - A1214 [S])	U		2	3	60.0	Inf	-	-	-	-	-	-

Give-Way Lane Input Data

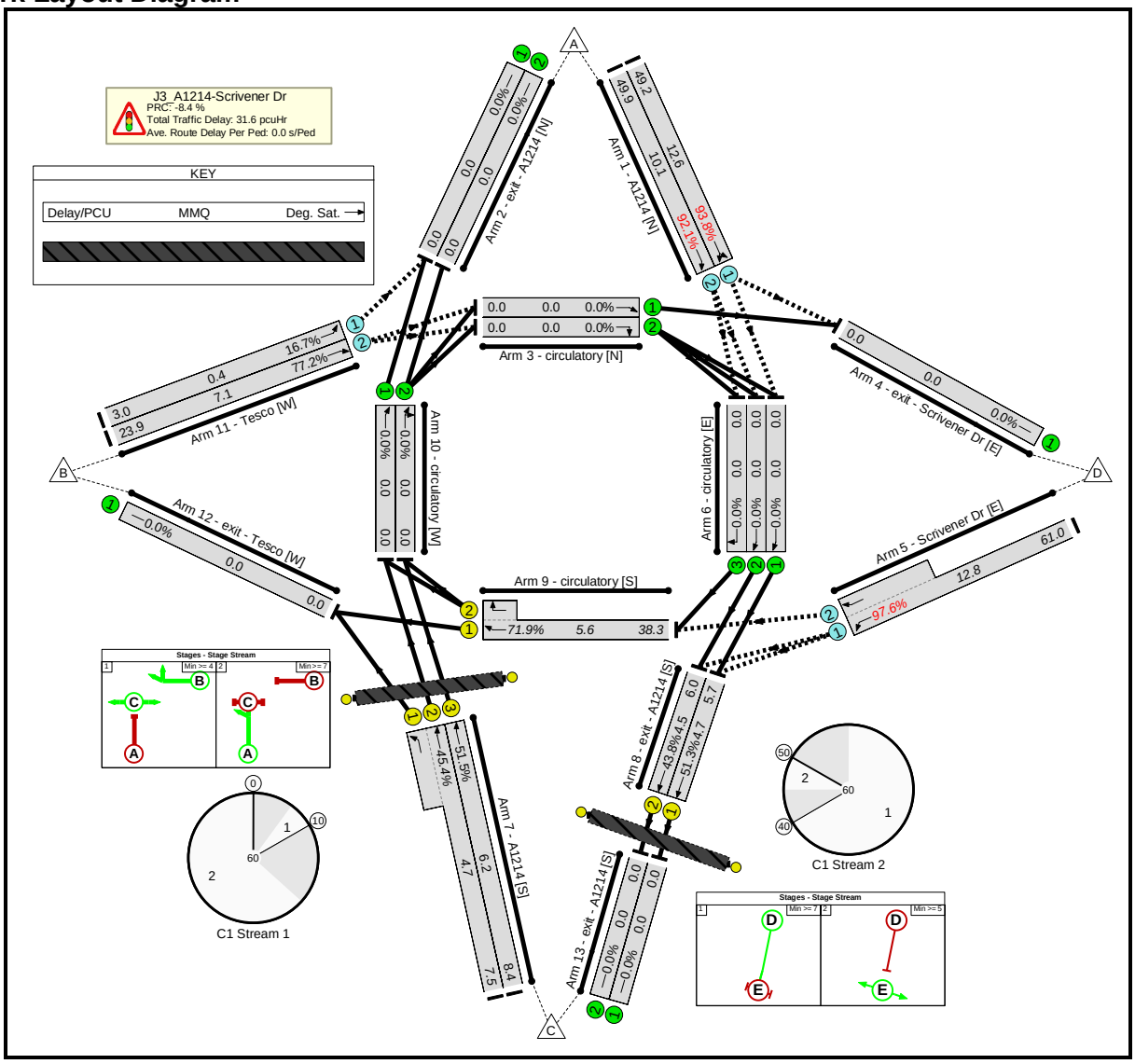
Junction: J3_A1214-Scrivener Dr

Lane	Movement	Max Flow when Giving Way (PCU/Hr)	Min Flow when Giving Way (PCU/Hr)	Opposing Lane	Opp. Lane Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	Non-Blocking Storage (PCU)	RTF	Right Turn Move up (s)	Max Turns in Intergreen (PCU)
1/1 (A1214 [N])	4/1 (Ahead)	1082	0	3/1	0.65	All	-	-	-	-	-
	6/1 (Ahead)	1082	0	3/1	0.65	All					
				3/2	0.65	To 6/1 (Right)					
1/2 (A1214 [N])	6/2 (Ahead)	1082	0	3/1	0.65	All					
				3/2	0.65	To 6/1 (Right) To 6/2 (Right)					
	6/3 (Ahead)	1082	0	3/1	0.65	All					
				3/2	0.65	All					
5/1 (Scrivener Dr [E])	8/1 (Left)	900	0	6/1	0.59	All					
	8/2 (Left)	900	0	6/1	0.59	All					
				6/2	0.59	To 8/2 (Ahead)					
5/2 (Scrivener Dr [E])	9/1 (Ahead)	996	0	6/1	0.59	All	-	-	-	-	-
				6/2	0.59	All					
11/1 (Tesco [W])	2/1 (Ahead)	1129	0	10/1	0.62	All	-	-	-	-	-
11/2 (Tesco [W])	3/1 (Ahead)	1129	0	10/1	0.62	All	-	-	-	-	-
				10/2	0.62	To 2/2 (Ahead) To 3/1 (Right)					
	3/2 (Ahead)	1129	0	10/1	0.62	All					
				10/2	0.62	All					

Basic Results Summary

Scenario 1: 'Base 2023 PM 1630-1730' (FG3: 'Base 2023 PM 1630-1730', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	149	671	15	835
	B	132	0	237	167	536
	C	547	53	0	662	1262
	D	13	134	401	0	548
	Tot.	692	336	1309	844	3181

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
3: 'Base 2023 PM 1630-1730'	16:30	17:30	01:00	

Basic Results Summary

Network Results

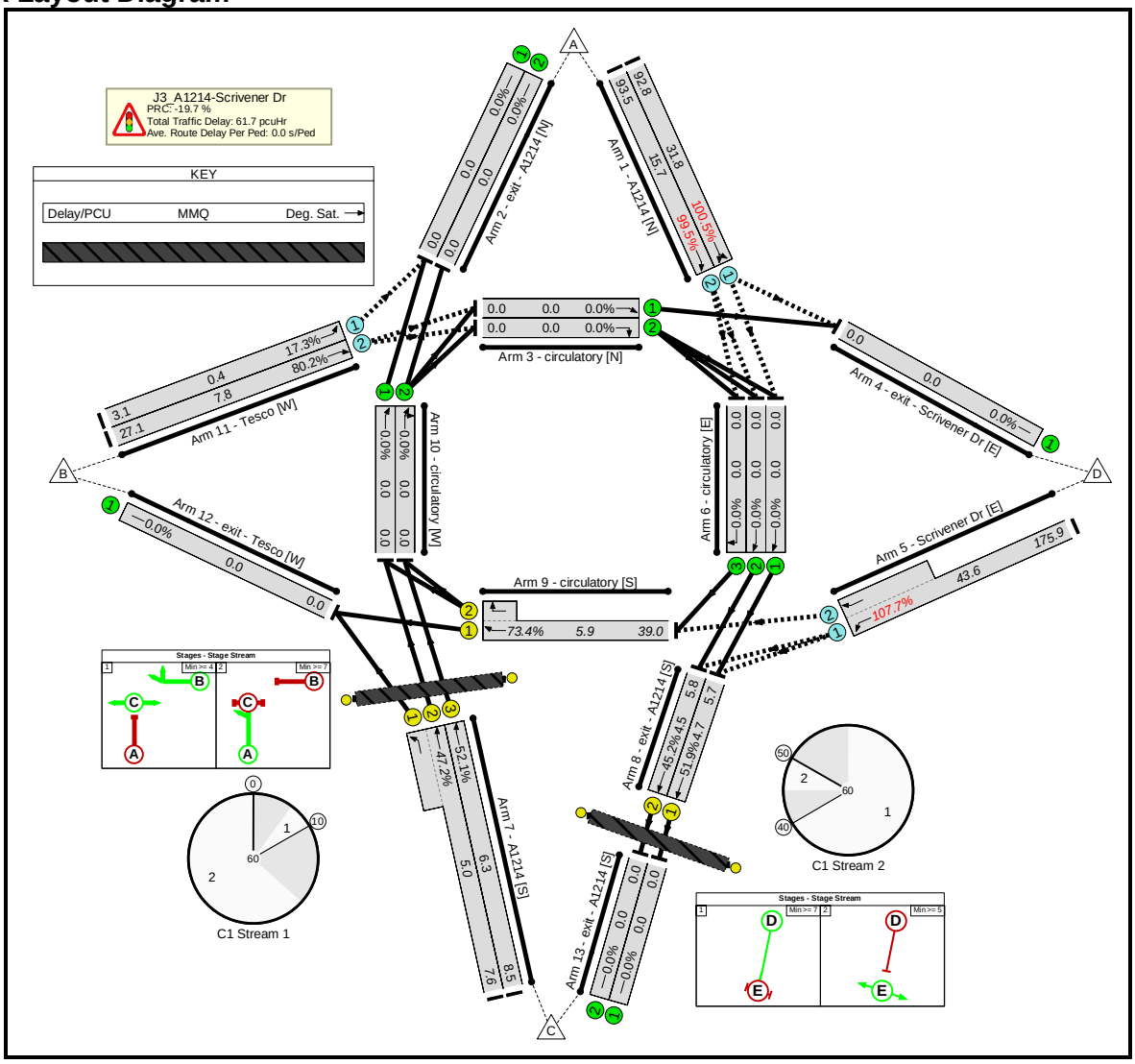
Item	Lane Description	Deg Sat (%)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	**-**	**97.6%**	**-**	**-**
J3_A1214-Scrivener Dr	**-**	**97.6%**	**-**	**-**
1/1	A1214 [N] Ahead Ahead2	93.8%	49.2	12.6
1/2	A1214 [N] Ahead	92.1%	49.9	10.1
5/1+5/2	Scrivener Dr [E] Left Ahead	97.6%	61.0	12.8
7/2+7/1	A1214 [S] Ahead Left	45.4%	7.5	4.7
7/3	A1214 [S] Ahead	51.5%	8.4	6.2
8/1	exit - A1214 [S] Ahead	51.3%	5.7	4.7
8/2	exit - A1214 [S] Ahead	43.8%	6.0	4.5
9/1+9/2	circulatory [S] Right Ahead	71.9%	38.3	5.6
11/1	Tesco [W] Ahead	16.7%	3.0	0.4
11/2	Tesco [W] Ahead	77.2%	23.9	7.1
Ped Link: P1	Unnamed Ped Link	0.0%	-	-
Ped Link: P2	Unnamed Ped Link	0.0%	-	-

C1	Stream: 1 PRC for Signalled Lanes (%):	25.1	Total Delay for Signalled Lanes (pcuHr):	5.94	Cycle Time (s):	60
C1	Stream: 2 PRC for Signalled Lanes (%):	75.5	Total Delay for Signalled Lanes (pcuHr):	2.11	Cycle Time (s):	60
	PRC Over All Lanes (%):	-8.4	Total Delay Over All Lanes(pcuHr):	31.62		

Basic Results Summary

Scenario 2: '2025 PM 1630-1730 (Base+Tempro+con+Staff)' (FG6: '2025 PM 1630-1730 (Base+Tempro+con+Staff)', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	152	721	16	889
	B	134	0	241	170	545
	C	569	54	0	671	1294
	D	13	137	406	0	556
	Tot.	716	343	1368	857	3284

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
6: '2025 PM 1630-1730 (Base+Tempro+con+Staff)'	16:30	17:30	01:00	

Basic Results Summary

Network Results

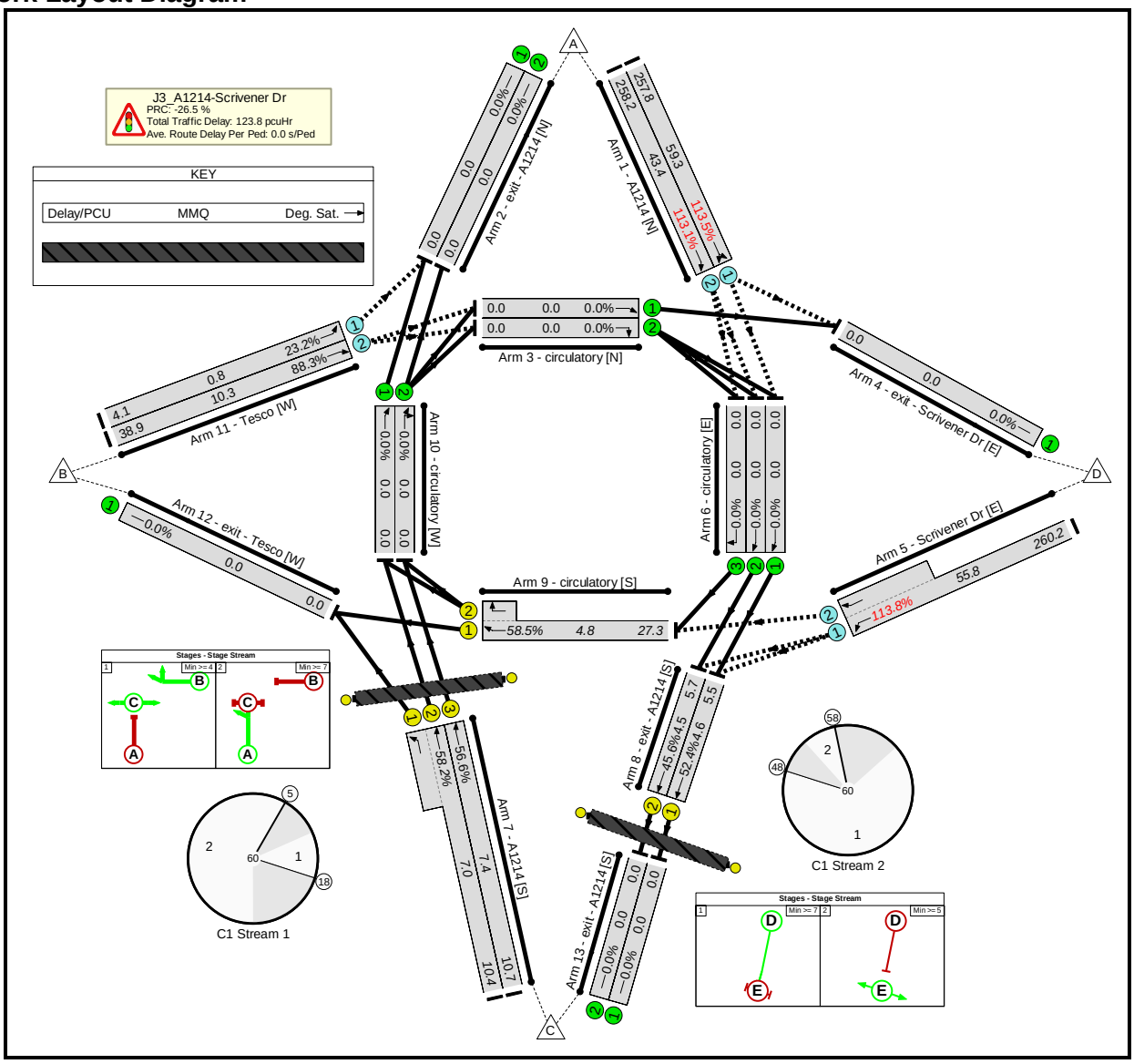
Item	Lane Description	Deg Sat (%)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	**-**	**107.7%**	**-**	**-**
J3_A1214-Scrivener Dr	**-**	**107.7%**	**-**	**-**
1/1	A1214 [N] Ahead Ahead2	100.5%	92.8	31.8
1/2	A1214 [N] Ahead	99.5%	93.5	15.7
5/1+5/2	Scrivener Dr [E] Left Ahead	107.7%	175.9	43.6
7/2+7/1	A1214 [S] Ahead Left	47.2%	7.6	5.0
7/3	A1214 [S] Ahead	52.1%	8.5	6.3
8/1	exit - A1214 [S] Ahead	51.9%	5.7	4.7
8/2	exit - A1214 [S] Ahead	45.2%	5.8	4.5
9/1+9/2	circulatory [S] Right Ahead	73.4%	39.0	5.9
11/1	Tesco [W] Ahead	17.3%	3.1	0.4
11/2	Tesco [W] Ahead	80.2%	27.1	7.8
Ped Link: P1	Unnamed Ped Link	0.0%	-	-
Ped Link: P2	Unnamed Ped Link	0.0%	-	-

C1	Stream: 1 PRC for Signalled Lanes (%):	22.6	Total Delay for Signalled Lanes (pcuHr):	6.17	Cycle Time (s):	60
C1	Stream: 2 PRC for Signalled Lanes (%):	73.4	Total Delay for Signalled Lanes (pcuHr):	2.13	Cycle Time (s):	60
	PRC Over All Lanes (%):	-19.7	Total Delay Over All Lanes(pcuHr):	61.67		

Basic Results Summary

Scenario 3: '2025 PM 1630-1730 HG (Base+Tempro+con+Staff)' (FG8: '2025 PM 1630-1730 HG', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	172	798	15	985
	B	170	0	293	167	630
	C	653	70	0	662	1385
	D	13	134	401	0	548
	Tot.	836	376	1492	844	3548

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
8: '2025 PM 1630-1730 HG'	16:30	17:30	01:00	

Basic Results Summary

Network Results

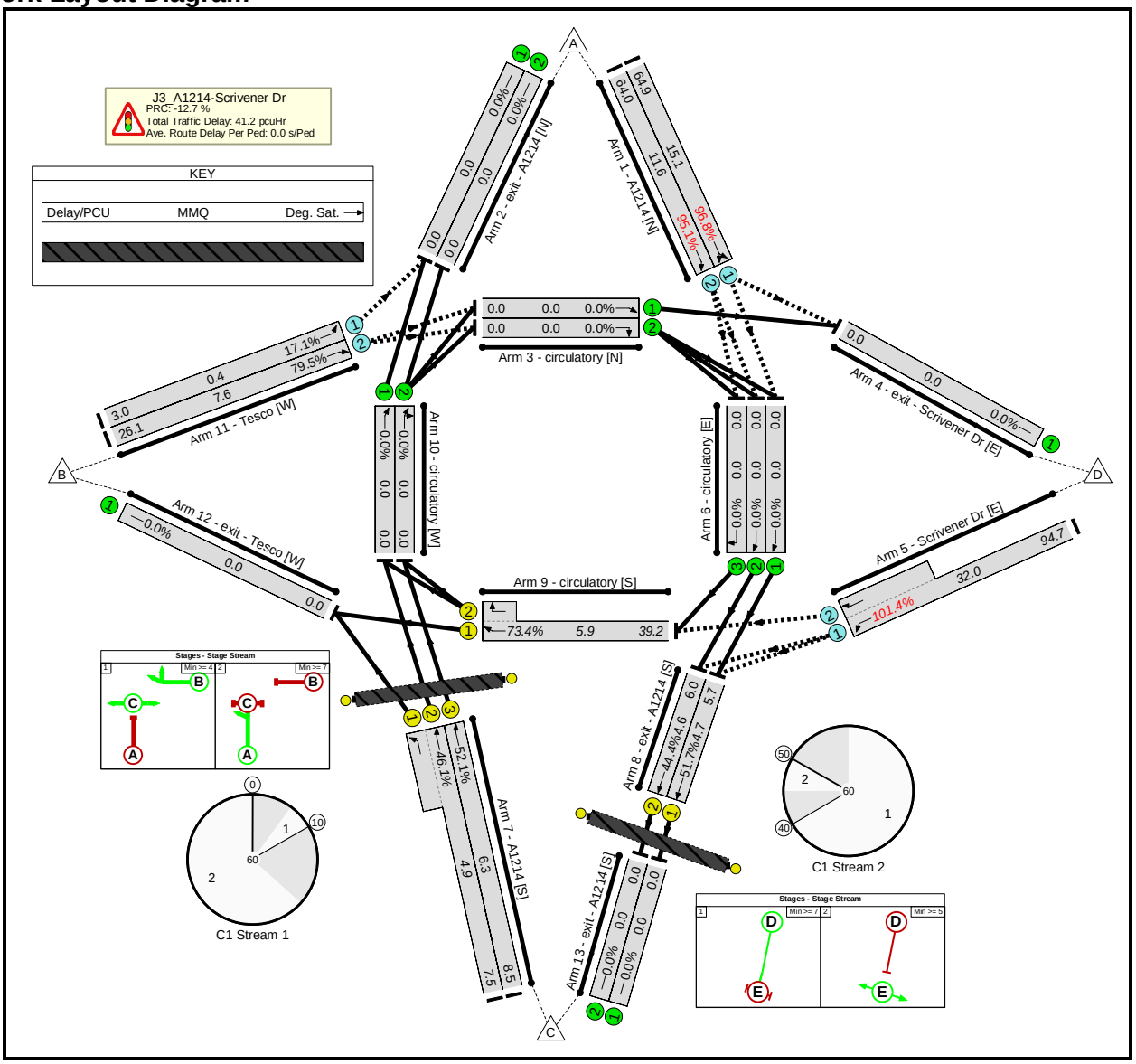
Item	Lane Description	Deg Sat (%)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	**-**	**113.8%**	**-**	**-**
J3_A1214-Scrivener Dr	**-**	**113.8%**	**-**	**-**
1/1	A1214 [N] Ahead Ahead2	113.5%	257.8	59.3
1/2	A1214 [N] Ahead	113.1%	258.2	43.4
5/1+5/2	Scrivener Dr [E] Left Ahead	113.8%	260.2	55.8
7/2+7/1	A1214 [S] Ahead Left	58.2%	10.4	7.0
7/3	A1214 [S] Ahead	56.6%	10.7	7.4
8/1	exit - A1214 [S] Ahead	52.4%	5.5	4.6
8/2	exit - A1214 [S] Ahead	45.6%	5.7	4.5
9/1+9/2	circulatory [S] Right Ahead	58.5%	27.3	4.8
11/1	Tesco [W] Ahead	23.2%	4.1	0.8
11/2	Tesco [W] Ahead	88.3%	38.9	10.3
Ped Link: P1	Unnamed Ped Link	0.0%	-	-
Ped Link: P2	Unnamed Ped Link	0.0%	-	-

C1	Stream: 1 PRC for Signalled Lanes (%):	53.9	Total Delay for Signalled Lanes (pcuHr):	6.34	Cycle Time (s):	60
C1	Stream: 2 PRC for Signalled Lanes (%):	71.7	Total Delay for Signalled Lanes (pcuHr):	2.11	Cycle Time (s):	60
	PRC Over All Lanes (%):	-26.5	Total Delay Over All Lanes(pcuHr):	123.79		

Basic Results Summary

Scenario 4: 'Future Base 2025 PM 1630-1730' (FG9: 'Future Base 2025 PM 1630-1730', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	152	681	16	849
	B	134	0	241	170	545
	C	555	54	0	671	1280
	D	13	137	406	0	556
	Tot.	702	343	1328	857	3230

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
9: 'Future Base 2025 PM 1630-1730'	16:30	17:30	01:00	

Basic Results Summary

Network Results

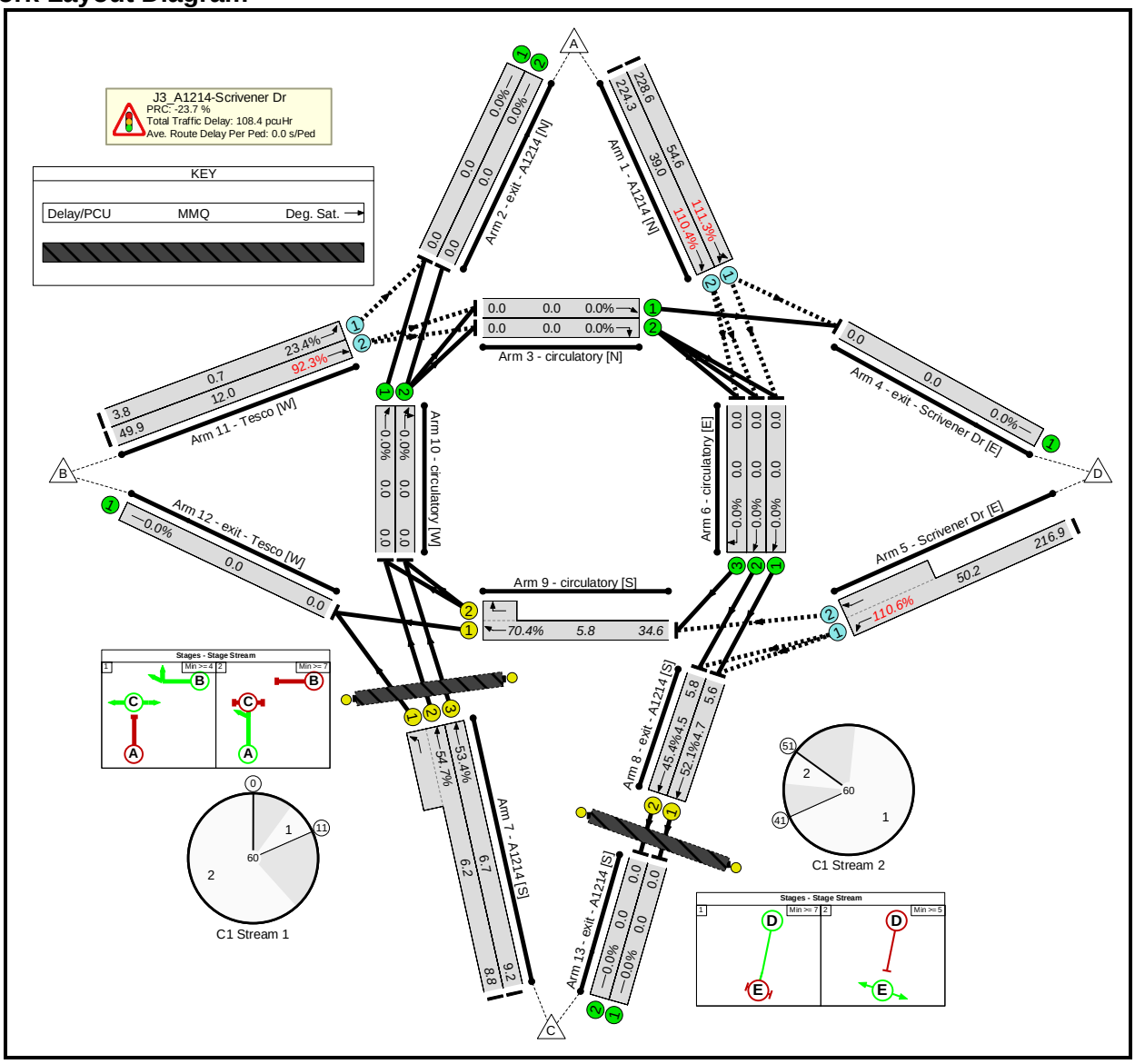
Item	Lane Description	Deg Sat (%)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	**-**	**101.4%**	**-**	**-**
J3_A1214-Scrivener Dr	**-**	**101.4%**	**-**	**-**
1/1	A1214 [N] Ahead Ahead2	96.8%	64.9	15.1
1/2	A1214 [N] Ahead	95.1%	64.0	11.6
5/1+5/2	Scrivener Dr [E] Left Ahead	101.4%	94.7	32.0
7/2+7/1	A1214 [S] Ahead Left	46.1%	7.5	4.9
7/3	A1214 [S] Ahead	52.1%	8.5	6.3
8/1	exit - A1214 [S] Ahead	51.7%	5.7	4.7
8/2	exit - A1214 [S] Ahead	44.4%	6.0	4.6
9/1+9/2	circulatory [S] Right Ahead	73.4%	39.2	5.9
11/1	Tesco [W] Ahead	17.1%	3.0	0.4
11/2	Tesco [W] Ahead	79.5%	26.1	7.6
Ped Link: P1	Unnamed Ped Link	0.0%	-	-
Ped Link: P2	Unnamed Ped Link	0.0%	-	-

C1	Stream: 1 PRC for Signalled Lanes (%):	22.6	Total Delay for Signalled Lanes (pcuHr):	6.14	Cycle Time (s):	60
C1	Stream: 2 PRC for Signalled Lanes (%):	74.1	Total Delay for Signalled Lanes (pcuHr):	2.13	Cycle Time (s):	60
	PRC Over All Lanes (%):	-12.7	Total Delay Over All Lanes(pcuHr):	41.20		

Basic Results Summary

Scenario 5: 'Future Base 2025 PM 1630-1730 HG' (FG10: 'Future Base 2025 PM 1630-1730 HG', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Traffic Flows, Desired

Desired Flow :

Origin	Destination				
	A	B	C	D	Tot.
A	0	183	757	15	955
B	173	0	298	167	638
C	639	78	0	662	1379
D	13	134	401	0	548
Tot.	825	395	1456	844	3520

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
10: 'Future Base 2025 PM 1630-1730 HG'	16:30	17:30	01:00	

Basic Results Summary

Network Results

Item	Lane Description	Deg Sat (%)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	**-**	**111.3%**	**-**	**-**
J3_A1214-Scrivener Dr	**-**	**111.3%**	**-**	**-**
1/1	A1214 [N] Ahead Ahead2	111.3%	228.6	54.6
1/2	A1214 [N] Ahead	110.4%	224.3	39.0
5/1+5/2	Scrivener Dr [E] Left Ahead	110.6%	216.9	50.2
7/2+7/1	A1214 [S] Ahead Left	54.7%	8.8	6.2
7/3	A1214 [S] Ahead	53.4%	9.2	6.7
8/1	exit - A1214 [S] Ahead	52.1%	5.6	4.7
8/2	exit - A1214 [S] Ahead	45.4%	5.8	4.5
9/1+9/2	circulatory [S] Right Ahead	70.4%	34.6	5.8
11/1	Tesco [W] Ahead	23.4%	3.8	0.7
11/2	Tesco [W] Ahead	92.3%	49.9	12.0
Ped Link: P1	Unnamed Ped Link	0.0%	-	-
Ped Link: P2	Unnamed Ped Link	0.0%	-	-

C1	Stream: 1 PRC for Signalled Lanes (%):	27.9	Total Delay for Signalled Lanes (pcuHr):	6.44	Cycle Time (s):	60
C1	Stream: 2 PRC for Signalled Lanes (%):	72.7	Total Delay for Signalled Lanes (pcuHr):	2.12	Cycle Time (s):	60
	PRC Over All Lanes (%):	-23.7	Total Delay Over All Lanes(pcuHr):	108.38		

Junctions 10

ARCADY 10 - Roundabout Module

Filename: J4_A1071-Swan Hill PLG.j10
Path: \\gblon7vs01\projects\UNIF\Projects\B2416601 - Bramford to Twinstead EIA TA\Junction Analysis\Junction Modelling\Junctions\J4 - A1071_Swan Hill
Report generation date: 09/08/2023 12:47:25

Summary of junction performance

	AM 8-9							
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity
	Existing Layout 8-9 - Base 2022							
1 - B1113 [N]	A1 D1	15.4	93.58	0.98	F	34.97	D	-10 % [1 - B1113 [N]]
2 - A1071 [W]		2.0	12.67	0.67	B			
3 - Swan Hill [S]		3.0	15.56	0.74	C			
4-1 - A1071 [E]		1.9	15.11	0.64	C			
	Existing Layout 8-9 - 2025 (Base+Tempro+con+Staff)							
1 - B1113 [N]	A1 D4	23.3	131.39	1.03	F	46.32	E	-12 % [1 - B1113 [N]]
2 - A1071 [W]		2.4	14.70	0.71	B			
3 - Swan Hill [S]		3.6	18.43	0.77	C			
4-1 - A1071 [E]		2.6	19.36	0.72	C			
	Existing Layout 8-9 - 2025 HG							
1 - B1113 [N]	A1 D7	30.2	162.98	1.07	F	55.55	F	-14 % [1 - B1113 [N]]
2 - A1071 [W]		2.8	16.69	0.74	C			
3 - Swan Hill [S]		3.8	19.98	0.79	C			
4-1 - A1071 [E]		3.3	22.39	0.77	C			
	Existing Layout 8-9 - Future Base 2025							
1 - B1113 [N]	A1 D9	20.0	115.64	1.01	F	41.34	E	-11 % [1 - B1113 [N]]
2 - A1071 [W]		2.2	13.53	0.68	B			
3 - Swan Hill [S]		3.2	16.58	0.76	C			
4-1 - A1071 [E]		2.0	15.86	0.66	C			

	Existing Layout 8-9 - Future Base 2025 HG							
1 - B1113 [N]	A1 D12	26.7	146.36	1.05	F	50.21	F	-13 % [1 - B1113 [N]]
2 - A1071 [W]		2.5	15.22	0.71	C			
3 - Swan Hill [S]		3.4	17.84	0.77	C			
4-1 - A1071 [E]		2.5	18.03	0.71	C			

	AM 730-830							
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity
	Existing Layout 0730-0830 - Base 2022							
1 - B1113 [N]	A2 D2	34.4	165.18	1.07	F	61.91	F	-14 % [1 - B1113 [N]]
2 - A1071 [W]		3.8	21.68	0.80	C			
3 - Swan Hill [S]		5.7	27.57	0.85	D			
4-1 - A1071 [E]		2.4	18.75	0.70	C			
	Existing Layout 0730-0830 - 2025 (Base+Tempro+con+Staff)							
1 - B1113 [N]	A2 D5	46.7	216.08	1.12	F	82.22	F	-17 % [1 - B1113 [N]]
2 - A1071 [W]		5.1	28.08	0.84	D			
3 - Swan Hill [S]		8.8	42.61	0.91	E			
4-1 - A1071 [E]		4.4	30.40	0.82	D			
	Existing Layout 0730-0830 - Future Base 2025							
1 - B1113 [N]	A2 D10	42.3	196.90	1.10	F	72.36	F	-16 % [1 - B1113 [N]]
2 - A1071 [W]		4.3	24.46	0.82	C			
3 - Swan Hill [S]		6.5	30.96	0.87	D			
4-1 - A1071 [E]		2.5	19.86	0.71	C			

	PM 1630-1730							
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity
	Existing Layout 1630-1730 - Base 2022							
1 - B1113 [N]	A3 D3	17.9	91.68	0.99	F	68.81	F	-11 % [3 - Swan Hill [S]]
2 - A1071 [W]		0.9	9.19	0.48	A			
3 - Swan Hill [S]		28.0	101.68	1.02	F			
4-1 - A1071 [E]		1.4	11.22	0.58	B			
	Existing Layout 1630-1730 - 2025 (Base+Tempro+con+Staff)							
1 - B1113 [N]	A3 D6	31.7	148.51	1.06	F	96.32	F	-14 % [1 - B1113 [N]]
2 - A1071 [W]		1.3	10.79	0.55	B			
3 - Swan Hill [S]		39.4	135.15	1.06	F			
4-1 - A1071 [E]		1.6	12.22	0.61	B			
	Existing Layout 1630-1730 - 2025 HG							
1 - B1113 [N]	A3 D8	48.4	215.83	1.12	F	121.42	F	-18 % [1 - B1113 [N]]
2 - A1071 [W]		1.5	12.03	0.60	B			
3 - Swan Hill [S]		46.5	159.76	1.08	F			
4-1 - A1071 [E]		2.0	13.76	0.67	B			
	Existing Layout 1630-1730 - Future Base 2025							
1 - B1113 [N]	A3 D11	23.7	115.14	1.02	F	84.22	F	-12 % [3 - Swan Hill [S]]
2 - A1071 [W]		1.0	9.55	0.49	A			
3 - Swan Hill [S]		35.9	124.30	1.05	F			
4-1 - A1071 [E]		1.5	11.78	0.60	B			
	Existing Layout 1630-1730 - Future Base 2025 HG							
1 - B1113 [N]	A3 D13	37.8	170.74	1.08	F	106.57	F	-16 % [1 - B1113 [N]]
2 - A1071 [W]		1.2	10.47	0.54	B			
3 - Swan Hill [S]		43.0	148.26	1.07	F			
4-1 - A1071 [E]		1.9	13.31	0.66	B			

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

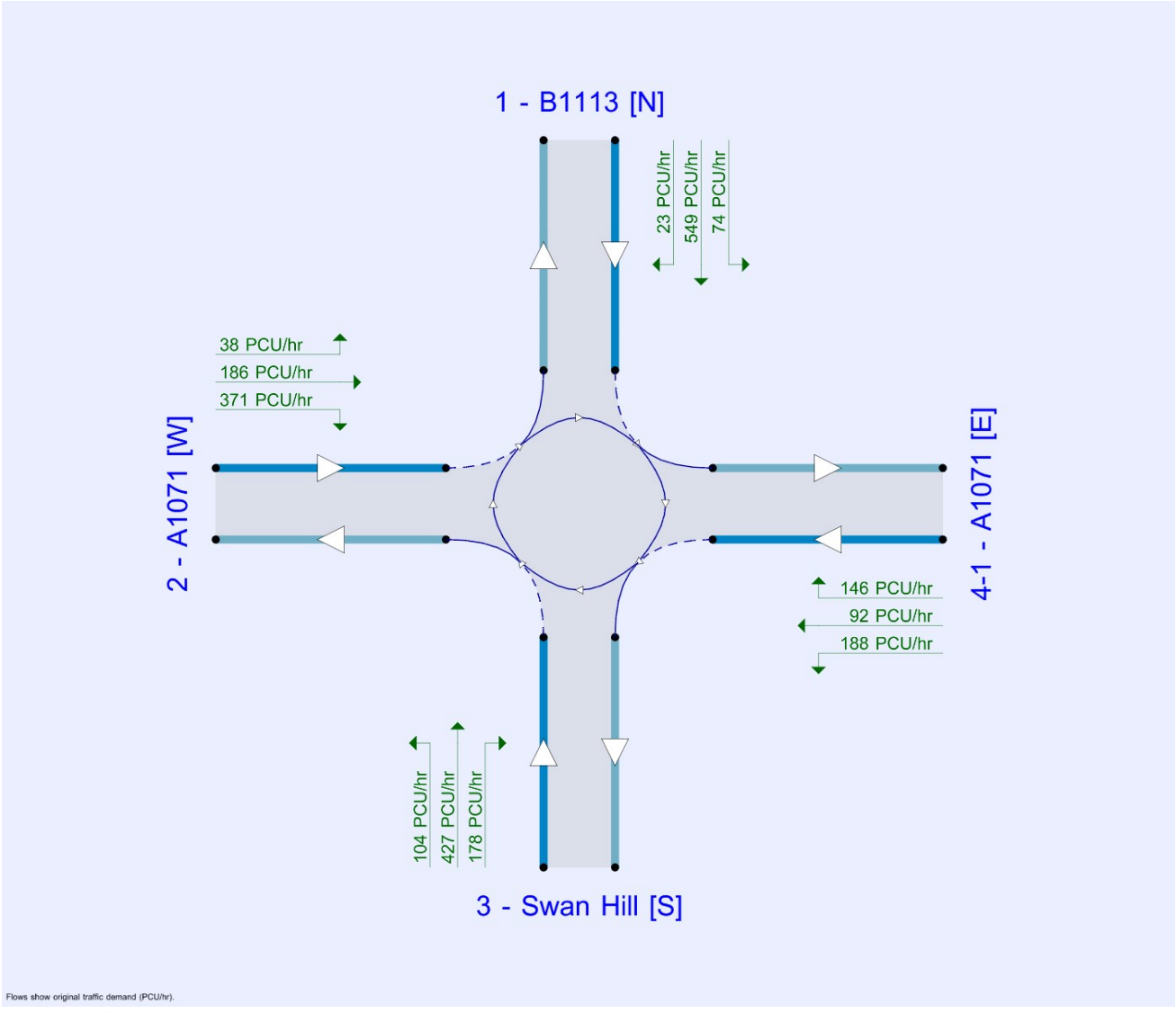
File summary

File Description

Title	Bramford to Twinstead
Location	A1071_Swan Hill
Site number	J04
Date	11/07/2023
Version	-
Status	-
Identifier	-
Client	National Grid
Jobnumber	
Enumerator	JEGINTL\WITOWSJJ
Description	T14 Topic Paper

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of Junctions.

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use iterations with HCM roundabouts	Max number of iterations for roundabouts
5.75					✓	Delay	0.85	36.00	20.00		500

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	Base 2022	AM 8-9	ONE HOUR	07:45	09:15	15	✓
D2	Base 2022	AM 730-830	ONE HOUR	07:15	08:45	15	✓
D3	Base 2022	PM 1630-1730	ONE HOUR	16:15	17:45	15	✓
D4	2025 (Base+Tempro+con+Staff)	AM 8-9	ONE HOUR	07:45	09:15	15	✓
D5	2025 (Base+Tempro+con+Staff)	AM 730-830	ONE HOUR	07:15	08:45	15	✓
D6	2025 (Base+Tempro+con+Staff)	PM 1630-1730	ONE HOUR	16:15	17:45	15	✓
D7	2025 HG	AM 8-9	ONE HOUR	07:45	09:15	15	✓
D8	2025 HG	PM 1630-1730	ONE HOUR	16:15	17:45	15	✓
D9	Future Base 2025	AM 8-9	ONE HOUR	07:45	09:15	15	✓
D10	Future Base 2025	AM 730-830	ONE HOUR	07:15	08:45	15	✓
D11	Future Base 2025	PM 1630-1730	ONE HOUR	16:15	17:45	15	✓
D12	Future Base 2025 HG	AM 8-9	ONE HOUR	07:45	09:15	15	✓
D13	Future Base 2025 HG	PM 1630-1730	ONE HOUR	16:15	17:45	15	✓

Existing Layout 8-9 - Base 2022, AM 8-9

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set (s)	Specific Demand Set (s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Existing Layout 8-9	✓	✓	D1,D4,D7,D9,D12	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A1071 - Swan Hill	Standard Roundabout		4-1, 3, 2, 1	34.97	D

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	-10	1 - B1113 [N]	34.97	D

Arms

Arms

Arm	Name	Description	No give-way line
1	B1113 [N]		
2	A1071 [W]		
3	Swan Hill [S]		
4-1	A1071 [E]		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
1 - B1113 [N]	2.90	5.60	2.6	10.0	34.0	29.0		
2 - A1071 [W]	3.50	5.70	5.0	36.0	34.0	15.0		
3 - Swan Hill [S]	3.00	4.30	5.9	12.0	34.0	32.0		
4-1 - A1071 [E]	3.00	4.90	5.0	40.0	34.0	17.5		

Slope / Intercept / Capacity

Arm Intercept Adjustments

Arm	Type	Reason	Direct intercept adjustment (PCU/hr)
1 - B1113 [N]	Direct	To reflect queues	-24
2 - A1071 [W]	Direct	To reflect queues	-99
3 - Swan Hill [S]	None		
4-1 - A1071 [E]	Direct	To reflect queues	-30

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - B1113 [N]	0.501	995
2 - A1071 [W]	0.622	1337
3 - Swan Hill [S]	0.518	1095
4-1 - A1071 [E]	0.582	1218

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	Base 2022	AM 8-9	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - B1113 [N]		ONE HOUR	✓	554	100.000
2 - A1071 [W]		ONE HOUR	✓	527	100.000
3 - Swan Hill [S]		ONE HOUR	✓	645	100.000
4-1 - A1071 [E]		ONE HOUR	✓	413	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - B1113 [N]	2 - A1071 [W]	3 - Swan Hill [S]	4-1 - A1071 [E]
From	1 - B1113 [N]	0	25	459	70
	2 - A1071 [W]	29	0	326	172
	3 - Swan Hill [S]	366	95	2	182
	4-1 - A1071 [E]	129	82	202	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - B1113 [N]	2 - A1071 [W]	3 - Swan Hill [S]	4-1 - A1071 [E]
From	1 - B1113 [N]	0	4	7	8
	2 - A1071 [W]	15	0	2	3
	3 - Swan Hill [S]	10	11	0	6
	4-1 - A1071 [E]	11	9	2	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - B1113 [N]	0.98	93.58	15.4	F	508	763
2 - A1071 [W]	0.67	12.67	2.0	B	484	725
3 - Swan Hill [S]	0.74	15.56	3.0	C	592	888
4-1 - A1071 [E]	0.64	15.11	1.9	C	379	568

Existing Layout 8-9 - 2025 (Base+Tempro+con+Staff), AM 8-9

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set (s)	Specific Demand Set (s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Existing Layout 8-9	✓	✓	D1,D4,D7,D9,D12	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A1071 - Swan Hill	Standard Roundabout		4-1, 3, 2, 1	46.32	E

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	-12	1 - B1113 [N]	46.32	E

Arms

Arms

Arm	Name	Description	No give-way line
1	B1113 [N]		
2	A1071 [W]		
3	Swan Hill [S]		
4-1	A1071 [E]		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
1 - B1113 [N]	2.90	5.60	2.6	10.0	34.0	29.0		
2 - A1071 [W]	3.50	5.70	5.0	36.0	34.0	15.0		
3 - Swan Hill [S]	3.00	4.30	5.9	12.0	34.0	32.0		
4-1 - A1071 [E]	3.00	4.90	5.0	40.0	34.0	17.5		

Slope / Intercept / Capacity

Arm Intercept Adjustments

Arm	Type	Reason	Direct intercept adjustment (PCU/hr)
1 - B1113 [N]	Direct	To reflect queues	-24
2 - A1071 [W]	Direct	To reflect queues	-99
3 - Swan Hill [S]	None		
4-1 - A1071 [E]	Direct	To reflect queues	-30

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - B1113 [N]	0.501	995
2 - A1071 [W]	0.622	1337
3 - Swan Hill [S]	0.518	1095
4-1 - A1071 [E]	0.582	1218

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2025 (Base+Tempro+con+Staff)	AM 8-9	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - B1113 [N]		ONE HOUR	✓	567	100.000
2 - A1071 [W]		ONE HOUR	✓	553	100.000
3 - Swan Hill [S]		ONE HOUR	✓	658	100.000
4-1 - A1071 [E]		ONE HOUR	✓	460	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - B1113 [N]	2 - A1071 [W]	3 - Swan Hill [S]	4-1 - A1071 [E]
From	1 - B1113 [N]	0	28	467	72
	2 - A1071 [W]	33	0	331	189
	3 - Swan Hill [S]	372	97	3	186
	4-1 - A1071 [E]	132	122	206	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - B1113 [N]	2 - A1071 [W]	3 - Swan Hill [S]	4-1 - A1071 [E]
From	1 - B1113 [N]	0	8	7	8
	2 - A1071 [W]	17	0	2	6
	3 - Swan Hill [S]	10	11	0	6
	4-1 - A1071 [E]	11	12	2	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - B1113 [N]	1.03	131.39	23.3	F	520	780
2 - A1071 [W]	0.71	14.70	2.4	B	507	761
3 - Swan Hill [S]	0.77	18.43	3.6	C	604	906
4-1 - A1071 [E]	0.72	19.36	2.6	C	422	633

Existing Layout 8-9 - 2025 HG, AM 8-9

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set (s)	Specific Demand Set (s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Existing Layout 8-9	✓	✓	D1,D4,D7,D9,D12	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A1071 - Swan Hill	Standard Roundabout		4-1, 3, 2, 1	55.55	F

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	-14	1 - B1113 [N]	55.55	F

Arms

Arms

Arm	Name	Description	No give-way line
1	B1113 [N]		
2	A1071 [W]		
3	Swan Hill [S]		
4-1	A1071 [E]		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
1 - B1113 [N]	2.90	5.60	2.6	10.0	34.0	29.0		
2 - A1071 [W]	3.50	5.70	5.0	36.0	34.0	15.0		
3 - Swan Hill [S]	3.00	4.30	5.9	12.0	34.0	32.0		
4-1 - A1071 [E]	3.00	4.90	5.0	40.0	34.0	17.5		

Slope / Intercept / Capacity

Arm Intercept Adjustments

Arm	Type	Reason	Direct intercept adjustment (PCU/hr)
1 - B1113 [N]	Direct	To reflect queues	-24
2 - A1071 [W]	Direct	To reflect queues	-99
3 - Swan Hill [S]	None		
4-1 - A1071 [E]	Direct	To reflect queues	-30

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - B1113 [N]	0.501	995
2 - A1071 [W]	0.622	1337
3 - Swan Hill [S]	0.518	1095
4-1 - A1071 [E]	0.582	1218

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2025 HG	AM 8-9	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - B1113 [N]		ONE HOUR	✓	576	100.000
2 - A1071 [W]		ONE HOUR	✓	568	100.000
3 - Swan Hill [S]		ONE HOUR	✓	652	100.000
4-1 - A1071 [E]		ONE HOUR	✓	501	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - B1113 [N]	2 - A1071 [W]	3 - Swan Hill [S]	4-1 - A1071 [E]
From	1 - B1113 [N]	0	27	459	90
	2 - A1071 [W]	32	0	326	210
	3 - Swan Hill [S]	366	95	2	189
	4-1 - A1071 [E]	157	140	204	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - B1113 [N]	2 - A1071 [W]	3 - Swan Hill [S]	4-1 - A1071 [E]
From	1 - B1113 [N]	0	8	7	6
	2 - A1071 [W]	17	0	2	6
	3 - Swan Hill [S]	10	11	0	6
	4-1 - A1071 [E]	9	10	2	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - B1113 [N]	1.07	162.98	30.2	F	529	793
2 - A1071 [W]	0.74	16.69	2.8	C	521	782
3 - Swan Hill [S]	0.79	19.98	3.8	C	598	897
4-1 - A1071 [E]	0.77	22.39	3.3	C	460	690

Existing Layout 8-9 - Future Base 2025, AM 8-9

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set (s)	Specific Demand Set (s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Existing Layout 8-9	✓	✓	D1,D4,D7,D9,D12	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A1071 - Swan Hill	Standard Roundabout		4-1, 3, 2, 1	41.34	E

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	-11	1 - B1113 [N]	41.34	E

Arms

Arms

Arm	Name	Description	No give-way line
1	B1113 [N]		
2	A1071 [W]		
3	Swan Hill [S]		
4-1	A1071 [E]		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
1 - B1113 [N]	2.90	5.60	2.6	10.0	34.0	29.0		
2 - A1071 [W]	3.50	5.70	5.0	36.0	34.0	15.0		
3 - Swan Hill [S]	3.00	4.30	5.9	12.0	34.0	32.0		
4-1 - A1071 [E]	3.00	4.90	5.0	40.0	34.0	17.5		

Slope / Intercept / Capacity

Arm Intercept Adjustments

Arm	Type	Reason	Direct intercept adjustment (PCU/hr)
1 - B1113 [N]	Direct	To reflect queues	-24
2 - A1071 [W]	Direct	To reflect queues	-99
3 - Swan Hill [S]	None		
4-1 - A1071 [E]	Direct	To reflect queues	-30

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - B1113 [N]	0.501	995
2 - A1071 [W]	0.622	1337
3 - Swan Hill [S]	0.518	1095
4-1 - A1071 [E]	0.582	1218

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D9	Future Base 2025	AM 8-9	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - B1113 [N]		ONE HOUR	✓	564	100.000
2 - A1071 [W]		ONE HOUR	✓	536	100.000
3 - Swan Hill [S]		ONE HOUR	✓	658	100.000
4-1 - A1071 [E]		ONE HOUR	✓	420	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - B1113 [N]	2 - A1071 [W]	3 - Swan Hill [S]	4-1 - A1071 [E]
From	1 - B1113 [N]	0	25	467	72
	2 - A1071 [W]	30	0	331	175
	3 - Swan Hill [S]	372	97	3	186
	4-1 - A1071 [E]	131	83	206	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - B1113 [N]	2 - A1071 [W]	3 - Swan Hill [S]	4-1 - A1071 [E]
From	1 - B1113 [N]	0	4	7	8
	2 - A1071 [W]	15	0	2	3
	3 - Swan Hill [S]	10	11	0	6
	4-1 - A1071 [E]	11	9	2	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - B1113 [N]	1.01	115.64	20.0	F	518	776
2 - A1071 [W]	0.68	13.53	2.2	B	492	738
3 - Swan Hill [S]	0.76	16.58	3.2	C	604	906
4-1 - A1071 [E]	0.66	15.86	2.0	C	385	578

Existing Layout 8-9 - Future Base 2025 HG, AM 8-9

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set (s)	Specific Demand Set (s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Existing Layout 8-9	✓	✓	D1,D4,D7,D9,D12	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A1071 - Swan Hill	Standard Roundabout		4-1, 3, 2, 1	50.21	F

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	-13	1 - B1113 [N]	50.21	F

Arms

Arms

Arm	Name	Description	No give-way line
1	B1113 [N]		
2	A1071 [W]		
3	Swan Hill [S]		
4-1	A1071 [E]		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
1 - B1113 [N]	2.90	5.60	2.6	10.0	34.0	29.0		
2 - A1071 [W]	3.50	5.70	5.0	36.0	34.0	15.0		
3 - Swan Hill [S]	3.00	4.30	5.9	12.0	34.0	32.0		
4-1 - A1071 [E]	3.00	4.90	5.0	40.0	34.0	17.5		

Slope / Intercept / Capacity

Arm Intercept Adjustments

Arm	Type	Reason	Direct intercept adjustment (PCU/hr)
1 - B1113 [N]	Direct	To reflect queues	-24
2 - A1071 [W]	Direct	To reflect queues	-99
3 - Swan Hill [S]	None		
4-1 - A1071 [E]	Direct	To reflect queues	-30

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - B1113 [N]	0.501	995
2 - A1071 [W]	0.622	1337
3 - Swan Hill [S]	0.518	1095
4-1 - A1071 [E]	0.582	1218

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D12	Future Base 2025 HG	AM 8-9	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - B1113 [N]		ONE HOUR	✓	574	100.000
2 - A1071 [W]		ONE HOUR	✓	551	100.000
3 - Swan Hill [S]		ONE HOUR	✓	652	100.000
4-1 - A1071 [E]		ONE HOUR	✓	460	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - B1113 [N]	2 - A1071 [W]	3 - Swan Hill [S]	4-1 - A1071 [E]
From	1 - B1113 [N]	0	25	459	90
	2 - A1071 [W]	29	0	326	196
	3 - Swan Hill [S]	366	95	2	189
	4-1 - A1071 [E]	156	100	204	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - B1113 [N]	2 - A1071 [W]	3 - Swan Hill [S]	4-1 - A1071 [E]
From	1 - B1113 [N]	0	4	7	8
	2 - A1071 [W]	15	0	2	3
	3 - Swan Hill [S]	10	11	0	6
	4-1 - A1071 [E]	11	9	2	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - B1113 [N]	1.05	146.36	26.7	F	527	790
2 - A1071 [W]	0.71	15.22	2.5	C	506	758
3 - Swan Hill [S]	0.77	17.84	3.4	C	598	897
4-1 - A1071 [E]	0.71	18.03	2.5	C	422	633

Existing Layout 0730-0830 - Base 2022, AM 730-830

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set (s)	Specific Demand Set (s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	Existing Layout 0730-0830	✓	✓	D2,D5,D10	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A1071 - Swan Hill	Standard Roundabout		4-1, 3, 2, 1	61.91	F

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	-14	1 - B1113 [N]	61.91	F

Arms

Arms

Arm	Name	Description	No give-way line
1	B1113 [N]		
2	A1071 [W]		
3	Swan Hill [S]		
4-1	A1071 [E]		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
1 - B1113 [N]	2.90	5.60	2.6	10.0	34.0	29.0		
2 - A1071 [W]	3.50	5.70	5.0	36.0	34.0	15.0		
3 - Swan Hill [S]	3.00	4.30	5.9	12.0	34.0	32.0		
4-1 - A1071 [E]	3.00	4.90	5.0	40.0	34.0	17.5		

Slope / Intercept / Capacity

Arm Intercept Adjustments

Arm	Type	Reason	Direct intercept adjustment (PCU/hr)
1 - B1113 [N]	Direct	To reflect queues	50
2 - A1071 [W]	Direct	To reflect queues	-99
3 - Swan Hill [S]	Direct	To reflect quues	-30
4-1 - A1071 [E]	None		

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - B1113 [N]	0.501	1069
2 - A1071 [W]	0.622	1337
3 - Swan Hill [S]	0.518	1065
4-1 - A1071 [E]	0.582	1248

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	Base 2022	AM 730-830	ONE HOUR	07:15	08:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - B1113 [N]		ONE HOUR	✓	646	100.000
2 - A1071 [W]		ONE HOUR	✓	595	100.000
3 - Swan Hill [S]		ONE HOUR	✓	710	100.000
4-1 - A1071 [E]		ONE HOUR	✓	426	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - B1113 [N]	2 - A1071 [W]	3 - Swan Hill [S]	4-1 - A1071 [E]
From	1 - B1113 [N]	0	23	549	74
	2 - A1071 [W]	38	0	371	186
	3 - Swan Hill [S]	427	104	1	178
	4-1 - A1071 [E]	146	92	188	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - B1113 [N]	2 - A1071 [W]	3 - Swan Hill [S]	4-1 - A1071 [E]
From	1 - B1113 [N]	0	5	16	7
	2 - A1071 [W]	14	0	2	3
	3 - Swan Hill [S]	9	8	0	6
	4-1 - A1071 [E]	10	8	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - B1113 [N]	1.07	165.18	34.4	F	593	889
2 - A1071 [W]	0.80	21.68	3.8	C	546	819
3 - Swan Hill [S]	0.85	27.57	5.7	D	652	977
4-1 - A1071 [E]	0.70	18.75	2.4	C	391	586

Existing Layout 0730-0830 - 2025 (Base+Tempro+con+Staff), AM 730-830

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set (s)	Specific Demand Set (s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	Existing Layout 0730-0830	✓	✓	D2,D5,D10	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A1071 - Swan Hill	Standard Roundabout		4-1, 3, 2, 1	82.22	F

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	-17	1 - B1113 [N]	82.22	F

Arms

Arms

Arm	Name	Description	No give-way line
1	B1113 [N]		
2	A1071 [W]		
3	Swan Hill [S]		
4-1	A1071 [E]		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
1 - B1113 [N]	2.90	5.60	2.6	10.0	34.0	29.0		
2 - A1071 [W]	3.50	5.70	5.0	36.0	34.0	15.0		
3 - Swan Hill [S]	3.00	4.30	5.9	12.0	34.0	32.0		
4-1 - A1071 [E]	3.00	4.90	5.0	40.0	34.0	17.5		

Slope / Intercept / Capacity

Arm Intercept Adjustments

Arm	Type	Reason	Direct intercept adjustment (PCU/hr)
1 - B1113 [N]	Direct	To reflect queues	50
2 - A1071 [W]	Direct	To reflect queues	-99
3 - Swan Hill [S]	Direct	To reflect ques	-30
4-1 - A1071 [E]	None		

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - B1113 [N]	0.501	1069
2 - A1071 [W]	0.622	1337
3 - Swan Hill [S]	0.518	1065
4-1 - A1071 [E]	0.582	1248

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2025 (Base+Tempro+con+Staff)	AM 730-830	ONE HOUR	07:15	08:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - B1113 [N]		ONE HOUR	✓	660	100.000
2 - A1071 [W]		ONE HOUR	✓	623	100.000
3 - Swan Hill [S]		ONE HOUR	✓	725	100.000
4-1 - A1071 [E]		ONE HOUR	✓	500	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - B1113 [N]	2 - A1071 [W]	3 - Swan Hill [S]	4-1 - A1071 [E]
From	1 - B1113 [N]	0	26	559	75
	2 - A1071 [W]	42	0	378	203
	3 - Swan Hill [S]	435	107	2	181
	4-1 - A1071 [E]	151	158	191	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - B1113 [N]	2 - A1071 [W]	3 - Swan Hill [S]	4-1 - A1071 [E]
From	1 - B1113 [N]	0	8	16	7
	2 - A1071 [W]	16	0	2	6
	3 - Swan Hill [S]	9	8	0	6
	4-1 - A1071 [E]	10	9	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - B1113 [N]	1.12	216.08	46.7	F	606	908
2 - A1071 [W]	0.84	28.08	5.1	D	572	858
3 - Swan Hill [S]	0.91	42.61	8.8	E	665	998
4-1 - A1071 [E]	0.82	30.40	4.4	D	459	688

Existing Layout 0730-0830 - Future Base 2025, AM 730-830

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set (s)	Specific Demand Set (s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	Existing Layout 0730-0830	✓	✓	D2,D5,D10	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A1071 - Swan Hill	Standard Roundabout		4-1, 3, 2, 1	72.36	F

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	-16	1 - B1113 [N]	72.36	F

Arms

Arms

Arm	Name	Description	No give-way line
1	B1113 [N]		
2	A1071 [W]		
3	Swan Hill [S]		
4-1	A1071 [E]		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
1 - B1113 [N]	2.90	5.60	2.6	10.0	34.0	29.0		
2 - A1071 [W]	3.50	5.70	5.0	36.0	34.0	15.0		
3 - Swan Hill [S]	3.00	4.30	5.9	12.0	34.0	32.0		
4-1 - A1071 [E]	3.00	4.90	5.0	40.0	34.0	17.5		

Slope / Intercept / Capacity

Arm Intercept Adjustments

Arm	Type	Reason	Direct intercept adjustment (PCU/hr)
1 - B1113 [N]	Direct	To reflect queues	50
2 - A1071 [W]	Direct	To reflect queues	-99
3 - Swan Hill [S]	Direct	To reflect ques	-30
4-1 - A1071 [E]	None		

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - B1113 [N]	0.501	1069
2 - A1071 [W]	0.622	1337
3 - Swan Hill [S]	0.518	1065
4-1 - A1071 [E]	0.582	1248

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D10	Future Base 2025	AM 730-830	ONE HOUR	07:15	08:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - B1113 [N]		ONE HOUR	✓	657	100.000
2 - A1071 [W]		ONE HOUR	✓	606	100.000
3 - Swan Hill [S]		ONE HOUR	✓	725	100.000
4-1 - A1071 [E]		ONE HOUR	✓	434	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - B1113 [N]	2 - A1071 [W]	3 - Swan Hill [S]	4-1 - A1071 [E]
From	1 - B1113 [N]	0	23	559	75
	2 - A1071 [W]	39	0	378	189
	3 - Swan Hill [S]	435	107	2	181
	4-1 - A1071 [E]	149	94	191	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - B1113 [N]	2 - A1071 [W]	3 - Swan Hill [S]	4-1 - A1071 [E]
From	1 - B1113 [N]	0	5	16	0
	2 - A1071 [W]	14	0	2	0
	3 - Swan Hill [S]	9	8	0	0
	4-1 - A1071 [E]	10	8	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - B1113 [N]	1.10	196.90	42.3	F	603	904
2 - A1071 [W]	0.82	24.46	4.3	C	556	834
3 - Swan Hill [S]	0.87	30.96	6.5	D	665	998
4-1 - A1071 [E]	0.71	19.86	2.5	C	398	597

Existing Layout 1630-1730 - Base 2022, PM 1630-1730

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set (s)	Specific Demand Set (s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A3	Existing Layout 1630-1730	✓	✓	D3,D6,D8,D11,D13	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A1071 - Swan Hill	Standard Roundabout		4-1, 3, 2, 1	68.81	F

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	-11	3 - Swan Hill [S]	68.81	F

Arms

Arms

Arm	Name	Description	No give-way line
1	B1113 [N]		
2	A1071 [W]		
3	Swan Hill [S]		
4-1	A1071 [E]		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
1 - B1113 [N]	2.90	5.60	2.6	10.0	34.0	29.0		
2 - A1071 [W]	3.50	5.70	5.0	36.0	34.0	15.0		
3 - Swan Hill [S]	3.00	4.30	5.9	12.0	34.0	32.0		
4-1 - A1071 [E]	3.00	4.90	5.0	40.0	34.0	17.5		

Slope / Intercept / Capacity

Arm Intercept Adjustments

Arm	Type	Reason	Direct intercept adjustment (PCU/hr)
1 - B1113 [N]	Direct	To reflect queues	-24
2 - A1071 [W]	Direct	To reflect queues	-99
3 - Swan Hill [S]	None		
4-1 - A1071 [E]	Direct	To reflect queues	-30

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - B1113 [N]	0.501	995
2 - A1071 [W]	0.622	1337
3 - Swan Hill [S]	0.518	1095
4-1 - A1071 [E]	0.582	1218

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	Base 2022	PM 1630-1730	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - B1113 [N]		ONE HOUR	✓	650	100.000
2 - A1071 [W]		ONE HOUR	✓	337	100.000
3 - Swan Hill [S]		ONE HOUR	✓	879	100.000
4-1 - A1071 [E]		ONE HOUR	✓	411	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - B1113 [N]	2 - A1071 [W]	3 - Swan Hill [S]	4-1 - A1071 [E]
From	1 - B1113 [N]	0	33	525	92
	2 - A1071 [W]	34	1	143	159
	3 - Swan Hill [S]	523	151	0	205
	4-1 - A1071 [E]	117	109	185	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - B1113 [N]	2 - A1071 [W]	3 - Swan Hill [S]	4-1 - A1071 [E]
From	1 - B1113 [N]	0	3	4	7
	2 - A1071 [W]	3	0	5	3
	3 - Swan Hill [S]	5	0	0	2
	4-1 - A1071 [E]	2	1	2	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - B1113 [N]	0.99	91.68	17.9	F	596	895
2 - A1071 [W]	0.48	9.19	0.9	A	309	464
3 - Swan Hill [S]	1.02	101.68	28.0	F	807	1210
4-1 - A1071 [E]	0.58	11.22	1.4	B	377	566

Existing Layout 1630-1730 - 2025 (Base+Tempro+con+Staff), PM 1630-1730

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set (s)	Specific Demand Set (s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A3	Existing Layout 1630-1730	✓	✓	D3,D6,D8,D11,D13	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A1071 - Swan Hill	Standard Roundabout		4-1, 3, 2, 1	96.32	F

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	-14	1 - B1113 [N]	96.32	F

Arms

Arms

Arm	Name	Description	No give-way line
1	B1113 [N]		
2	A1071 [W]		
3	Swan Hill [S]		
4-1	A1071 [E]		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
1 - B1113 [N]	2.90	5.60	2.6	10.0	34.0	29.0		
2 - A1071 [W]	3.50	5.70	5.0	36.0	34.0	15.0		
3 - Swan Hill [S]	3.00	4.30	5.9	12.0	34.0	32.0		
4-1 - A1071 [E]	3.00	4.90	5.0	40.0	34.0	17.5		

Slope / Intercept / Capacity

Arm Intercept Adjustments

Arm	Type	Reason	Direct intercept adjustment (PCU/hr)
1 - B1113 [N]	Direct	To reflect queues	-24
2 - A1071 [W]	Direct	To reflect queues	-99
3 - Swan Hill [S]	None		
4-1 - A1071 [E]	Direct	To reflect queues	-30

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - B1113 [N]	0.501	995
2 - A1071 [W]	0.622	1337
3 - Swan Hill [S]	0.518	1095
4-1 - A1071 [E]	0.582	1218

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2025 (Base+Tempro+con+Staff)	PM 1630-1730	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - B1113 [N]		ONE HOUR	✓	667	100.000
2 - A1071 [W]		ONE HOUR	✓	387	100.000
3 - Swan Hill [S]		ONE HOUR	✓	896	100.000
4-1 - A1071 [E]		ONE HOUR	✓	434	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - B1113 [N]	2 - A1071 [W]	3 - Swan Hill [S]	4-1 - A1071 [E]
From	1 - B1113 [N]	0	37	535	95
	2 - A1071 [W]	38	2	146	201
	3 - Swan Hill [S]	533	154	0	209
	4-1 - A1071 [E]	119	125	189	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - B1113 [N]	2 - A1071 [W]	3 - Swan Hill [S]	4-1 - A1071 [E]
From	1 - B1113 [N]	0	6	4	7
	2 - A1071 [W]	6	0	5	6
	3 - Swan Hill [S]	5	0	0	2
	4-1 - A1071 [E]	2	6	2	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - B1113 [N]	1.06	148.51	31.7	F	612	918
2 - A1071 [W]	0.55	10.79	1.3	B	355	533
3 - Swan Hill [S]	1.06	135.15	39.4	F	822	1233
4-1 - A1071 [E]	0.61	12.22	1.6	B	398	597

Existing Layout 1630-1730 - 2025 HG, PM 1630-1730

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set (s)	Specific Demand Set (s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A3	Existing Layout 1630-1730	✓	✓	D3,D6,D8,D11,D13	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A1071 - Swan Hill	Standard Roundabout		4-1, 3, 2, 1	121.42	F

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	-18	1 - B1113 [N]	121.42	F

Arms

Arms

Arm	Name	Description	No give-way line
1	B1113 [N]		
2	A1071 [W]		
3	Swan Hill [S]		
4-1	A1071 [E]		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
1 - B1113 [N]	2.90	5.60	2.6	10.0	34.0	29.0		
2 - A1071 [W]	3.50	5.70	5.0	36.0	34.0	15.0		
3 - Swan Hill [S]	3.00	4.30	5.9	12.0	34.0	32.0		
4-1 - A1071 [E]	3.00	4.90	5.0	40.0	34.0	17.5		

Slope / Intercept / Capacity

Arm Intercept Adjustments

Arm	Type	Reason	Direct intercept adjustment (PCU/hr)
1 - B1113 [N]	Direct	To reflect queues	-24
2 - A1071 [W]	Direct	To reflect queues	-99
3 - Swan Hill [S]	None		
4-1 - A1071 [E]	Direct	To reflect queues	-30

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - B1113 [N]	0.501	995
2 - A1071 [W]	0.622	1337
3 - Swan Hill [S]	0.518	1095
4-1 - A1071 [E]	0.582	1218

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2025 HG	PM 1630-1730	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - B1113 [N]		ONE HOUR	✓	686	100.000
2 - A1071 [W]		ONE HOUR	✓	421	100.000
3 - Swan Hill [S]		ONE HOUR	✓	885	100.000
4-1 - A1071 [E]		ONE HOUR	✓	489	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - B1113 [N]	2 - A1071 [W]	3 - Swan Hill [S]	4-1 - A1071 [E]
From	1 - B1113 [N]	0	35	525	126
	2 - A1071 [W]	36	1	143	241
	3 - Swan Hill [S]	523	151	0	211
	4-1 - A1071 [E]	140	162	187	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - B1113 [N]	2 - A1071 [W]	3 - Swan Hill [S]	4-1 - A1071 [E]
From	1 - B1113 [N]	0	6	4	6
	2 - A1071 [W]	6	0	5	5
	3 - Swan Hill [S]	5	0	0	3
	4-1 - A1071 [E]	2	4	2	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - B1113 [N]	1.12	215.83	48.4	F	629	944
2 - A1071 [W]	0.60	12.03	1.5	B	386	579
3 - Swan Hill [S]	1.08	159.76	46.5	F	812	1218
4-1 - A1071 [E]	0.67	13.76	2.0	B	449	673

Existing Layout 1630-1730 - Future Base 2025, PM 1630-1730

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set (s)	Specific Demand Set (s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A3	Existing Layout 1630-1730	✓	✓	D3,D6,D8,D11,D13	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A1071 - Swan Hill	Standard Roundabout		4-1, 3, 2, 1	84.22	F

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	-12	3 - Swan Hill [S]	84.22	F

Arms

Arms

Arm	Name	Description	No give-way line
1	B1113 [N]		
2	A1071 [W]		
3	Swan Hill [S]		
4-1	A1071 [E]		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
1 - B1113 [N]	2.90	5.60	2.6	10.0	34.0	29.0		
2 - A1071 [W]	3.50	5.70	5.0	36.0	34.0	15.0		
3 - Swan Hill [S]	3.00	4.30	5.9	12.0	34.0	32.0		
4-1 - A1071 [E]	3.00	4.90	5.0	40.0	34.0	17.5		

Slope / Intercept / Capacity

Arm Intercept Adjustments

Arm	Type	Reason	Direct intercept adjustment (PCU/hr)
1 - B1113 [N]	Direct	To reflect queues	-24
2 - A1071 [W]	Direct	To reflect queues	-99
3 - Swan Hill [S]	None		
4-1 - A1071 [E]	Direct	To reflect queues	-30

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - B1113 [N]	0.501	995
2 - A1071 [W]	0.622	1337
3 - Swan Hill [S]	0.518	1095
4-1 - A1071 [E]	0.582	1218

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D11	Future Base 2025	PM 1630-1730	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - B1113 [N]		ONE HOUR	✓	663	100.000
2 - A1071 [W]		ONE HOUR	✓	348	100.000
3 - Swan Hill [S]		ONE HOUR	✓	896	100.000
4-1 - A1071 [E]		ONE HOUR	✓	420	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - B1113 [N]	2 - A1071 [W]	3 - Swan Hill [S]	4-1 - A1071 [E]
From	1 - B1113 [N]	0	34	535	94
	2 - A1071 [W]	35	2	149	162
	3 - Swan Hill [S]	533	154	0	209
	4-1 - A1071 [E]	119	111	189	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - B1113 [N]	2 - A1071 [W]	3 - Swan Hill [S]	4-1 - A1071 [E]
From	1 - B1113 [N]	0	3	4	7
	2 - A1071 [W]	3	0	5	3
	3 - Swan Hill [S]	5	0	0	2
	4-1 - A1071 [E]	2	1	2	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - B1113 [N]	1.02	115.14	23.7	F	608	913
2 - A1071 [W]	0.49	9.55	1.0	A	319	479
3 - Swan Hill [S]	1.05	124.30	35.9	F	822	1233
4-1 - A1071 [E]	0.60	11.78	1.5	B	385	578

Existing Layout 1630-1730 - Future Base 2025 HG, PM 1630-1730

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set (s)	Specific Demand Set (s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A3	Existing Layout 1630-1730	✓	✓	D3,D6,D8,D11,D13	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A1071 - Swan Hill	Standard Roundabout		4-1, 3, 2, 1	106.57	F

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	-16	1 - B1113 [N]	106.57	F

Arms

Arms

Arm	Name	Description	No give-way line
1	B1113 [N]		
2	A1071 [W]		
3	Swan Hill [S]		
4-1	A1071 [E]		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
1 - B1113 [N]	2.90	5.60	2.6	10.0	34.0	29.0		
2 - A1071 [W]	3.50	5.70	5.0	36.0	34.0	15.0		
3 - Swan Hill [S]	3.00	4.30	5.9	12.0	34.0	32.0		
4-1 - A1071 [E]	3.00	4.90	5.0	40.0	34.0	17.5		

Slope / Intercept / Capacity

Arm Intercept Adjustments

Arm	Type	Reason	Direct intercept adjustment (PCU/hr)
1 - B1113 [N]	Direct	To reflect queues	-24
2 - A1071 [W]	Direct	To reflect queues	-99
3 - Swan Hill [S]	None		
4-1 - A1071 [E]	Direct	To reflect queues	-30

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - B1113 [N]	0.501	995
2 - A1071 [W]	0.622	1337
3 - Swan Hill [S]	0.518	1095
4-1 - A1071 [E]	0.582	1218

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D13	Future Base 2025 HG	PM 1630-1730	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - B1113 [N]		ONE HOUR	✓	683	100.000
2 - A1071 [W]		ONE HOUR	✓	379	100.000
3 - Swan Hill [S]		ONE HOUR	✓	885	100.000
4-1 - A1071 [E]		ONE HOUR	✓	475	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - B1113 [N]	2 - A1071 [W]	3 - Swan Hill [S]	4-1 - A1071 [E]
From	1 - B1113 [N]	0	33	525	125
	2 - A1071 [W]	34	1	143	201
	3 - Swan Hill [S]	523	151	0	211
	4-1 - A1071 [E]	140	148	187	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - B1113 [N]	2 - A1071 [W]	3 - Swan Hill [S]	4-1 - A1071 [E]
From	1 - B1113 [N]	0	3	4	7
	2 - A1071 [W]	3	0	5	3
	3 - Swan Hill [S]	5	0	0	2
	4-1 - A1071 [E]	2	1	2	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - B1113 [N]	1.08	170.74	37.8	F	627	940
2 - A1071 [W]	0.54	10.47	1.2	B	348	522
3 - Swan Hill [S]	1.07	148.26	43.0	F	812	1218
4-1 - A1071 [E]	0.66	13.31	1.9	B	436	654

Junctions 10

PICADY 10 - Priority Intersection Module

Filename: J5_A134-A1071.j10
Path: \\gblon7vs01\projects\UNIF\Projects\B2416601 - Bramford to Twinstead EIA TA\Junction Analysis\Junction Modelling\Junctions\J5 - A134_A1071
Report generation date: 09/08/2023 14:59:06

Summary of junction performance

	AM 8-9							
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity
	Existing Layout 8-9 - Base 2023							
Stream B-C	A1 D1	21.4	146.45	1.05	F	82.04	F	-13 % [Stream B-A]
Stream B-A		14.4	168.45	1.03	F			
Stream C-AB		4.4	33.24	0.81	D			
	Existing Layout 8-9 - 2025 (Base+Tempro+con+Staff)							
Stream B-C	A1 D4	32.1	206.00	1.11	F	110.74	F	-16 % [Stream B-A]
Stream B-A		20.1	227.41	1.09	F			
Stream C-AB		5.6	40.98	0.85	E			
	Existing Layout 8-9 - Future Base 2025							
Stream B-C	A1 D7	25.4	168.97	1.07	F	93.21	F	-14 % [Stream B-A]
Stream B-A		16.6	190.76	1.05	F			
Stream C-AB		4.7	35.43	0.83	E			

	AM 730-830							
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity
	Existing Layout 0730-0830 - Base 2023							
Stream B-C	A2 D2	18.7	115.73	1.02	F	75.05	F	-10 % [Stream B-A]
Stream B-A		13.3	136.17	1.00	F			
Stream C-AB		7.9	54.30	0.90	F			

	Existing Layout 0730-0830 - 2025 (Base+Tempro+con+Staff)							
Stream B-C	A2 D5	30.6	174.86	1.09	F	107.61	F	-13 % [Stream B-A]
Stream B-A		19.9	195.10	1.07	F			
Stream C-AB		11.7	75.17	0.95	F			
	Existing Layout 0730-0830 - Future Base 2025							
Stream B-C	A2 D8	22.3	133.86	1.04	F	85.13	F	-11 % [Stream B-A]
Stream B-A		15.5	153.88	1.02	F			
Stream C-AB		8.8	59.08	0.91	F			

	PM 1630-1730							
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity
	Existing Layout 1630-1730 - Base 2023							
Stream B-C	A3 D3	45.6	389.92	1.21	F	195.33	F	-24 % [Stream B-A]
Stream B-A		30.9	400.76	1.20	F			
Stream C-AB		2.4	20.45	0.71	C			
	Existing Layout 1630-1730 - 2025 (Base+Tempro+con+Staff)							
Stream B-C	A3 D6	58.5	525.24	1.28	F	257.30	F	-26 % [Stream B-A]
Stream B-A		38.9	534.50	1.27	F			
Stream C-AB		2.9	23.29	0.74	C			
	Existing Layout 1630-1730 - Future Base 2025							
Stream B-C	A3 D9	50.7	439.57	1.24	F	219.93	F	-25 % [Stream B-A]
Stream B-A		34.2	454.44	1.23	F			
Stream C-AB		2.6	21.41	0.72	C			

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

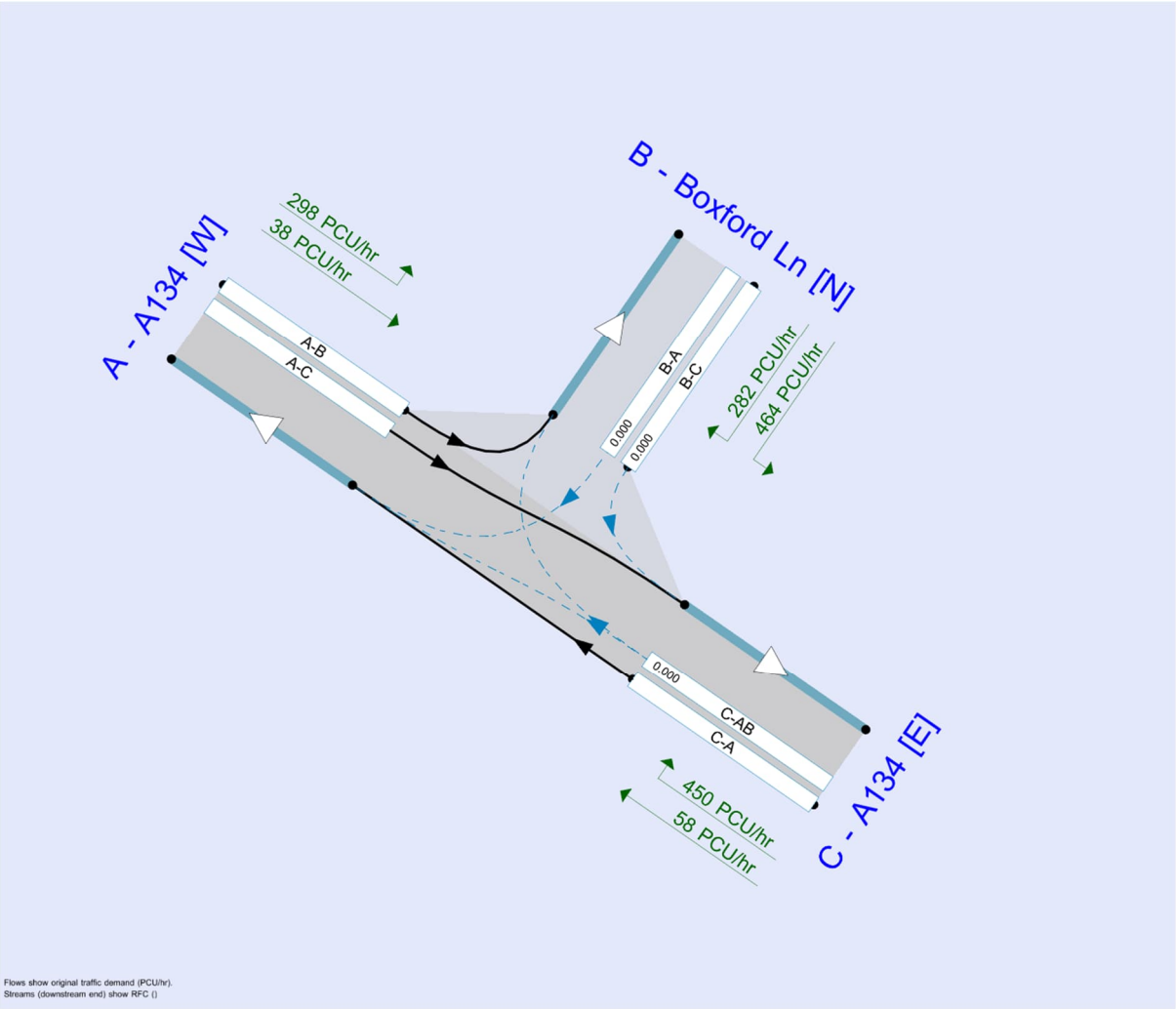
File summary

File Description

Title	Bramford to Twinstead Reinforcement
Location	Assington
Site number	J05
Date	12/07/2023
Version	1
Status	(new file)
Identifier	-
Client	National Grid
Jobnumber	-
Enumerator	JEGINTL\WITOWSJJ
Description	T14 Topic Paper

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of Junctions.

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use iterations with HCM roundabouts	Max number of iterations for roundabouts
5.75					✓	Delay	0.85	36.00	20.00		500

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	Base 2023	AM 8-9	ONE HOUR	07:45	09:15	15	✓
D2	Base 2023	AM 730-830	ONE HOUR	07:15	08:45	15	✓
D3	Base 2023	PM 1630-1730	ONE HOUR	16:15	17:45	15	✓
D4	2025 (Base+Tempro+con+Staff)	AM 8-9	ONE HOUR	07:45	09:15	15	✓
D5	2025 (Base+Tempro+con+Staff)	AM 730-830	ONE HOUR	07:15	08:45	15	✓
D6	2025 (Base+Tempro+con+Staff)	PM 1630-1730	ONE HOUR	16:15	17:45	15	✓
D7	Future Base 2025	AM 8-9	ONE HOUR	07:45	09:15	15	✓
D8	Future Base 2025	AM 730-830	ONE HOUR	07:15	08:45	15	✓
D9	Future Base 2025	PM 1630-1730	ONE HOUR	16:15	17:45	15	✓

Existing Layout 8-9 - Base 2023, AM 8-9

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm visibility to right	B - Boxford Ln [N] - Minor arm geometry	Visibility to right expected to have two components if the arm has two lanes, or two lanes in a flared section.

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Existing Layout 8-9	✓	✓	D1,D4,D7	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A134 - Baxford Ln	T-Junction	Two-way	Two-way	Two-way		82.04	F

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	-13	Stream B-A	82.04	F

Arms

Arms

Arm	Name	Description	Arm type
A	A134 [W]		Major
B	Boxford Ln [N]		Minor
C	A134 [E]		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Width for right-turn storage (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - A134 [E]	6.00		✓	3.00	140.0	✓	15.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B - Boxford Ln [N]	One lane plus flare	10.00	7.80	4.80	3.80	3.50		2.00	44	65

Slope / Intercept / Capacity

Custom Intercept Adjustments

Custom stream intercept adjustment	Stream	Use adjustment	Reason	Direct intercept adjustment (PCU/hr)
1	B-C	✓	to adjust queues	120
2	B-A	✓	to adjust queues	110

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	647	0.098	0.247	0.156	0.353
B-C	870	0.115	0.291	-	-
C-B	712	0.276	0.276	-	-

The slopes and intercepts shown above include custom intercept adjustments only.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	Base 2023	AM 8-9	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - A134 [W]		ONE HOUR	✓	336	100.000
B - Boxford Ln [N]		ONE HOUR	✓	746	100.000
C - A134 [E]		ONE HOUR	✓	508	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - A134 [W]	B - Boxford Ln [N]	C - A134 [E]
From	A - A134 [W]	0	298	38
	B - Boxford Ln [N]	282	0	464
	C - A134 [E]	58	450	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A134 [W]	B - Boxford Ln [N]	C - A134 [E]
From	A - A134 [W]	0	10	14
	B - Boxford Ln [N]	6	0	7
	C - A134 [E]	7	10	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)

B-C	1.05	146.45	21.4	F	426	639
B-A	1.03	168.45	14.4	F	259	388
C-AB	0.81	33.24	4.4	D	414	621
C-A					52	78
A-B					273	410
A-C					35	52

Existing Layout 8-9 - 2025 (Base+Tempro+con+Staff), AM 8-9

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm visibility to right	B - Boxford Ln [N] - Minor arm geometry	Visibility to right expected to have two components if the arm has two lanes, or two lanes in a flared section.

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Existing Layout 8-9	✓	✓	D1,D4,D7	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A134 - Baxford Ln	T-Junction	Two-way	Two-way	Two-way		110.74	F

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	-16	Stream B-A	110.74	F

Arms

Arms

Arm	Name	Description	Arm type
A	A134 [W]		Major
B	Boxford Ln [N]		Minor
C	A134 [E]		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Width for right-turn storage (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - A134 [E]	6.00		✓	3.00	140.0	✓	15.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B - Boxford Ln [N]	One lane plus flare	10.00	7.80	4.80	3.80	3.50		2.00	44	65

Slope / Intercept / Capacity

Custom Intercept Adjustments

Custom stream intercept adjustment	Stream	Use adjustment	Reason	Direct intercept adjustment (PCU/hr)
1	B-C	✓	to adjust queues	120
2	B-A	✓	to adjust queues	110

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	646	0.098	0.247	0.155	0.353
B-C	872	0.115	0.291	-	-
C-B	712	0.276	0.276	-	-

The slopes and intercepts shown above include custom intercept adjustments only.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2025 (Base+Tempro+con+Staff)	AM 8-9	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - A134 [W]		ONE HOUR	✓	362	100.000
B - Boxford Ln [N]		ONE HOUR	✓	768	100.000
C - A134 [E]		ONE HOUR	✓	527	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - A134 [W]	**B - Boxford Ln [N]**	**C - A134 [E]**
From	**A - A134 [W]**	0	305	57
	B - Boxford Ln [N]	286	0	482
	C - A134 [E]	62	465	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A134 [W]	B - Boxford Ln [N]	C - A134 [E]
From	A - A134 [W]	0	10	9
	B - Boxford Ln [N]	6	0	8
	C - A134 [E]	7	11	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	1.11	206.00	32.1	F	442	663
B-A	1.09	227.41	20.1	F	262	394
C-AB	0.85	40.98	5.6	E	429	643
C-A					55	82
A-B					280	420
A-C					52	78

Existing Layout 8-9 - Future Base 2025, AM 8-9

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm visibility to right	B - Boxford Ln [N] - Minor arm geometry	Visibility to right expected to have two components if the arm has two lanes, or two lanes in a flared section.

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Existing Layout 8-9	✓	✓	D1,D4,D7	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A134 - Baxford Ln	T-Junction	Two-way	Two-way	Two-way		93.21	F

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	-14	Stream B-A	93.21	F

Arms

Arms

Arm	Name	Description	Arm type
A	A134 [W]		Major
B	Boxford Ln [N]		Minor
C	A134 [E]		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Width for right-turn storage (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - A134 [E]	6.00		✓	3.00	140.0	✓	15.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B - Boxford Ln [N]	One lane plus flare	10.00	7.80	4.80	3.80	3.50		2.00	44	65

Slope / Intercept / Capacity

Custom Intercept Adjustments

Custom stream intercept adjustment	Stream	Use adjustment	Reason	Direct intercept adjustment (PCU/hr)
1	B-C	✓	to adjust queues	120
2	B-A	✓	to adjust queues	110

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	647	0.098	0.247	0.156	0.353
B-C	870	0.115	0.291	-	-
C-B	712	0.276	0.276	-	-

The slopes and intercepts shown above include custom intercept adjustments only.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	Future Base 2025	AM 8-9	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - A134 [W]		ONE HOUR	✓	341	100.000
B - Boxford Ln [N]		ONE HOUR	✓	757	100.000
C - A134 [E]		ONE HOUR	✓	515	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - A134 [W]	B - Boxford Ln [N]	C - A134 [E]
From	A - A134 [W]	0	302	39
	B - Boxford Ln [N]	286	0	471
	C - A134 [E]	59	456	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A134 [W]	B - Boxford Ln [N]	C - A134 [E]
From	A - A134 [W]	0	10	14
	B - Boxford Ln [N]	6	0	7
	C - A134 [E]	7	10	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	1.07	168.97	25.4	F	432	648
B-A	1.05	190.76	16.6	F	262	394
C-AB	0.83	35.43	4.7	E	420	630
C-A					53	79
A-B					277	416
A-C					36	54

Existing Layout 0730-0830 - Base 2023, AM 730-830

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm visibility to right	B - Boxford Ln [N] - Minor arm geometry	Visibility to right expected to have two components if the arm has two lanes, or two lanes in a flared section.

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	Existing Layout 0730-0830	✓	✓	D2,D5,D8	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A134 - Baxford Ln	T-Junction	Two-way	Two-way	Two-way		75.05	F

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	-10	Stream B-A	75.05	F

Arms

Arms

Arm	Name	Description	Arm type
A	A134 [W]		Major
B	Boxford Ln [N]		Minor
C	A134 [E]		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Width for right-turn storage (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - A134 [E]	6.00		✓	3.00	140.0	✓	15.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B - Boxford Ln [N]	One lane plus flare	10.00	7.80	4.80	3.80	3.50		2.00	44	65

Slope / Intercept / Capacity

Custom Intercept Adjustments

Custom stream intercept adjustment	Stream	Use adjustment	Reason	Direct intercept adjustment (PCU/hr)
1	B-C	✓	to adjust queues	220
2	B-A	✓	to adjust queues	220

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	759	0.098	0.248	0.156	0.354
B-C	968	0.115	0.290	-	-
C-B	712	0.276	0.276	-	-

The slopes and intercepts shown above include custom intercept adjustments only.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	Base 2023	AM 730-830	ONE HOUR	07:15	08:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - A134 [W]		ONE HOUR	✓	353	100.000
B - Boxford Ln [N]		ONE HOUR	✓	844	100.000
C - A134 [E]		ONE HOUR	✓	555	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - A134 [W]	B - Boxford Ln [N]	C - A134 [E]
From	A - A134 [W]	0	299	54
	B - Boxford Ln [N]	325	0	519
	C - A134 [E]	60	495	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A134 [W]	B - Boxford Ln [N]	C - A134 [E]
From	A - A134 [W]	0	5	10
	B - Boxford Ln [N]	8	0	7
	C - A134 [E]	13	10	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	1.02	115.73	18.7	F	476	714
B-A	1.00	136.17	13.3	F	298	447
C-AB	0.90	54.30	7.9	F	459	689
C-A					50	75
A-B					274	412
A-C					50	74

Existing Layout 0730-0830 - 2025 (Base+Tempro+con+Staff), AM 730-830

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm visibility to right	B - Boxford Ln [N] - Minor arm geometry	Visibility to right expected to have two components if the arm has two lanes, or two lanes in a flared section.

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	Existing Layout 0730-0830	✓	✓	D2,D5,D8	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A134 - Baxford Ln	T-Junction	Two-way	Two-way	Two-way		107.61	F

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	-13	Stream B-A	107.61	F

Arms

Arms

Arm	Name	Description	Arm type
A	A134 [W]		Major
B	Boxford Ln [N]		Minor
C	A134 [E]		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Width for right-turn storage (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - A134 [E]	6.00		✓	3.00	140.0	✓	15.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B - Boxford Ln [N]	One lane plus flare	10.00	7.80	4.80	3.80	3.50		2.00	44	65

Slope / Intercept / Capacity

Custom Intercept Adjustments

Custom stream intercept adjustment	Stream	Use adjustment	Reason	Direct intercept adjustment (PCU/hr)

1	B-C	✓	to adjust queues	220
2	B-A	✓	to adjust queues	220

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	758	0.098	0.248	0.156	0.354
B-C	970	0.115	0.290	-	-
C-B	712	0.276	0.276	-	-

The slopes and intercepts shown above include custom intercept adjustments only.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2025 (Base+Tempro+con+Staff)	AM 730-830	ONE HOUR	07:15	08:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - A134 [W]		ONE HOUR	✓	396	100.000
B - Boxford Ln [N]		ONE HOUR	✓	869	100.000
C - A134 [E]		ONE HOUR	✓	574	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - A134 [W]	B - Boxford Ln [N]	C - A134 [E]
From	A - A134 [W]	0	309	87
	B - Boxford Ln [N]	330	0	539
	C - A134 [E]	64	510	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A134 [W]	B - Boxford Ln [N]	C - A134 [E]
From	A - A134 [W]	0	5	6
	B - Boxford Ln [N]	8	0	8
	C - A134 [E]	12	11	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	1.09	174.86	30.6	F	495	742
B-A	1.07	195.10	19.9	F	303	454
C-AB	0.95	75.17	11.7	F	479	719
C-A					47	71
A-B					284	425
A-C					80	120

Existing Layout 0730-0830 - Future Base 2025, AM 730-830

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm visibility to right	B - Boxford Ln [N] - Minor arm geometry	Visibility to right expected to have two components if the arm has two lanes, or two lanes in a flared section.

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	Existing Layout 0730-0830	✓	✓	D2,D5,D8	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A134 - Baxford Ln	T-Junction	Two-way	Two-way	Two-way		85.13	F

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	-11	Stream B-A	85.13	F

Arms

Arms

Arm	Name	Description	Arm type
A	A134 [W]		Major
B	Boxford Ln [N]		Minor
C	A134 [E]		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Width for right-turn storage (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - A134 [E]	6.00		✓	3.00	140.0	✓	15.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B - Boxford Ln [N]	One lane plus flare	10.00	7.80	4.80	3.80	3.50		2.00	44	65

Slope / Intercept / Capacity

Custom Intercept Adjustments

Custom stream intercept adjustment	Stream	Use adjustment	Reason	Direct intercept adjustment (PCU/hr)
1	B-C	✓	to adjust queues	220
2	B-A	✓	to adjust queues	220

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	759	0.098	0.248	0.156	0.354
B-C	968	0.115	0.290	-	-
C-B	712	0.276	0.276	-	-

The slopes and intercepts shown above include custom intercept adjustments only.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	Future Base 2025	AM 730-830	ONE HOUR	07:15	08:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - A134 [W]		ONE HOUR	✓	358	100.000
B - Boxford Ln [N]		ONE HOUR	✓	856	100.000
C - A134 [E]		ONE HOUR	✓	562	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - A134 [W]	B - Boxford Ln [N]	C - A134 [E]
From	A - A134 [W]	0	303	55
	B - Boxford Ln [N]	330	0	526
	C - A134 [E]	61	501	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A134 [W]	B - Boxford Ln [N]	C - A134 [E]
From	A - A134 [W]	0	5	10
	B - Boxford Ln [N]	8	0	7
	C - A134 [E]	13	10	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	1.04	133.86	22.3	F	483	724
B-A	1.02	153.88	15.5	F	303	454
C-AB	0.91	59.08	8.8	F	466	699
C-A					50	75
A-B					278	417
A-C					50	76

Existing Layout 1630-1730 - Base 2023, PM 1630-1730

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm visibility to right	B - Boxford Ln [N] - Minor arm geometry	Visibility to right expected to have two components if the arm has two lanes, or two lanes in a flared section.

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A3	Existing Layout 1630-1730	✓	✓	D3,D6,D9	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A134 - Baxford Ln	T-Junction	Two-way	Two-way	Two-way		195.33	F

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	-24	Stream B-A	195.33	F

Arms

Arms

Arm	Name	Description	Arm type
A	A134 [W]		Major
B	Boxford Ln [N]		Minor
C	A134 [E]		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Width for right-turn storage (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - A134 [E]	6.00		✓	3.00	140.0	✓	15.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B - Boxford Ln [N]	One lane plus flare	10.00	7.80	4.80	3.80	3.50		2.00	44	65

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	542	0.099	0.250	0.157	0.356
B-C	744	0.114	0.288	-	-
C-B	712	0.276	0.276	-	-

The slopes and intercepts shown above include custom intercept adjustments only.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	Base 2023	PM 1630-1730	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - A134 [W]		ONE HOUR	✓	285	100.000
B - Boxford Ln [N]		ONE HOUR	✓	696	100.000
C - A134 [E]		ONE HOUR	✓	466	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - A134 [W]	B - Boxford Ln [N]	C - A134 [E]
From	A - A134 [W]	0	240	45
	B - Boxford Ln [N]	278	0	418
	C - A134 [E]	63	403	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A134 [W]	B - Boxford Ln [N]	C - A134 [E]
From	A - A134 [W]	0	3	4
	B - Boxford Ln [N]	3	0	3
	C - A134 [E]	5	4	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	1.21	389.92	45.6	F	384	575
B-A	1.20	400.76	30.9	F	255	383
C-AB	0.71	20.45	2.4	C	370	555
C-A					58	87
A-B					220	330
A-C					41	62

Existing Layout 1630-1730 - 2025 (Base+Tempro+con+Staff), PM 1630-1730

Data Errors and Warnings

Severity	Area	Item	Description

Warning	Minor arm visibility to right	B - Boxford Ln [N] - Minor arm geometry	Visibility to right expected to have two components if the arm has two lanes, or two lanes in a flared section.

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A3	Existing Layout 1630-1730	✓	✓	D3,D6,D9	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A134 - Baxford Ln	T-Junction	Two-way	Two-way	Two-way		257.30	F

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	-26	Stream B-A	257.30	F

Arms

Arms

Arm	Name	Description	Arm type
A	A134 [W]		Major
B	Boxford Ln [N]		Minor
C	A134 [E]		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Width for right-turn storage (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - A134 [E]	6.00		✓	3.00	140.0	✓	15.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B - Boxford Ln [N]	One lane plus flare	10.00	7.80	4.80	3.80	3.50		2.00	44	65

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	541	0.099	0.249	0.157	0.356
B-C	745	0.114	0.289	-	-
C-B	712	0.276	0.276	-	-

The slopes and intercepts shown above include custom intercept adjustments only.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2025 (Base+Tempro+con+Staff)	PM 1630-1730	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - A134 [W]		ONE HOUR	✓	294	100.000
B - Boxford Ln [N]		ONE HOUR	✓	718	100.000
C - A134 [E]		ONE HOUR	✓	502	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - A134 [W]	B - Boxford Ln [N]	C - A134 [E]
From	A - A134 [W]	0	244	50
	B - Boxford Ln [N]	285	0	433
	C - A134 [E]	82	420	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A134 [W]	B - Boxford Ln [N]	C - A134 [E]
From	A - A134 [W]	0	3	4
	B - Boxford Ln [N]	3	0	4
	C - A134 [E]	4	5	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	1.28	525.24	58.5	F	397	596
B-A	1.27	534.50	38.9	F	262	392
C-AB	0.74	23.29	2.9	C	386	579
C-A					75	112
A-B					224	336
A-C					46	69

Existing Layout 1630-1730 - Future Base 2025, PM 1630-1730

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm visibility to right	B - Boxford Ln [N] - Minor arm geometry	Visibility to right expected to have two components if the arm has two lanes, or two lanes in a flared section.

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A3	Existing Layout 1630-1730	✓	✓	D3,D6,D9	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A134 - Baxford Ln	T-Junction	Two-way	Two-way	Two-way		219.93	F

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	-25	Stream B-A	219.93	F

Arms

Arms

Arm	Name	Description	Arm type
A	A134 [W]		Major
B	Boxford Ln [N]		Minor
C	A134 [E]		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Width for right-turn storage (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - A134 [E]	6.00		✓	3.00	140.0	✓	15.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B - Boxford Ln [N]	One lane plus flare	10.00	7.80	4.80	3.80	3.50		2.00	44	65

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	542	0.099	0.250	0.157	0.356
B-C	744	0.114	0.288	-	-
C-B	712	0.276	0.276	-	-

The slopes and intercepts shown above include custom intercept adjustments only.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D9	Future Base 2025	PM 1630-1730	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - A134 [W]		ONE HOUR	✓	291	100.000
B - Boxford Ln [N]		ONE HOUR	✓	706	100.000
C - A134 [E]		ONE HOUR	✓	473	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - A134 [W]	B - Boxford Ln [N]	C - A134 [E]
From	A - A134 [W]	0	244	47
	B - Boxford Ln [N]	282	0	424
	C - A134 [E]	64	409	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A134 [W]	B - Boxford Ln [N]	C - A134 [E]
From	A - A134 [W]	0	3	4
	B - Boxford Ln [N]	3	0	3
	C - A134 [E]	5	4	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	1.24	439.57	50.7	F	389	584

B-A	1.23	454.44	34.2	F	259	388
C-AB	0.72	21.41	2.6	C	375	563
C-A					59	88
A-B					224	336
A-C					43	65

Appendix B: Core Scenario Turning Counts

Junction 1: A1214/A1071

BASE: 19/05/2022 (PCU Movements)			A1071 NW	A1214 SW	Scrivener Dr S	A1214 NE
			A	B	C	D
A1071 NW	A	0730 - 0830	0	249	127	124
		0800 - 0900	0	273	146	132
		1630 - 1730	0	309	199	96
A1214 SW	B	0730 - 0830	273	0	3	363
		0800 - 0900	256	0	8	422
		1630 - 1730	316	0	17	384
Scrivener Dr S	C	0730 - 0830	167	6	0	65
		0800 - 0900	174	15	0	77
		1630 - 1730	140	7	0	60
A1214 NE	D	0730 - 0830	152	452	63	0
		0800 - 0900	144	426	82	0
		1630 - 1730	147	520	67	0

FUTURE BASE: 2025 (PCU Movements)			A1071 NW	A1214 SW	Scrivener Dr S	A1214 NE
			A	B	C	D
A1071 NW	A	0730 - 0830	0	254	130	127
		0800 - 0900	0	278	149	135
		1630 - 1730	0	314	203	98
A1214 SW	B	0730 - 0830	278	0	4	369
		0800 - 0900	261	0	9	429
		1630 - 1730	322	0	17	391
Scrivener Dr S	C	0730 - 0830	170	7	0	67
		0800 - 0900	178	16	0	79
		1630 - 1730	143	8	0	62
A1214 NE	D	0730 - 0830	154	460	65	0
		0800 - 0900	146	433	84	0
		1630 - 1730	150	529	69	0

CONSTRUCTION: 2025 (PCU Movements)			A1071 NW	A1214 SW	Scrivener Dr S	A1214 NE
			A	B	C	D
A1071 NW	A	0730 - 0830	0	14	0	0
		0800 - 0900	0	14	0	0
		1630 - 1730	0	40	0	0
A1214 SW	B	0730 - 0830	66	0	0	0
		0800 - 0900	40	0	0	0
		1630 - 1730	14	0	0	0
Scrivener Dr S	C	0730 - 0830	0	0	0	0
		0800 - 0900	0	0	0	0
		1630 - 1730	0	0	0	0
A1214 NE	D	0730 - 0830	0	0	0	0
		0800 - 0900	0	0	0	0
		1630 - 1730	0	0	0	0

TOTAL FLOW: 2025 (PCU Movements)			A1071 NW	A1214 SW	Scrivener Dr S	A1214 NE
			A	B	C	D
A1071 NW	A	0730 - 0830	0	268	130	127
		0800 - 0900	0	292	149	135
		1630 - 1730	0	354	203	98
A1214 SW	B	0730 - 0830	344	0	4	369
		0800 - 0900	301	0	9	429
		1630 - 1730	336	0	17	391
Scrivener Dr S	C	0730 - 0830	170	7	0	67
		0800 - 0900	178	16	0	79
		1630 - 1730	143	8	0	62
A1214 NE	D	0730 - 0830	154	460	65	0
		0800 - 0900	146	433	84	0
		1630 - 1730	150	529	69	0

Junction 2: Copdock Interchange

BASE: 19/05/2022 (PCU Movements)			A14 N	A12 SW	A14 S	A1214 N
			A	B	C	D
A14 N	A	0730 - 0830	0	1013	0	461
		0800 - 0900	0	990	0	496
		1630 - 1730	0	983	0	570
A12 SW	B	0730 - 0830	885	0	1116	301
		0800 - 0900	847	0	1045	363
		1630 - 1730	808	0	1000	442
A14 S	C	0730 - 0830	0	1033	0	385
		0800 - 0900	0	969	0	429
		1630 - 1730	0	1038	0	538
A1214 N	D	0730 - 0830	354	489	573	0
		0800 - 0900	373	507	561	0
		1630 - 1730	355	559	488	0

FUTURE BASE: 2025 (PCU Movements)			A14 N	A12 SW	A14 S	A1214 N
			A	B	C	D
A14 N	A	0730 - 0830	0	1031	0	469
		0800 - 0900	0	1007	0	505
		1630 - 1730	0	1000	0	580
A12 SW	B	0730 - 0830	900	0	1135	306
		0800 - 0900	862	0	1063	369
		1630 - 1730	823	0	1018	450
A14 S	C	0730 - 0830	0	1050	0	392
		0800 - 0900	0	985	0	436
		1630 - 1730	0	1057	0	547
A1214 N	D	0730 - 0830	361	498	583	0
		0800 - 0900	380	516	571	0
		1630 - 1730	361	568	496	0

CONSTRUCTION: 2025 (PCU Movements)			A14 N	A12 SW	A14 S	A1214 N
			A	B	C	D
A14 N	A	0730 - 0830	0	0	0	22
		0800 - 0900	0	0	0	13
		1630 - 1730	0	0	0	5
A12 SW	B	0730 - 0830	0	0	0	22
		0800 - 0900	0	0	0	13
		1630 - 1730	0	0	0	5
A14 S	C	0730 - 0830	0	0	0	22
		0800 - 0900	0	0	0	13
		1630 - 1730	0	0	0	5
A1214 N	D	0730 - 0830	6	6	6	0
		0800 - 0900	5	5	5	0
		1630 - 1730	13	13	13	0

TOTAL FLOW: 2025 (PCU Movements)			A14 N	A12 SW	A14 S	A1214 N
			A	B	C	D
A14 N	A	0730 - 0830	0	1031	0	491
		0800 - 0900	0	1007	0	518
		1630 - 1730	0	1000	0	585
A12 SW	B	0730 - 0830	0	1031	0	491
		0800 - 0900	862	0	1063	382
		1630 - 1730	823	0	1018	455
A14 S	C	0730 - 0830	0	1031	0	491
		0800 - 0900	0	985	0	449
		1630 - 1730	0	1057	0	552
A1214 N	D	0730 - 0830	0	1031	0	491
		0800 - 0900	385	521	576	0
		1630 - 1730	374	581	509	0

Junction 3: Tesco Access Roundabout

BASE: 15/06/2023 (PCU Movements)			A1214 N	Local Rd W	A1214 S	Scrivener Dr W
			A	B	C	D
A1214 N	A	0730 - 0830	3	120	538	5
		0800 - 0900	4	113	519	8
		1630 - 1730	1	149	671	15
Local Rd W	B	0730 - 0830	95	0	179	63
		0800 - 0900	86	0	180	82
		1630 - 1730	132	0	237	167
A1214 S	C	0730 - 0830	641	32	2	413
		0800 - 0900	657	32	3	461
		1630 - 1730	547	53	7	662
Scrivener Dr W	D	0730 - 0830	21	87	598	0
		0800 - 0900	19	141	561	0
		1630 - 1730	13	134	401	0

FUTURE BASE: 2025 (PCU Movements)			A1214 N	Local Rd W	A1214 S	Scrivener Dr W
			A	B	C	D
A1214 N	A	0730 - 0830	4	122	545	5
		0800 - 0900	5	115	525	9
		1630 - 1730	2	152	681	16
Local Rd W	B	0730 - 0830	96	0	182	64
		0800 - 0900	87	0	183	84
		1630 - 1730	134	0	241	170
A1214 S	C	0730 - 0830	649	33	3	418
		0800 - 0900	666	33	4	467
		1630 - 1730	555	54	8	671
Scrivener Dr W	D	0730 - 0830	22	88	606	0
		0800 - 0900	20	144	569	0
		1630 - 1730	13	137	406	0

CONSTRUCTION: 2025 (PCU Movements)			A1214 N	Local Rd W	A1214 S	Scrivener Dr W
			A	B	C	D
A1214 N	A	0730 - 0830	0	0	14	0
		0800 - 0900	0	0	14	0
		1630 - 1730	0	0	40	0
Local Rd W	B	0730 - 0830	0	0	0	0
		0800 - 0900	0	0	0	0
		1630 - 1730	0	0	0	0
A1214 S	C	0730 - 0830	66	0	0	0
		0800 - 0900	40	0	0	0
		1630 - 1730	14	0	0	0
Scrivener Dr W	D	0730 - 0830	0	0	0	0
		0800 - 0900	0	0	0	0
		1630 - 1730	0	0	0	0

TOTAL FLOW: 2025 (PCU Movements)			A1214 N	Local Rd W	A1214 S	Scrivener Dr W
			A	B	C	D
A1214 N	A	0730 - 0830	4	122	559	5
		0800 - 0900	5	115	539	9
		1630 - 1730	2	152	721	16
Local Rd W	B	0730 - 0830	96	0	182	64
		0800 - 0900	87	0	183	84
		1630 - 1730	134	0	241	170
A1214 S	C	0730 - 0830	715	33	3	418
		0800 - 0900	706	33	4	467
		1630 - 1730	569	54	8	671
Scrivener Dr W	D	0730 - 0830	22	88	606	0
		0800 - 0900	20	144	569	0
		1630 - 1730	13	137	406	0

Junction 4: A1071/B1113

BASE: 19/05/2022 (PCU Movements)			B1113 N	A1071 NW	Swan Hill S	A1071 SE
			A	B	C	D
B1113 N	A	0730 - 0830	0	23	549	74
		0800 - 0900	0	25	459	70
		1630 - 1730	0	33	525	92
A1071 NW	B	0730 - 0830	38	0	371	186
		0800 - 0900	0	25	459	70
		1630 - 1730	34	1	143	159
Swan Hill S	C	0730 - 0830	427	104	1	178
		0800 - 0900	366	95	2	182
		1630 - 1730	523	151	0	205
A1071 SE	D	0730 - 0830	146	92	188	0
		0800 - 0900	129	82	202	0
		1630 - 1730	117	109	185	0

FUTURE BASE: 2025 (PCU Movements)			B1113 N	A1071 NW	Swan Hill S	A1071 SE
			A	B	C	D
B1113 N	A	0730 - 0830	0	23	559	75
		0800 - 0900	0	25	467	72
		1630 - 1730	0	34	535	94
A1071 NW	B	0730 - 0830	0	378	189	39
		0800 - 0900	30	0	331	175
		1630 - 1730	35	2	146	162
Swan Hill S	C	0730 - 0830	435	107	2	181
		0800 - 0900	372	97	3	186
		1630 - 1730	533	154	0	209
A1071 SE	D	0730 - 0830	149	94	191	0
		0800 - 0900	131	83	206	0
		1630 - 1730	0	25	467	72

CONSTRUCTION: 2025 (PCU Movements)			B1113 N	A1071 NW	Swan Hill S	A1071 SE
			A	B	C	D
B1113 N	A	0730 - 0830	0	3	0	0
		0800 - 0900	0	3	0	0
		1630 - 1730	0	3	0	1
A1071 NW	B	0730 - 0830	3	0	0	14
		0800 - 0900	3	0	0	14
		1630 - 1730	3	0	0	39
Swan Hill S	C	0730 - 0830	0	0	0	0
		0800 - 0900	0	0	0	0
		1630 - 1730	0	0	0	0
A1071 SE	D	0730 - 0830	2	64	0	0
		0800 - 0900	1	39	0	0
		1630 - 1730	0	14	0	0

TOTAL FLOW: 2025 (PCU Movements)			B1113 N	A1071 NW	Swan Hill S	A1071 SE
			A	B	C	D
B1113 N	A	0730 - 0830	0	26	559	75
		0800 - 0900	0	28	467	72
		1630 - 1730	0	37	535	95
A1071 NW	B	0730 - 0830	42	0	378	203
		0800 - 0900	33	0	331	189
		1630 - 1730	38	2	146	201
Swan Hill S	C	0730 - 0830	435	107	2	181
		0800 - 0900	372	97	3	186
		1630 - 1730	533	154	0	209
A1071 SE	D	0730 - 0830	151	158	191	0
		0800 - 0900	132	122	206	0
		1630 - 1730	119	125	189	1

Junction 5: A134/A1071

BASE: 14/06/2023 (PCU Movements)			A1071 NE	A134 NW	A134 SE
			A	B	C
A1071 NE	A	0730 - 0830	0	299	54
		0800 - 0900	0	298	38
		1630 - 1730	0	240	45
A134 NW	B	0730 - 0830	325	0	519
		0800 - 0900	282	0	464
		1630 - 1730	278	0	418
A134 SE	C	0730 - 0830	60	495	0
		0800 - 0900	58	450	0
		1630 - 1730	63	403	0

FUTURE BASE: 2025 (PCU Movements)			A1071 NE	A134 NW	A134 SE
			A	B	C
A1071 NE	A	0730 - 0830	0	303	55
		0800 - 0900	0	302	39
		1630 - 1730	0	244	47
A134 NW	B	0800 - 0900	286	0	471
		0730 - 0830	330	0	526
		1630 - 1730	282	0	424
A134 SE	C	0800 - 0900	59	456	0
		0730 - 0830	61	501	0
		1630 - 1730	64	409	0

CONSTRUCTION: 2025 (PCU Movements)			A1071 NE	A134 NW	A134 SE
			A	B	C
A1071 NE	A	0730 - 0830	0	6	32
		0800 - 0900	0	3	18
		1630 - 1730	0	0	3
A134 NW	B	0730 - 0830	0	0	13
		0800 - 0900	0	0	11
		1630 - 1730	3	0	9
A134 SE	C	0730 - 0830	3	9	0
		0800 - 0900	3	9	0
		1630 - 1730	18	11	0

TOTAL FLOW: 2025 (PCU Movements)			A1071 NE	A134 NW	A134 SE
			A	B	C
A1071 NE	A	0730 - 0830	0	309	87
		0800 - 0900	0	305	57
		1630 - 1730	0	244	50
A134 NW	B	0730 - 0830	330	0	539
		0800 - 0900	286	0	482
		1630 - 1730	285	0	433
A134 SE	C	0730 - 0830	64	510	0
		0800 - 0900	62	465	0
		1630 - 1730	82	420	0

Appendix C: High Growth Scenario Turning Counts

Junction 1: A1214/A1071

FUTURE BASELINE: 2025 HG (PCU Movements)			A1071 NW	A1214 SW	Scrivener Dr S	A1214 NE
			A	B	C	D
A1071 NW	A	0730 - 0830	0	345	130	176
		0800 - 0900	0	369	149	184
		1630 - 1730	0	391	200	123
A1214 SW	B	0730 - 0830	313	0	16	409
		0800 - 0900	296	1	21	468
		1630 - 1730	402	1	62	484
Scrivener Dr S	C	0730 - 0830	168	27	0	65
		0800 - 0900	175	36	0	77
		1630 - 1730	142	73	0	7
A1214 NE	D	0730 - 0830	176	518	63	5
		0800 - 0900	168	492	82	5
		1630 - 1730	189	617	67	7

TOTAL FLOW: 2025 HG (PCU Movements)			A1071 NW	A1214 SW	Scrivener Dr S	A1214 NE
			A	B	C	D
A1071 NW	A	0730 - 0830	0	359	130	176
		0800 - 0900	0	384	149	184
		1630 - 1730	0	431	200	123
A1214 SW	B	0730 - 0830	379	0	16	409
		0800 - 0900	337	1	21	468
		1630 - 1730	417	1	62	484
Scrivener Dr S	C	0730 - 0830	168	27	0	65
		0800 - 0900	175	36	0	77
		1630 - 1730	142	73	0	60
A1214 NE	D	0730 - 0830	176	518	63	5
		0800 - 0900	168	492	82	5
		1630 - 1730	189	617	67	7

Junction 2: Copdock Interchange

FUTURE BASELINE: 2025 HG (PCU Movements)			A14 N	A12 SW	A14 S	A1214 N
			A	B	C	D
A14 N	A	0730 - 0830	0	1013	0	505
		0800 - 0900	0	990	0	538
		1630 - 1730	0	983	0	610
A12 SW	B	0730 - 0830	885	0	1116	336
		0800 - 0900	847	0	1045	400
		1630 - 1730	808	0	1000	480
A14 S	C	0730 - 0830	0	1033	0	441
		0800 - 0900	0	969	0	485
		1630 - 1730	0	1038	0	0
A1214 N	D	0730 - 0830	377	529	629	0
		0800 - 0900	397	547	616	0
		1630 - 1730	393	604	551	0

TOTAL FLOW: 2025 HG (PCU Movements)			A14 N	A12 SW	A14 S	A1214 N
			A	B	C	D
A14 N	A	0730 - 0830	0	1013	0	527
		0800 - 0900	0	990	0	552
		1630 - 1730	0	983	0	615
A12 SW	B	0730 - 0830	885	0	1116	359
		0800 - 0900	847	0	1045	413
		1630 - 1730	808	0	1000	484
A14 S	C	0730 - 0830	0	1033	0	464
		0800 - 0900	0	969	0	498
		1630 - 1730	0	1038	0	607
A1214 N	D	0730 - 0830	383	535	635	0
		0800 - 0900	402	552	621	0
		1630 - 1730	407	617	564	0

Junction 3: Tesco Access Roundabout

FUTURE BASELINE: 2025 HG (PCU Movements)			A1214 N	Local Rd W	A1214 S	Scrivener Dr W
			A	B	C	D
A1214 N	A	0730 - 0830	3	162	608	5
		0800 - 0900	4	155	589	8
		1630 - 1730	1	183	757	15
Local Rd W	B	0730 - 0830	128	0	227	63
		0800 - 0900	119	0	229	82
		1630 - 1730	173	0	298	167
A1214 S	C	0730 - 0830	715	62	2	413
		0800 - 0900	731	62	3	461
		1630 - 1730	639	78	7	0
Scrivener Dr W	D	0730 - 0830	21	87	598	0
		0800 - 0900	19	141	561	0
		1630 - 1730	13	134	401	0

TOTAL FLOW: 2025 HG (PCU Movements)			A1214 N	Local Rd W	A1214 S	Scrivener Dr W
			A	B	C	D
A1214 N	A	0730 - 0830	3	162	622	5
		0800 - 0900	4	155	603	8
		1630 - 1730	1	183	798	15
Local Rd W	B	0730 - 0830	128	0	227	63
		0800 - 0900	119	0	229	82
		1630 - 1730	173	0	298	167
A1214 S	C	0730 - 0830	781	62	2	413
		0800 - 0900	772	62	3	461
		1630 - 1730	653	78	7	662
Scrivener Dr W	D	0730 - 0830	21	87	598	0
		0800 - 0900	19	141	561	0
		1630 - 1730	13	134	401	0

Junction 4: A1071/B1113

FUTURE BASELINE: 2025 HG (PCU Movements)			B1113 N	A1071 NW	Swan Hill S	A1071 SE
			A	B	C	D
B1113 N	A	0730 - 0830	0	23	549	93
		0800 - 0900	0	25	459	90
		1630 - 1730	0	33	525	125
A1071 NW	B	0730 - 0830	38	0	371	211
		0800 - 0900	29	0	326	196
		1630 - 1730	34	1	143	201
Swan Hill S	C	0730 - 0830	427	104	1	184
		0800 - 0900	366	95	2	189
		1630 - 1730	523	151	0	0
A1071 SE	D	0730 - 0830	174	110	189	0
		0800 - 0900	156	100	204	0
		1630 - 1730	140	148	187	0

TOTAL FLOW: 2025 HG (PCU Movements)			B1113 N	A1071 NW	Swan Hill S	A1071 SE
			A	B	C	D
B1113 N	A	0730 - 0830	0	25	549	93
		0800 - 0900	0	27	459	90
		1630 - 1730	0	35	525	126
A1071 NW	B	0730 - 0830	41	0	371	225
		0800 - 0900	32	0	326	210
		1630 - 1730	36	1	143	241
Swan Hill S	C	0730 - 0830	427	104	1	184
		0800 - 0900	366	95	2	189
		1630 - 1730	523	151	0	0
A1071 SE	D	0730 - 0830	176	175	189	0
		0800 - 0900	157	140	204	0
		1630 - 1730	140	162	187	0

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