Tritax Symmetry (Hinckley) Limited

HINCKLEY NATIONAL RAIL FREIGHT INTERCHANGE

The Hinckley National Rail Freight Interchange Development Consent Order

Project reference TR050007

Appendix 1 - M1 J21 Modelling Note

Revision: 01

December 2024

Planning Act 2008

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 Regulation 5(2)(q)





PROJECT NAME	Hinckley National Rail Freight Interchange					
DOCUMENT NUMBER	HNRFI-BWB-GEN-XX-RP-TR-000X BWB REF NTT2814					
AUTHOR	Vibeeshan Devaharan	STATUS	S2			
CHECKED	Malcolm Ash	REVISION	P02			
APPROVED	Shirley Dumigan	DATE	14/11/2024			

1. INTRODUCTION

- 1.1 The modelling of M1 Junction 21 Modelling Note Note (PINS Ref: REP5-051) was submitted as part of the examination. Following the end of examination, the Secretary of State (SoS) response letter was received on 10th September 2024 and references the ExA report which states:
 - i. NH highlighted that because the data submitted did not include the signal specification, it was not able to conclude how the Proposed Development might impact how the M1 J21/M69 J3 is likely to be affected. Based on the existing operational issues and the increases in demand arising from the Proposed Development, NH considered that it is likely that the Proposed Development is likely to adversely affect the safe and efficient operation of the SRN [ER 3.3.284]
 - ii. LCC's view is that the strategic model shows development traffic using this junction and displacing other traffic on to the local road network ("LRN"). LCC considers that that the Applicant should provide mitigation to attract back the displaced traffic which would, potentially, reduce the need for mitigations on the LRN [ER 3.3.315];
 - iii. LCC stated modelling based on an unconstrained scenario is required so that LCC is able to determine the actual impact at this junction, and that they are of the view that the Applicant is incorrectly relying on the modelling conducted for the Lutterworth East Scheme (which cannot be guaranteed and only deals with the effects of that development) and a reduction of 10% to 13% of development traffic routing from the effects of the Sustainable Transport Strategy [ER 3.3.316];
 - iv. The LinSig model does not capture all the complex movements and free flow links and thus the full effects of traffic movements. LCC's view is that LinSig would only be appropriate if the effects were negligible, as they are on the Applicant's assessment but that prejudges results of the modelling [ER 3.3.317];
 - v. LCC is of the view that the Applicant's strategy is to displace traffic onto the LRN and not to resolve the issues at this junction which is already operating above capacity [ER 3.3.318].
 - vi. The safety concerns raised in respect of the M1 J21/ M69 J3 (Junction 15) (paragraphs 49 - 52 above) and the lack of adequate modelling at this junction. The Secretary of State invites the Applicant to submit further evidence in light of these concerns, and in particular requests that the Applicant provides NH with the signal specification used in its 'M1 J21 Modelling Note' (paragraph 53 above)



1.2 Following the above, NH and their consultants have been consulted on the M1 Junction 21 traffic modelling, this report provides a summary of the base model validation, forecast modelling outputs and any changes made to the model during the NH audit process.

2. BACKGROUND

- 2.1 Current capacity constraints at Junction 21 are longstanding and driven by the restricted width of the M1 underbridges on the circulatory carriageway. The mainline flows on the M1 and baseline traffic already trigger the need to upgrade the north and southbound slip roads. Improvement to address these constraints would be of a significant magnitude and require considerable Government investment. Whilst there is a clear aspiration from both Leicestershire County Council and National Highways to improve the junction, there is currently no scheme identified.
- 2.2 As set out in Paragraph 49 of Circular 01/2022 'planned improvements to the SRN or local road network should be considered in any assessment where there is a high degree of certainty that this will be delivered'. Given there was no scheme committed or even foreseeable to address these existing issues at Junction 21, LCC's PRTM2.2 model reflects the current arrangement. This was agreed with the TWG as part of the Infrastructure Log for PRTM2.2 (Appendix 8.1: Transport Assessment PRTM 2.2 Forecast Modelling 6.2.8.1).

3. TRAFFIC MODEL VALIDATION

- 3.1 This section provides the results and validation of M1 Junction 21 which has been built using JCT's LinSig software (version V3.2.44). A copy of the approved LUE LinSig model has been replicated utilising the LinSig outputs presented in the LUE TA.
- 3.2 Further to manual turning counts, green time survey and Degree of Saturation (DoS) surveys were undertaken in November 2023 to validate the models. A copy of the following in information was supplied to NH during the model auditing process:
 - Manual Turning Count Survey;
 - DoS Survey;
 - Queue Survey;
 - M1 J21 Signal Specification.
- 3.3 TfL modelling guidelines recommend that "A Degree of Saturation (DoS) survey should be conducted on all critical approaches for each modelled period. Critical approaches would include those close to saturation, those that determine stage length and those key to scheme proposals".
- 3.4 The validation criteria for LinSig models are presented in 'TfL modelling guidelines' which indicates that modelled DoS should be within 5% of observed values.



Signal Operation

3.5 M1 Junction 21 operates utilising two controllers. Details of the stage sequence for the respective Controllers/Streams are provided below.

Controller 1 Stream 1: M1 Southbound Off Slip/Northern Circulatory Carriageway



Controller 1 Stream 2: A5460/Eastern Circulatory Carriageway



Controller 2 Stream 1: M1 Northbound Off Slip/Southern Circulatory Carriageway



Signal Timing Analysis

3.6 The junction operates on Microprocessor Optimised Vehicle Actuation (MOVA) with varying stage lengths per cycle. A summary of number of times each Controller/Stream was activate is presented in **Table 1** below.



	M1 SB	A5460	M1 NB
AM	47	48	49
PM	48	47	48

- 3.7 Based on table above, it is understood that the junction operates approximately on an average cycle time of 75 seconds (3600s/48) therefore this has been utilised in the 2023 Base modelling scenarios.
- 3.8 Further to the above, a green time survey was undertaken at M1 Junction 21 to identify the average, minimum and maximum green times recorded at the junction. Subsequently the average green times have been input into the base model on all approaches except M1 NB off-slip PM peak hour. It should be noted that as the junction operates on MOVA, the DoS recorded would vary cycle to cycle therefore it has been ensured that all green times input into model are between the minimum and maximum green times.
- 3.9 A summary of the green times for the approach arms to the junction are provided in **Table 2** below.

Table 2: Signal Timing Analysis

	Average			Average				Minimun	า	1	Maximur	n		Modelle	d
	M1 SB	A5460	M1 NB	M1 SB	A5460	M1 NB	M1 SB	A5460	M1 NB	M1 SB	A5460	M1 NB			
AM	22	33	12	19	8	11	24	43	16	21	36	11			
PM	21	36	11	17	35	9	24	42	14	20	38	10			

NH Model Audit

- 3.10 Following the SoS letter, BWB consulted NH on the M1 J21 traffic modelling and the model was submitted to NH for audit. The following points were raised during the audit:
 - Model to be updated to include for recorded Underutilised Green Time(UGT);
 - Saturation flow on Arm J1:3 to exclude 'Treat as Nearside";
 - "Physical Lane Lengths" and "Custom Lane Lengths" to be updated to reflect existing junction arrangements;
 - PCU flows to be updated in accordance with PCU values for various vehicle types.
- 3.11 Subsequently the LinSig model was updated to account for the above comments and submitted to NH.

Base Model Validation

3.12 A summary of the base model validation has been presented in





3.13 **Table** 3.



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			AM		РМ			
		Observed	Modelled	Difference	Observed	Modelled	Difference	
	Lane 1	98.0%	96.9%	-1.1%	97.3%	98.7%	1.4%	
M1 SB	Lane 2	100.0%	101.4%	1.4%	100.0%	103.5%	3.5%	
	Lane 3	97.0%	96.2%	-0.8%	96.3%	101.1%	4.8%	
	Lane 1	75.1%	76.2%	1.1%	84.9%	84.9%	0.0%	
A 5 4 4 O	Lane 2	78.0%	73.2%	-4.8%	76.6%	71.7%	-4.9%	
AJ400	Lane 3	98.4%	102.0%	3.6%	97.8%	102.7%	4.9%	
	Lane 4	100.4%	96.8%	-3.6%	99.1%	99.3%	0.2%	
M1 NB	Lane 1	96.2%	97.5%	1.3%	100.0%	96.3%	-3.7%	
	Lane 2	96.5%	101.4%	4.9%	97.1%	99.9%	2.8%	

3.14



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3.15 **Table** 3 above illustrates that the modelled DoS are within 5% of the observed data therefore it is considered the signalised approaches of the junction meet the validation criteria and therefore is 'fit for purpose' for future year assessment.

M69 West Validation

- 3.16 M69 western approach of the junction is currently a priority-controlled junction. A review of the video footage was undertaken whilst validating the approach arm to modelled queues. It was noted that the queues from M1 northbound on-slip was blocking back onto M1 Junction 21 and thereby impacting the capacity of M69 western approach. It was noted that this occurred in both AM and PM peak hour periods however at varying frequencies and duration.
- 3.17 **Figure 1** illustrates the blocking back of vehicles observed in the evening peak hour.



Figure 1: M1 NB block back

3.18 Further examination of the video footage was undertaken to understand whether the segregated left turn movement was affected by the queues on M1 northbound. However, it was noted that the segregated left turn from M69 West was free flowing in both AM and PM peak hours. **Figure 2** provides a snapshot of the operation of M69 West diverge in the PM peak hour.



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Figure 2: M69 Diverge



- 3.19 To replicate the blocking back of queues across the M69 Western approach, saturation flows have been altered. These have been input separately for AM and PM peak hour scenario to reflect observed queues. The saturation flows utilised in the base model will be maintained for forecast AM and PM peak hour assessments respectively.
- 3.20 A summary of the queue validation on M69 West is provided below.

		AM		PM			
	Observed	Modelled	Difference	Observed	Modelled	Difference	
Lane 1	19.0	14.3	+4.7	19.0	22.2	-3.2	
Lane 2	19.0	16.2	+2.8	16.0	14.0	+2.0	

Table 4: M69 EB Queue Validation

3.21 **Table 4** illustrates that the modelled queues are reflective of the observed queues. A meeting was held with NH Audit team on 29th October 2024, and it was confirmed that the base model represents the operation of the junction and is 'fit for purpose' for future year assessment.

4. PRTM TRAFFIC FLOWS

Traffic flows

4.1 Section 8.0 of the Transport Assessment provides details of M1 Junction 21. An extract of the '2036 Without Development (WoD)' and '2036 With Development (WD)' PRTM flows are provided in **Table 5**.

Table 5: 2036 PRTM flows at M1 Junction 21

Devel	2036 A	M Peak	2036 PM Peak		
Koda	Total Vehicles	HGVs	Total Vehicles	HGVs	



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	WoD	WD	Diff.	WoD	WD	Diff.	WoD	WD	Diff.	WoD	WD	Diff.
M69 W	963	958	-5	50	43	-6	1027	1043	15	52	61	9
M1 N	1801	1744	-56	205	228	23	1799	1774	-25	177	212	36
A5460	3282	3331	49	234	245	10	3082	3189	107	139	149	10
M1 S	566	568	2	96	96	0	573	589	16	57	58	1
Total	6612	6602	-10	585	611	26	6481	6595	114	425	481	56

- 4.2 **Table 5** shows that the PRTM is predicting there to be a reduction of 10 vehicles in the morning peak hour and an increase of 114 vehicles in the evening peak hour at M69 Junction 2 between the WoD and WD scenarios.
- 4.3 The traffic flows extracted from PRTM have been furnessed for M1 Junction 21 in accordance with the methodology outlined in HNRFI-BWB-GEN-XX-RP-TR-0022 Furnessing Methodology. Subsequently the derived forecast matrices have been utilised in the modelling assessment of M1 Junction 21.
- 4.4 Further to the above, analysis of the PRTM data was undertaken to understand the breakdown of the development traffic routing through the junction. A summary of this is provided below in **Table 6**.

			AM			PM	
From	То	LGV	HGV	Total	LGV	HGV	Total
M69 W	M1 N	24	50	74	119	50	169
M69 W	A5460	2	3	5	109	11	120
M1 N	M69 W	36	33	69	29	40	69
A5460	M69 W	159	14	173	69	16	85
To	otal	221	100	321	326	114	443

Table 6: Development Traffic through M1 Junction 21

4.5 The above demonstrates that in the AM peak hour, 22% of development light vehicles and 23% of HGVs are predicted to route through M1 Junction 21. In the PM peak hour, 26% of development light vehicles and 23% of HGVs are predicted to route through M1 the junction.

5. FORECAST MODELLING

- 5.1 Due to the existing constraints at M1 Junction 21, the PRTM demonstrates that the proposed development traffic results in background traffic re-routing onto alternative routes. However, Leicestershire County Council (LCC) has requested a theoretical sensitivity test assuming that this re-routing does not occur. Consequently, the following scenarios have been assessed:
 - Scenario 1: 2036 WoD AM/PM
 - Scenario 2: 2036 WD AM/PM



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- Sensitivity Test: 2036 WoD AM/PM + Development Traffic
- 5.2 It should be noted that the modelling undertaken does not account for the STS proposal which would reduce the number of development trips routing via M1 J21.

Modelling Output

- 5.3 A summary of the LinSig output is presented in
- 5.4 Table 7 for the morning peak hour period. **Appendix 1** incudes the output data.

PRC Max Per Approach									
			AM DoS Max	(PM DoS Max	(
		2036WoD	2036 WD	2036 WoD +Dev	2036Wo D	2036 WD	2036 WoD +Dev		
	Lane 1	74%	80%	84%	68%	85%	79%		
MT 3D OTI-SIIP	Lane 2	75%	81%	85%	68%	80%	80%		
	Lane 1	100%	105%	112%	94%	92%	103%		
A 5 4 4 O	Lane 2	87%	92%	98%	83%	81%	90%		
A346U	Lane 3	108%	107%	108%	92%	94%	95%		
	Lane 4	102%	102%	102%	87%	90%	90%		
	Lane 1	80%	80%	80%	83%	85%	83%		
ил ив Оп-зір	Lane 2	90%	90%	90%	84%	88%	84%		
	Lane 1	105%	108%	107%	104%	111%	122%		
M6A ER	Lane 2	105%	108%	107%	105%	106%	122%		
		AM A	verage Delo	ay (s)	PM A	verage Dela	ay (s)		
	Lane 1	30.6	36.2	39	26.3	39.6	34.2		
W I 2R Ott-211b	Lane 2	26.5	30.3	32	24.1	34.3	29.9		
	Lane 1	90.2	152.9	252.7	52.9	45.3	125.6		
45440	Lane 2	36.4	43.9	68.1	30.1	28.1	39.9		
A346U	Lane 3	183	171.1	181.1	41.4	46.9	50.8		
	Lane 4	102.9	96.3	104.1	31.8	34.4	36.2		
	Lane 1	60.1	60.1	60.1	65.3	70	65.3		
	Lane 2	87.1	89.9	87.1	68.6	76.8	68.6		
MAG ER	Lane 1	164.8	204.4	186.2	173.4	265	397.6		
10107 ED	Lane 2	146.8	189.9	168.4	150.2	166.8	366.1		
			AM MMQ			PM MMQ			
M1 SB Off Slip	Lane 1	10.9	11.9	13	9.9	12.7	11.9		
MT 30 OTF311p	Lane 2	11.1	12.1	13.2	10.1	12.4	12.2		
	Lane 1	27.3	41.3	65.2	20.2	18.9	36.6		
A 5 4 4 O	Lane 2	16.4	19.1	26.1	15.1	14.8	18.5		
AJ400	Lane 3	60	56.6	59.5	20.7	23.5	23		
	Lane 4	40.5	38.6	40.8	18.5	20.4	19.5		
	Lane 1	6.3	6.3	6.3	6.9	7.5	6.9		
	Lane 2	7.9	8.2	7.9	7.1	8.0	7.1		
MAG ER	Lane 1	41.5	46.3	43.7	24.5	30.3	44.7		
10107 LD	Lane 2	54.4	64.9	59.3	51.5	54	90.8		
			PRC AM (%)			PRC PM (%)			
Junction F	PRC	-19.7	-20.5	-24.7	-16.7	-23.7	-35.7		

Table 7: M1 Junction 21 Modelling Results (AM peak hour)



5.6 Table 7 illustrates that in the morning peak hour period A5460 and M69 EB approach all operate over capacity in the 'WoD' scenario. A comparison of the junction operation against the WD scenario indicates that there are minimal changes in PRC, with an impact of approximately 0.8% in PRC.

- 5.7 A theoretical assessment was undertaken to assess the operation of the junction to exclude the rerouting of background traffic.
- 5.8 Table 7 illustrates that the impact of the theoretical assessment would equate to 5% in the morning peak hour period.
- 5.9 A comparison of the evening peak hour period between '2036 WD' and '2036 WD' scenario indicates that the A5460 and M69 EB is already over capacity in the 'WoD' scenario which is worsened slightly with the addition of the development traffic. The impact of the overall junction equates to 8% in the 'WD' scenario and 19% in the theoretical assessment. However, it should be noted that the base model was calibrated in the PM peak hour to restrict vehicles egressing from M69 EB to replicate on site observation of M1 NB blocking back onto the junction. Consequently, an additional assessment was undertaken to analyse the junction's operation in the scenario where the M1 NB on slip is not obstructed. A summary of the results are presented in





5.10 **Table** 8 below.



			PM DoS	
		2036WoD	2036 WD	2036 WoD +Dev
	Lane 1	68%	85%	79%
MT 3D OTI-SIIP	Lane 2	68%	80%	80%
	Lane 1	94%	95%	103%
45440	Lane 2	83%	83%	90%
A3460	Lane 3	92%	97%	95%
	Lane 4	87%	92%	90%
	Lane 1	83%	85%	83%
MT NB OT-SIIP	Lane 2	84%	88%	84%
	Lane 1	56%	61%	65%
1107 ED	Lane 2	56%	61%	65%
	1		PM Average Delay (s)
	Lane 1	26.3	25.1	34.2
WL 2R OLI-2lib	Lane 2	24.1	23	29.9
	Lane 1	52.9	56.3	125.6
A5460	Lane 2	30.1	30.7	39.9
	Lane 3	41.4	60.7	50.8
	Lane 4	31.8	40.3	36.2
	Lane 1	65.3	70	65.3
MI NE OII-SIIP	Lane 2	68.6	76.8	68.6
	Lane 1	18.1	21.5	21.7
1V167 EB	Lane 2	13.5	16.1	16.1
			PM MMQ	
	Lane 1	9.9	12.7	11.9
MT 28 OII-211b	Lane 2	10.1	12.4	12.2
	Lane 1	20.2	21.1	36.6
	Lane 2	15.1	15.5	18.5
A3460	Lane 3	20.7	27.1	23
	Lane 4	18.5	22.1	19.5
	Lane 1	6.9	7.5	6.9
WI NR Ott-211b	Lane 2	7.1	8	7.1
	Lane 1	4.2	4.7	5.5
M9A FR	Lane 2	4.1	4.7	5.5
	·		PRC PM (%)	
Junction	PRC	-4.3	-7.8	-14.6

Table 8: M1 Junction 21 Modelling Results (PM peak hour no block back)

5.11



5.12 **Table** 8 shows that, the impact of the proposed development is 3.5% PRC and an impact of 10.3% is predicted in the theoretical assessment. It should be noted that the junction operates within 100% capacity in both the WoD and WD scenarios.

6. SUMMARY & CONCLUSION

- 6.1 The purpose of this Technical Note is to provide additional information on the modelling of M1 Junction 21.
- 6.2 The following comments were raised in the SoS response letter:
 - i. NH require M1 J21 signal specification to conclude model audit;
 - ii. LCC requires mitigation to attract displaced traffic back onto M1 J21;
 - iii. Lutterworth East scheme should not be relied upon and LCC require modelling of an unconstrained scenario.
 - iv. LinSig does not capture all complex movements and free flow links and thus the full effects of traffic movements.
 - v. LCC's view is that the traffic is displaced from M1 J21 and does not resolve the issue at the junction.
 - vi. SoS requested further information sent to address the comments and in particular supply NH with signal specification used for the modelling.
- 6.3 Following the above, NH was consulted on the modelling of M1 J21. Subsequently the model has gone through an audit and NH considers that the LinSig model represents the operation of the existing junction. (SoS Points i, iii, iv, vi)
- 6.4 The following scenarios were assessed as part of the forecast modelling:
 - Scenario 1: 2036 WoD AM/PM
 - Scenario 2: 2036 WD AM/PM
 - Sensitivity Test: 2036 WoD AM/PM + Development Traffic (SoS Point ii, v)
- 6.5 Forecast modelling was undertaken which indicated that the junction already operates overcapacity and is slightly worsened by the inclusion of the proposed development equating to an increase in PRC of 0.8% and 3.5% in the morning and evening peak hours respectively.
- 6.6 To address points ii) and vi) The applicant considers the use of Leicestershire's PRTM outputs throughout the process has informed the understanding of the displacement of local traffic. This has been fully accounted for with the mitigation works packages.
- 6.7 NH modelling audit concluded that the junction is already over capacity with existing constraints and any physical mitigation proposed would be disproportionate to the impact of the development.

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6.8 Nevertheless, further to the above, the proposed STS should alleviate the number of development traffic going through M1 J21 to further reduce the impact at the junction. This is not built into the model at this stage and therefore is robust.

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APPENDICES

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APPENDIX 1: M1 Junction 21 Model Outputs

Basic Results Summary Basic Results Summary

User and Project Details

Project:	HNRFI
Title:	M1 Junction 21
Location:	
Additional detail:	
File name:	241018_M1_Junction_21_Base_Validated V5.lsg3x
Author:	Vibeeshan Devaharan
Company:	BWB Consulting
Address:	

Scenario 1: '2023 Base AM Rev 1' (FG14: '2023 AM Survey Rev 1', Plan 1: 'Network Control Plan 1') Network Layout Diagram



Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: M1 Junction 21	-	-	-		-	-	-	-	-	-	102.0%	1904	0	0	151.6	-	-
J1: Unnamed Junction	-	-	-		-	-	-	-	-	-	102.0%	1904	0	0	118.1	-	-
1/1	M1 SB Off-Slip Ahead	U	C1:B		1	21	-	485	1975	500	96.9%	-	-	-	11.6	85.8	17.8
1/2+1/3	M1 SB Off-Slip Ahead	U	C1:B		1	21	-	971	2115:2100	479+504	101.4 : 96.2%	-	-	-	24.0 (13.8+10.2)	88.8 (102.0:75.6)	26.3
3/1	A5460 Ahead	U	C1:D		1	36	-	535	1951	702	76.2%	-	-	-	4.7	31.7	11.4
3/2	A5460 Ahead	U	C1:D		1	36	-	590	1951	806	73.2%	-	-	-	4.4	26.7	11.7
3/3	A5460 Ahead	U	C1:D		1	36	-	881	2089	863	102.0%	-	-	-	25.9	105.7	38.6
3/4	A5460 Ahead	U	C1:D		1	36	-	881	1950	910	96.8%	-	-	-	14.0	57.3	26.9
6/1	M69 EB Left Ahead	ο	-		-	-	-	380	2100	394	96.4%	380	0	0	8.7	82.2	14.3
6/2+6/3	M69 EB Ahead	0	-		-	-	-	762	2000:2000	394+394	96.7 : 96.7%	1524	0	0	12.4 (6.2+6.2)	58.7 (58.7:58.7)	16.2
8/1	Northern Circulatory Ahead	U	C1:A		1	42	-	678	1934	1109	61.1%	-	-	-	1.5	7.9	9.5
8/2	Northern Circulatory Ahead	U	C1:A		1	42	-	521	2073	1189	43.7%	-	-	-	0.7	4.6	4.1
8/3	Northern Circulatory Ahead Right	U	C1:A		1	42	-	523	1945	1115	46.7%	-	-	-	0.7	5.0	4.3
9/1	Eastern Circulatory Ahead Right	U	C1:C		1	27	-	490	1941	725	67.6%	-	-	-	3.0	21.8	4.2
9/2	Eastern Circulatory Right	U	C1:C		1	27	-	487	2030	758	63.4%	-	-	-	2.4	18.2	3.4

9/3	Eastern Circulatory Right	U	C1:C		1	27	-	485	1889	705	68.8%	-	-	-	3.0	22.3	4.1
10/1	Western Circulatory Ahead	U	-		-	-	-	887	1934	1934	45.0%	-	-	-	0.5	2.0	1.0
10/2	Western Circulatory Ahead Right	U	-		-	-	-	1179	2107	2107	56.0%	-	-	-	0.6	1.9	0.6
10/3	Western Circulatory Right	U	-		-	-	-	282	1932	1932	14.4%	-	-	-	0.1	1.1	0.2
J2: M1 Junction 21	-	-	-		-	-	-	-	-	-	101.4%	0	0	0	33.5	-	-
1/1	M1 NB Off-Slip Left Ahead	U	C2:B		1	11	-	301	1930	309	97.5%	-	-	-	9.6	114.4	13.1
1/2	M1 NB Off-Slip Ahead	U	C2:B		1	11	-	282	2085	278	101.4%	-	-	-	12.1	154.5	15.4
2/1	Southern Circulatory Ahead	U	C2:A		1	52	-	1020	1940	1371	74.4%	-	-	-	2.4	8.3	11.0
2/2	Southern Circulatory Ahead	U	C2:A		1	52	-	1077	2084	1473	72.7%	-	-	-	2.1	7.1	10.9
2/3	Southern Circulatory Ahead Right	U	C2:A		1	52	-	1366	2089	1476	91.3%	-	-	-	6.1	16.2	15.5
2/4	Southern Circulatory Right	U	C2:A		1	52	-	881	1937	1369	64.4%	-	-	-	1.3	5.4	2.6
			C1 SI C1 SI C2 SI	ream: 1 PF ream: 2 PF ream: 1 PF	RC for Signa RC for Signa RC for Signa PRC Over	Illed Lanes Illed Lanes Illed Lanes All Lanes ((%): -1 (%): -1 (%): -1 %): -1	12.6 13.4 12.7 13.4	Total Delay fo Total Delay fo Total Delay fo Total Delay fo	or Signalled Li or Signalled Li or Signalled Li elay Over All L	anes (pcuHr) anes (pcuHr) anes (pcuHr) anes(pcuHr)	: 38.40 : 57.39 : 33.53 : 151.61	Cycle Time Cycle Time Cycle Time	(s): 75 (s): 75 (s): 75 (s): 75			

Basic Results Summary Scenario 2: '2023 Base PM Rev 1' (FG15: '2023 PM Survey Rev 1', Plan 1: 'Network Control Plan 1') Network Layout Diagram



Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: M1 Junction 21	-	-	-		-	-	-	-	-	-	103.5%	1180	0	0	164.4	-	-
J1: Unnamed Junction	-	-	-		-	-	-	-	-	-	103.5%	1180	0	0	136.5	-	-
1/1	M1 SB Off-Slip Ahead	U	C1:B		1	20	-	468	1975	474	98.7%	-	-	-	13.1	100.9	19.0
1/2+1/3	M1 SB Off-Slip Ahead	U	C1:B		1	20	-	920	2115:2100	451+448	103.5 : 101.1%	-	-	-	29.3 (17.6+11.7)	114.5 (135.7:92.7)	31.3
3/1	A5460 Ahead	U	C1:D		1	38	-	596	1951	702	84.9%	-	-	-	6.3	38.2	14.1
3/2	A5460 Ahead	U	C1:D		1	38	-	597	1951	832	71.7%	-	-	-	4.2	25.3	11.4
3/3	A5460 Ahead	U	C1:D		1	38	-	858	2089	836	102.7%	-	-	-	27.5	115.2	39.6
3/4	A5460 Ahead	U	C1:D		1	38	-	878	1950	884	99.3%	-	-	-	18.4	75.3	31.4
6/1	M69 EB Left Ahead	0	-		-	-	-	238	440	232	102.5%	232	0	0	10.5	158.8	22.2
6/2+6/3	M69 EB Ahead	0	-		-	-	-	474	480:480	240+240	98.8 : 98.8%	948	0	0	11.3 (5.6+5.6)	85.6 (85.6:85.6)	14.0
8/1	Northern Circulatory Ahead	U	C1:A		1	43	-	477	1934	1135	41.5%	-	-	-	1.5	11.1	7.4
8/2	Northern Circulatory Ahead	U	C1:A		1	43	-	362	2073	1216	29.8%	-	-	-	0.8	7.7	4.5
8/3	Northern Circulatory Ahead Right	U	C1:A		1	43	-	362	1945	1141	31.7%	-	-	-	0.8	8.1	4.6
9/1	Eastern Circulatory Ahead Right	U	C1:C		1	25	-	473	1941	673	70.3%	-	-	-	4.4	33.2	6.1
9/2	Eastern Circulatory Right	U	C1:C		1	25	-	468	2030	704	64.3%	-	-	-	3.6	28.8	5.1

9/3	Eastern Circulatory Right	U	C1:C		1	25	-	453	1889	655	68.4%	-	-	-	3.9	31.5	5.4
10/1	Western Circulatory Ahead	U	-		-	-	-	883	1934	1934	44.5%	-	-	-	0.5	1.9	0.9
10/2	Western Circulatory Ahead Right	U	-		-	-	-	1117	2109	2109	53.0%	-	-	-	0.6	1.8	0.6
10/3	Western Circulatory Right	U	-		-	-	-	250	1932	1932	12.9%	-	-	-	0.1	1.1	0.1
J2: M1 Junction 21	-	-	-		-	-	-	-	-	-	99.9%	0	0	0	27.9	-	-
1/1	M1 NB Off-Slip Left Ahead	U	C2:B		1	10	-	248	1931	257	96.3%	-	-	-	8.1	117.3	11.0
1/2	M1 NB Off-Slip Ahead	U	C2:B		1	10	-	250	2085	250	99.9%	-	-	-	10.1	146.1	13.0
2/1	Southern Circulatory Ahead	U	C2:A		1	53	-	1064	1940	1397	76.2%	-	-	-	2.1	7.0	6.7
2/2	Southern Circulatory Ahead	U	C2:A		1	53	-	1065	2084	1500	69.9%	-	-	-	1.8	6.1	6.3
2/3	Southern Circulatory Ahead Right	U	C2:A		1	53	-	1311	2089	1504	85.3%	-	-	-	3.9	10.9	9.8
2/4	Southern Circulatory Right	U	C2:A		1	53	-	878	1937	1395	63.0%	-	-	-	1.9	8.0	5.0
			C1 S C1 S C2 S	tream: 1 PF tream: 2 PF tream: 1 PF	RC for Signa RC for Signa RC for Signa PRC Over	lled Lanes lled Lanes lled Lanes All Lanes ('	(%): -1 (%): -1 (%): -1 %): -1	15.0 14.1 11.0 15.0	Total Delay fo Total Delay fo Total Delay fo Total Delay fo	or Signalled Li or Signalled Li or Signalled Li elay Over All L	anes (pcuHr) anes (pcuHr) anes (pcuHr) _anes(pcuHr)	: 45.42 : 68.25 : 27.88 : 164.40	Cycle Time Cycle Time Cycle Time	(s): 75 (s): 75 (s): 75			

Basic Results Summary

Basic Results Summary Scenario 3: '2036 WoD AM' (FG3: '2036 WoD AM (Sens)', Plan 1: 'Network Control Plan 1') Network Layout Diagram



Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: M1 Junction 21	-	-	-		-	-	-	-	-	-	107.7%	2115	0	0	204.5	-	-
J1: Unnamed Junction	-	-	-		-	-	-	-	-	-	107.7%	2115	0	0	179.2	-	-
1/1	M1 SB Off-Slip Ahead	U	C1:B		1	29	-	527	1975	711	74.1%	-	-	-	4.5	30.6	10.9
1/2+1/3	M1 SB Off-Slip Ahead	U	C1:B		1	29	-	1055	2115:2100	705+728	74.9 : 72.4%	-	-	-	7.8 (4.0+3.8)	26.5 (26.9:26.1)	11.1
3/1	A5460 Ahead	U	C1:D		1	36	-	701	1951	702	99.8%	-	-	-	17.6	90.2	27.3
3/2	A5460 Ahead	U	C1:D		1	36	-	702	1951	806	87.1%	-	-	-	7.1	36.4	16.4
3/3	A5460 Ahead	U	C1:D		1	36	-	930	2089	863	107.7%	-	-	-	47.3	183.0	60.0
3/4	A5460 Ahead	U	C1:D		1	36	-	929	1950	910	102.1%	-	-	-	26.5	102.9	40.5
6/1	M69 EB Left Ahead	0	-		-	-	-	445	2100	423	105.2%	423	0	0	20.4	164.8	41.5
6/2+6/3	M69 EB Ahead	ο	-		-	-	-	892	2000:2000	423+423	105.4 : 105.4%	1692	0	0	36.4 (18.2+18.2)	146.8 (146.8:146.8)	54.4
8/1	Northern Circulatory Ahead	U	C1:A		1	34	-	667	1934	903	71.5%	-	-	-	2.2	12.4	9.7
8/2	Northern Circulatory Ahead	U	C1:A		1	34	-	557	2073	967	55.2%	-	-	-	1.2	8.0	5.1
8/3	Northern Circulatory Ahead Right	U	C1:A		1	34	-	559	1945	908	59.1%	-	-	-	1.3	8.8	5.7
9/1	Eastern Circulatory Ahead Right	U	C1:C		1	27	-	533	1941	725	73.5%	-	-	-	2.1	14.2	2.7
9/2	Eastern Circulatory Right	U	C1:C		1	27	-	529	2030	758	69.8%	-	-	-	1.7	11.4	2.0

Basic Resu	ults Summary	,															
9/3	Eastern Circulatory Right	U	C1:C		1	27	-	527	1889	705	74.7%	-	-	-	2.1	14.3	2.5
10/1	Western Circulatory Ahead	U	-		-	-	-	936	1934	1934	45.0%	-	-	-	0.5	2.0	1.0
10/2	Western Circulatory Ahead Right	U	-		-	-	-	1151	2110	2110	53.6%	-	-	-	0.6	1.8	0.6
10/3	Western Circulatory Right	U	-		-	-	-	224	1932	1932	11.6%	-	-	-	0.1	1.1	0.1
J2: M1 Junction 21	-	-	-		-	-	-	-	-	-	92.4%	0	0	0	25.3	-	-
1/1	M1 NB Off-Slip Left Ahead	U	C2:B		1	10	-	225	1930	283	79.5%	-	-	-	3.8	60.1	6.3
1/2	M1 NB Off-Slip Ahead	U	C2:B		1	10	-	224	2085	250	89.5%	-	-	-	5.4	87.1	7.9
2/1	Southern Circulatory Ahead	U	C2:A		1	53	-	1228	1940	1397	87.9%	-	-	-	4.6	13.5	14.5
2/2	Southern Circulatory Ahead	U	C2:A		1	53	-	1231	2084	1500	82.0%	-	-	-	3.3	9.6	13.4
2/3	Southern Circulatory Ahead Right	U	C2:A		1	53	-	1457	2090	1505	92.4%	-	-	-	6.8	17.6	17.3
2/4	Southern Circulatory Right	U	C2:A		1	53	-	929	1937	1395	65.2%	-	-	-	1.5	5.8	3.0
			C1 S C1 S C2 S	tream: 1 P tream: 2 P tream: 1 P	RC for Signa RC for Signa RC for Signa PRC Over	alled Lanes alled Lanes alled Lanes All Lanes (s (%): s (%): s (%): (%):	20.2 19.7 -2.7 19.7	Total Delay Total Delay Total Delay Total D	for Signalled I for Signalled I for Signalled I lelay Over All	Lanes (pcuHr Lanes (pcuHr Lanes (pcuHr Lanes (pcuHr): 16.97): 104.36): 25.32): 204.53	Cycle Time Cycle Time Cycle Time	e (s): 75 e (s): 75 e (s): 75			

Basic Results Summary Scenario 4: '2036 WoD PM' (FG4: '2036 WoD PM (Sens)', Plan 1: 'Network Control Plan 1') Network Layout Diagram



Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: M1 Junction 21	-	-	-		-	-	-	-	-	-	105.0%	1203	0	0	114.7	-	-
J1: Unnamed Junction	-	-	-		-	-	-	-	-	-	105.0%	1203	0	0	90.4	-	-
1/1	M1 SB Off-Slip Ahead	U	C1:B		1	31	-	517	1975	764	67.7%	-	-	-	3.8	26.3	9.9
1/2+1/3	M1 SB Off-Slip Ahead	U	C1:B		1	31	-	1033	2115:2100	761+756	67.8 : 68.4%	-	-	-	6.9 (3.4+3.5)	24.1 (24.0:24.1)	10.1
3/1	A5460 Ahead	U	C1:D		1	40	-	708	1951	754	93.9%	-	-	-	10.4	52.9	20.2
3/2	A5460 Ahead	U	C1:D		1	40	-	708	1951	858	82.5%	-	-	-	5.9	30.1	15.1
3/3	A5460 Ahead	U	C1:D		1	40	-	816	2089	891	91.6%	-	-	-	9.4	41.4	20.7
3/4	A5460 Ahead	U	C1:D		1	40	-	817	1950	936	87.3%	-	-	-	7.2	31.8	18.5
6/1	M69 EB Left Ahead	0	-		-	-	-	253	440	243	104.0%	243	0	0	12.2	173.4	24.5
6/2+6/3	M69 EB Ahead	0	-		-	-	-	504	480:480	240+240	105.0 : 105.0%	960	0	0	21.0 (10.5+10.5)	150.2 (150.2:150.2)	51.5
8/1	Northern Circulatory Ahead	U	C1:A		1	32	-	475	1934	851	54.7%	-	-	-	1.6	12.2	7.8
8/2	Northern Circulatory Ahead	U	C1:A		1	32	-	369	2073	912	39.1%	-	-	-	0.9	8.8	4.6
8/3	Northern Circulatory Ahead Right	U	C1:A		1	32	-	369	1945	856	41.7%	-	-	-	0.9	9.3	4.8
9/1	Eastern Circulatory Ahead Right	U	C1:C		1	23	-	521	1941	621	83.9%	-	-	-	3.3	22.7	4.0
9/2	Eastern Circulatory Right	U	C1:C		1	23	-	516	2030	650	79.4%	-	-	-	2.5	17.3	2.8

Basic Resu	ults Summary																
9/3	Eastern Circulatory Right	U	C1:C		1	23	-	517	1889	604	85.5%	-	-	-	3.4	23.8	3.7
10/1	Western Circulatory Ahead	U	-		-	-	-	838	1934	1934	43.3%	-	-	-	0.4	1.9	0.8
10/2	Western Circulatory Ahead Right	U	-		-	-	-	1039	2109	2109	49.3%	-	-	-	0.5	1.7	0.5
10/3	Western Circulatory Right	U	-		-	-	-	234	1932	1932	12.1%	-	-	-	0.1	1.1	0.1
J2: M1 Junction 21	-	-	-		-	-	-	-	-	-	90.3%	0	0	0	24.3	-	-
1/1	M1 NB Off-Slip Left Ahead	U	C2:B		1	11	-	235	1931	283	83.0%	-	-	-	4.3	65.3	6.9
1/2	M1 NB Off-Slip Ahead	U	C2:B		1	11	-	234	2085	278	84.2%	-	-	-	4.5	68.6	7.1
2/1	Southern Circulatory Ahead	U	C2:A		1	52	-	1224	1940	1371	89.3%	-	-	-	5.2	15.2	14.9
2/2	Southern Circulatory Ahead	U	C2:A		1	52	-	1224	2084	1473	83.1%	-	-	-	3.7	10.8	13.7
2/3	Southern Circulatory Ahead Right	U	C2:A		1	52	-	1333	2090	1477	90.3%	-	-	-	5.6	15.2	15.8
2/4	Southern Circulatory Right	U	C2:A		1	52	-	817	1937	1369	59.7%	-	-	-	1.2	5.1	2.4
			C1 Si C1 Si C2 Si	tream: 1 P tream: 2 P tream: 1 P	RC for Sign RC for Sign RC for Sign PRC Over	alled Lanes alled Lanes alled Lanes All Lanes (s (%): s (%): s (%): (%):	31.6 -4.3 -0.3 16.7	Total Delay Total Delay Total Delay Total D	for Signalled I for Signalled I for Signalled I lelay Over All	_anes (pcuHr _anes (pcuHr _anes (pcuHr _anes (pcuHr): 14.06): 42.11): 24.35): 114.72	5 Cycle Tim Cycle Tim 5 Cycle Tim	e (s): 75 e (s): 75 e (s): 75			

Basic Results Summary Scenario 5: '2036 WD AM' (FG5: '2036 WD AM (Sens)', Plan 1: 'Network Control Plan 1') Network Layout Diagram



Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: M1 Junction 21	-	-	-		-	-	-	-	-	-	108.4%	2089	0	0	233.1	-	-
J1: Unnamed Junction	-	-	-		-	-	-	-	-	-	108.4%	2089	0	0	207.3	-	-
1/1	M1 SB Off-Slip Ahead	U	C1:B		1	27	-	528	1975	658	80.2%	-	-	-	5.3	36.2	11.9
1/2+1/3	M1 SB Off-Slip Ahead	U	C1:B		1	27	-	1055	2115:2100	649+672	81.3 : 78.6%	-	-	-	8.9 (4.5+4.4)	30.3 (30.7:29.8)	12.1
3/1	A5460 Ahead	U	C1:D		1	36	-	738	1951	702	105.1%	-	-	-	31.3	152.9	41.3
3/2	A5460 Ahead	U	C1:D		1	36	-	738	1951	806	91.5%	-	-	-	9.0	43.9	19.1
3/3	A5460 Ahead	U	C1:D		1	36	-	923	2089	863	106.9%	-	-	-	43.9	171.1	56.6
3/4	A5460 Ahead	U	C1:D		1	36	-	924	1950	910	101.5%	-	-	-	24.7	96.3	38.6
6/1	M69 EB Left Ahead	ο	-		-	-	-	452	2400	418	108.2%	418	0	0	25.7	204.4	46.3
6/2+6/3	M69 EB Ahead	0	-		-	-	-	906	2000:2000	418+418	108.4 : 108.4%	1671	0	0	47.8 (23.9+23.9)	189.9 (189.9:189.9)	64.9
8/1	Northern Circulatory Ahead	U	C1:A		1	36	-	674	1934	954	67.1%	-	-	-	1.9	10.7	8.9
8/2	Northern Circulatory Ahead	U	C1:A		1	36	-	565	2073	1023	51.8%	-	-	-	1.1	7.2	4.6
8/3	Northern Circulatory Ahead Right	U	C1:A		1	36	-	567	1945	960	55.4%	-	-	-	1.2	7.9	5.2
9/1	Eastern Circulatory Ahead Right	U	C1:C		1	27	-	534	1941	725	73.6%	-	-	-	2.0	13.4	2.4
9/2	Eastern Circulatory Right	U	C1:C		1	27	-	528	2030	758	69.7%	-	-	-	1.5	10.3	1.8

Basic Resu	ults Summary	,							1	1					1		
9/3	Eastern Circulatory Right	U	C1:C		1	27	-	528	1889	705	74.9%	-	-	-	2.0	13.4	2.2
10/1	Western Circulatory Ahead	U	-		-	-	-	929	1934	1934	45.0%	-	-	-	0.5	2.0	1.0
10/2	Western Circulatory Ahead Right	U	-		-	-	-	1146	2110	2110	53.6%	-	-	-	0.6	1.8	0.6
10/3	Western Circulatory Right	U	-		-	-	-	226	1932	1932	11.7%	-	-	-	0.1	1.1	0.1
J2: M1 Junction 21	-	-	-		-	-	-	-	-	-	92.5%	0	0	0	25.8	-	-
1/1	M1 NB Off-Slip Left Ahead	U	C2:B		1	10	-	225	1930	283	79.5%	-	-	-	3.8	60.1	6.3
1/2	M1 NB Off-Slip Ahead	υ	C2:B		1	10	-	226	2085	250	90.3%	-	-	-	5.6	89.9	8.2
2/1	Southern Circulatory Ahead	U	C2:A		1	53	-	1266	1940	1397	88.1%	-	-	-	4.4	12.9	14.6
2/2	Southern Circulatory Ahead	U	C2:A		1	53	-	1266	2084	1500	84.4%	-	-	-	3.5	9.9	14.0
2/3	Southern Circulatory Ahead Right	U	C2:A		1	53	-	1451	2090	1505	92.5%	-	-	-	6.7	17.4	17.6
2/4	Southern Circulatory Right	U	C2:A		1	53	-	924	1937	1395	65.2%	-	-	-	1.8	7.0	4.1
	-		C1 S C1 S C2 S	tream: 1 PF tream: 2 PF tream: 1 PF	RC for Sign RC for Sign RC for Sign PRC Over	alled Lanes alled Lanes alled Lanes All Lanes	s (%): s (%): s (%): (%):	10.8 18.8 -2.7 20.5	Total Delay Total Delay Total Delay Total Delay Total D	for Signalled L for Signalled L for Signalled L Delay Over All	anes (pcuHr) anes (pcuHr) anes (pcuHr) Lanes(pcuHr)	: 18.30 : 114.38 : 25.78 : 233.05	Cycle Tim Cycle Tim Cycle Tim	e (s): 75 e (s): 75 e (s): 75		-	

Basic Results Summary Scenario 6: '2036 WD PM' (FG6: '2036 WD PM (Sens)', Plan 1: 'Network Control Plan 1') Network Layout Diagram



Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: M1 Junction 21	-	-	-		-	-	-	-	-	-	111.3%	1189	0	0	136.9	-	-
J1: Unnamed Junction	-	-	-		-	-	-	-	-	-	111.3%	1189	0	0	108.1	-	-
1/1	M1 SB Off-Slip Ahead	U	C1:B		1	26	-	524	1975	632	82.9%	-	-	-	5.8	39.6	12.4
1/2+1/3	M1 SB Off-Slip Ahead	U	C1:B		1	26	-	1049	2115:2100	620+616	84.6 : 85.1%	-	-	-	10.0 (5.0+5.0)	34.3 (34.2:34.3)	12.9
3/1	A5460 Ahead	U	C1:D		1	41	-	715	1951	780	91.6%	-	-	-	9.0	45.3	18.9
3/2	A5460 Ahead	U	C1:D		1	41	-	715	1951	884	80.8%	-	-	-	5.6	28.1	14.8
3/3	A5460 Ahead	U	C1:D		1	41	-	865	2089	919	94.1%	-	-	-	11.3	46.9	23.5
3/4	A5460 Ahead	U	C1:D		1	41	-	865	1950	962	89.9%	-	-	-	8.3	34.4	20.4
6/1	M69 EB Left Ahead	ο	-		-	-	-	255	440	229	111.3%	229	0	0	18.8	265.0	30.3
6/2+6/3	M69 EB Ahead	ο	-		-	-	-	510	480:480	240+240	106.3 : 106.3%	960	0	0	23.6 (11.8+11.8)	166.8 (166.8:166.8)	54.0
8/1	Northern Circulatory Ahead	U	C1:A		1	37	-	484	1934	980	46.7%	-	-	-	1.3	10.2	7.1
8/2	Northern Circulatory Ahead	U	C1:A		1	37	-	377	2073	1050	34.5%	-	-	-	0.7	7.3	4.2
8/3	Northern Circulatory Ahead Right	U	C1:A		1	37	-	377	1945	985	36.7%	-	-	-	0.8	7.7	4.4
9/1	Eastern Circulatory Ahead Right	U	C1:C		1	22	-	528	1941	595	88.7%	-	-	-	4.3	29.1	4.7
9/2	Eastern Circulatory Right	U	C1:C		1	22	-	525	2030	623	84.3%	-	-	-	3.0	20.8	3.3

Basic Resu	ults Summary																
9/3	Eastern Circulatory Right	U	C1:C		1	22	-	524	1889	579	90.5%	-	-	-	4.6	31.9	4.8
10/1	Western Circulatory Ahead	U	-		-	-	-	887	1934	1934	45.9%	-	-	-	0.5	1.9	0.9
10/2	Western Circulatory Ahead Right	U	-		-	-	-	1094	2110	2110	51.8%	-	-	-	0.5	1.8	0.5
10/3	Western Circulatory Right	U	-		-	-	-	244	1932	1932	12.6%	-	-	-	0.1	1.1	0.1
J2: M1 Junction 21	-	-	-		-	-	-	-	-	-	94.0%	0	0	0	28.8	-	-
1/1	M1 NB Off-Slip Left Ahead	U	C2:B		1	11	-	242	1931	283	85.4%	-	-	-	4.7	70.0	7.5
1/2	M1 NB Off-Slip Ahead	U	C2:B		1	11	-	244	2085	278	87.8%	-	-	-	5.2	76.8	8.0
2/1	Southern Circulatory Ahead	U	C2:A		1	52	-	1238	1940	1371	90.3%	-	-	-	5.2	15.1	15.6
2/2	Southern Circulatory Ahead	U	C2:A		1	52	-	1240	2084	1473	84.2%	-	-	-	3.6	10.3	14.7
2/3	Southern Circulatory Ahead Right	U	C2:A		1	52	-	1389	2090	1477	94.0%	-	-	-	8.3	21.4	20.1
2/4	Southern Circulatory Right	U	C2:A		1	52	-	865	1937	1369	63.2%	-	-	-	1.9	7.9	4.7
			C1 S C1 S C2 S	tream: 1 P tream: 2 P tream: 1 P	RC for Signa RC for Signa RC for Signa PRC Over	alled Lanes alled Lanes alled Lanes All Lanes (s (%): s (%): s (%): (%):	5.8 -4.6 -4.5 -23.7	Total Delay Total Delay Total Delay Total D	for Signalled for Signalled for Signalled lelay Over All	Lanes (pcuHr Lanes (pcuHr Lanes (pcuHr Lanes (pcuHr	r): 18.56 r): 46.07 r): 28.81 r): 136.93	Cycle Time Cycle Time Cycle Time Cycle Time	e (s): 75 e (s): 75 e (s): 75			

Basic Results Summary Scenario 7: '2036 WoD + Dev AM' (FG7: '2036 WoD + Dev AM (Sens)', Plan 1: 'Network Control Plan 1') Network Layout Diagram



Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: M1 Junction 21	-	-	-		-	-	-	-	-	-	112.2%	2092	0	0	265.1	-	-
J1: Unnamed Junction	-	-	-		-	-	-	-	-	-	112.2%	2092	0	0	236.2	-	-
1/1	M1 SB Off-Slip Ahead	U	C1:B		1	27	-	550	1975	658	83.5%	-	-	-	6.0	39.0	13.0
1/2+1/3	M1 SB Off-Slip Ahead	U	C1:B		1	27	-	1101	2115:2100	649+672	85.0 : 81.8%	-	-	-	9.8 (5.0+4.8)	32.0 (32.4:31.5)	13.2
3/1	A5460 Ahead	U	C1:D		1	36	-	788	1951	702	112.2%	-	-	-	55.3	252.7	65.2
3/2	A5460 Ahead	U	C1:D		1	36	-	788	1951	806	97.7%	-	-	-	14.9	68.1	26.1
3/3	A5460 Ahead	U	C1:D		1	36	-	929	2089	863	107.6%	-	-	-	46.7	181.1	59.5
3/4	A5460 Ahead	U	C1:D		1	36	-	930	1950	910	102.2%	-	-	-	26.9	104.1	40.8
6/1	M69 EB Left Ahead	ο	-		-	-	-	447	2100	418	106.8%	418	0	0	23.1	186.2	43.7
6/2+6/3	M69 EB Ahead	0	-		-	-	-	895	2000:2000	418+418	107.1 : 106.8%	1674	0	0	41.9 (21.2+20.7)	168.4 (170.5:166.4)	59.3
8/1	Northern Circulatory Ahead	U	C1:A		1	36	-	669	1934	954	67.1%	-	-	-	1.9	10.8	8.9
8/2	Northern Circulatory Ahead	U	C1:A		1	36	-	559	2073	1023	51.8%	-	-	-	1.1	7.2	4.6
8/3	Northern Circulatory Ahead Right	U	C1:A		1	36	-	560	1945	960	55.4%	-	-	-	1.2	7.9	5.2
9/1	Eastern Circulatory Ahead Right	U	C1:C		1	27	-	556	1941	725	76.7%	-	-	-	2.3	14.9	2.8
9/2	Eastern Circulatory Right	U	C1:C		1	27	-	552	2030	758	72.8%	-	-	-	1.8	11.5	2.0

Basic Resu	ults Summary																
9/3	Eastern Circulatory Right	U	C1:C		1	27	-	550	1889	705	78.0%	-	-	-	2.3	15.0	2.6
10/1	Western Circulatory Ahead	U	-		-	-	-	935	1934	1934	45.0%	-	-	-	0.5	2.0	1.0
10/2	Western Circulatory Ahead Right	U	-		-	-	-	1152	2110	2110	53.6%	-	-	-	0.6	1.8	0.6
10/3	Western Circulatory Right	U	-		-	-	-	224	1932	1932	11.6%	-	-	-	0.1	1.1	0.1
J2: M1 Junction 21	-	-	-		-	-	-	-	-	-	93.9%	0	0	0	28.9	-	-
1/1	M1 NB Off-Slip Left Ahead	U	C2:B		1	10	-	225	1930	283	79.5%	-	-	-	3.8	60.1	6.3
1/2	M1 NB Off-Slip Ahead	U	C2:B		1	10	-	224	2085	250	89.5%	-	-	-	5.4	87.1	7.9
2/1	Southern Circulatory Ahead	U	C2:A		1	53	-	1338	1940	1397	89.7%	-	-	-	5.0	14.5	15.6
2/2	Southern Circulatory Ahead	U	C2:A		1	53	-	1340	2084	1500	89.3%	-	-	-	5.0	13.6	16.3
2/3	Southern Circulatory Ahead Right	U	C2:A		1	53	-	1479	2090	1505	93.9%	-	-	-	7.9	20.2	19.2
2/4	Southern Circulatory Right	U	C2:A		1	53	-	930	1937	1395	65.2%	-	-	-	1.8	7.0	4.1
			C1 S C1 S C2 S	tream: 1 P tream: 2 P tream: 1 P	RC for Sign RC for Sign RC for Sign PRC Over	alled Lanes alled Lanes alled Lanes All Lanes (s (%): s (%): s (%): (%):	5.9 24.7 -4.4 24.7	Total Delay Total Delay Total Delay Total D	for Signalled I for Signalled I for Signalled I Delay Over All	_anes (pcuHr) _anes (pcuHr) _anes (pcuHr) Lanes(pcuHr)): 19.86): 150.20): 28.95): 265.14	6 Cycle Tim 0 Cycle Tim 5 Cycle Tim	e (s): 75 e (s): 75 e (s): 75			

Basic Results Summary Scenario 8: '2036 WoD + Dev PM' (FG8: '2036 WoD + Dev DM (Sens)', Plan 1: 'Network Control Plan 1') Network Layout Diagram



Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: M1 Junction 21	-	-	-		-	-	-	-	-	-	122.1%	1199	0	0	201.1	-	-
J1: Unnamed Junction	-	-	-		-	-	-	-	-	-	122.1%	1199	0	0	174.1	-	-
1/1	M1 SB Off-Slip Ahead	U	C1:B		1	28	-	540	1975	685	78.9%	-	-	-	5.1	34.2	11.9
1/2+1/3	M1 SB Off-Slip Ahead	U	C1:B		1	28	-	1079	2115:2100	677+672	79.6 : 80.4%	-	-	-	9.0 (4.5+4.5)	29.9 (29.9:29.9)	12.2
3/1	A5460 Ahead	U	C1:D		1	39	-	751	1951	728	103.1%	-	-	-	26.2	125.6	36.6
3/2	A5460 Ahead	U	C1:D		1	39	-	750	1951	832	90.1%	-	-	-	8.3	39.9	18.5
3/3	A5460 Ahead	U	C1:D		1	39	-	816	2089	863	94.5%	-	-	-	11.5	50.8	23.0
3/4	A5460 Ahead	U	C1:D		1	39	-	817	1950	910	89.8%	-	-	-	8.2	36.2	19.5
6/1	M69 EB Left Ahead	ο	-		-	-	-	292	430	239	122.1%	239	0	0	32.2	397.6	44.7
6/2+6/3	M69 EB Ahead	0	-		-	-	-	585	480:480	240+240	121.9 : 121.9%	960	0	0	59.5 (29.8+29.7)	366.1 (366.1:366.1)	90.8
8/1	Northern Circulatory Ahead	U	C1:A		1	35	-	514	1934	928	49.7%	-	-	-	1.4	10.6	7.3
8/2	Northern Circulatory Ahead	U	C1:A		1	35	-	410	2073	995	35.9%	-	-	-	0.7	7.5	4.3
8/3	Northern Circulatory Ahead Right	U	C1:A		1	35	-	409	1945	934	38.2%	-	-	-	0.8	7.9	4.4
9/1	Eastern Circulatory Ahead Right	U	C1:C		1	24	-	544	1940	647	84.0%	-	-	-	3.6	23.8	4.3
9/2	Eastern Circulatory Right	U	C1:C		1	24	-	539	2030	677	79.7%	-	-	-	2.7	18.2	3.2

Basic Resu	ults Summary	,															
9/3	Eastern Circulatory Right	U	C1:C		1	24	-	540	1889	630	85.8%	-	-	-	3.9	25.8	4.3
10/1	Western Circulatory Ahead	U	-		-	-	-	838	1934	1934	43.3%	-	-	-	0.4	1.9	0.8
10/2	Western Circulatory Ahead Right	U	-		-	-	-	1039	2109	2109	49.3%	-	-	-	0.5	1.7	0.5
10/3	Western Circulatory Right	U	-		-	-	-	234	1932	1932	12.1%	-	-	-	0.1	1.1	0.1
J2: M1 Junction 21	-	-	-		-	-	-	-	-	-	92.4%	0	0	0	27.0	-	-
1/1	M1 NB Off-Slip Left Ahead	U	C2:B		1	11	-	235	1931	283	83.0%	-	-	-	4.3	65.3	6.9
1/2	M1 NB Off-Slip Ahead	U	C2:B		1	11	-	234	2085	278	84.2%	-	-	-	4.5	68.6	7.1
2/1	Southern Circulatory Ahead	U	C2:A		1	52	-	1290	1940	1371	92.4%	-	-	-	6.5	18.6	17.0
2/2	Southern Circulatory Ahead	U	C2:A		1	52	-	1289	2084	1473	87.5%	-	-	-	4.4	12.2	15.2
2/3	Southern Circulatory Ahead Right	U	C2:A		1	52	-	1356	2090	1477	91.8%	-	-	-	6.2	16.5	17.0
2/4	Southern Circulatory Right	U	C2:A		1	52	-	817	1937	1369	59.7%	-	-	-	1.2	5.3	2.5
	-		C1 S C1 S C2 S	tream: 1 P tream: 2 P tream: 1 P	RC for Signa RC for Signa RC for Signa PRC Over	alled Lanes alled Lanes alled Lanes All Lanes (s (%): s (%): s (%): (%):	12.0 14.6 -2.7 35.7	Total Delay Total Delay Total Delay Total D	for Signalled I for Signalled I for Signalled I lelay Over All	Lanes (pcuHr Lanes (pcuHr Lanes (pcuHr Lanes (pcuHr): 16.97): 64.40): 27.04): 201.14	Cycle Tim Cycle Tim Cycle Tim Cycle Tim	e (s): 75 e (s): 75 e (s): 75			

Basic Results Summary Scenario 9: '2036 WoD PM (M1 NB Not Block)' (FG11: '2036 WoD PM (Sens) (M1 No Block)', Plan 1: 'Network Control Plan 1') Network Layout Diagram



ltem	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: M1 Junction 21	-	-	-		-	-	-	-	-	-	93.9%	1261	0	0	85.1	-	-
J1: Unnamed Junction	-	-	-		-	-	-	-	-	-	93.9%	1261	0	0	60.8	-	-
1/1	M1 SB Off-Slip Ahead	U	C1:B		1	31	-	517	1975	764	67.7%	-	-	-	3.8	26.3	9.9
1/2+1/3	M1 SB Off-Slip Ahead	U	C1:B		1	31	-	1033	2115:2100	761+756	67.8 : 68.4%	-	-	-	6.9 (3.4+3.5)	24.1 (24.0:24.1)	10.1
3/1	A5460 Ahead	U	C1:D		1	40	-	708	1951	754	93.9%	-	-	-	10.4	52.9	20.2
3/2	A5460 Ahead	U	C1:D		1	40	-	708	1951	858	82.5%	-	-	-	5.9	30.1	15.1
3/3	A5460 Ahead	U	C1:D		1	40	-	816	2089	891	91.6%	-	-	-	9.4	41.4	20.7
3/4	A5460 Ahead	U	C1:D		1	40	-	817	1950	936	87.3%	-	-	-	7.2	31.8	18.5
6/1	M69 EB Left Ahead	ο	-		-	-	-	253	2100	449	56.4%	253	0	0	1.3	18.1	4.2
6/2+6/3	M69 EB Ahead	ο	-		-	-	-	504	2000:2000	449+449	56.2 : 56.2%	1008	0	0	1.9 (0.9+0.9)	13.5 (13.5:13.5)	4.1
8/1	Northern Circulatory Ahead	U	C1:A		1	32	-	475	1934	851	55.8%	-	-	-	1.8	13.4	9.1
8/2	Northern Circulatory Ahead	U	C1:A		1	32	-	369	2073	912	40.5%	-	-	-	1.0	9.8	5.9
8/3	Northern Circulatory Ahead Right	U	C1:A		1	32	-	369	1945	856	43.1%	-	-	-	1.1	10.5	6.1
9/1	Eastern Circulatory Ahead Right	U	C1:C		1	23	-	521	1941	621	83.9%	-	-	-	3.3	22.8	4.0
9/2	Eastern Circulatory Right	U	C1:C		1	23	-	516	2030	650	79.4%	-	-	-	2.5	17.3	2.8

	1																
9/3	Eastern Circulatory Right	U	C1:C		1	23	-	517	1889	604	85.5%	-	-	-	3.4	23.8	3.7
10/1	Western Circulatory Ahead	U	-		-	-	-	838	1934	1934	43.3%	-	-	-	0.4	1.9	0.8
10/2	Western Circulatory Ahead Right	U	-		-	-	-	1039	2109	2109	49.3%	-	-	-	0.5	1.7	0.5
10/3	Western Circulatory Right	U	-		-	-	-	234	1932	1932	12.1%	-	-	-	0.1	1.1	0.1
J2: M1 Junction 21	-	-	-		-		-	-	-	-	90.3%	0	0	0	24.3	-	-
1/1	M1 NB Off-Slip Left Ahead	U	C2:B		1	11	-	235	1931	283	83.0%	-	-	-	4.3	65.3	6.9
1/2	M1 NB Off-Slip Ahead	U	C2:B		1	11	-	234	2085	278	84.2%	-	-	-	4.5	68.6	7.1
2/1	Southern Circulatory Ahead	U	C2:A		1	52	-	1224	1940	1371	89.3%	-	-	-	5.2	15.2	14.9
2/2	Southern Circulatory Ahead	U	C2:A		1	52	-	1224	2084	1473	83.1%	-	-	-	3.7	10.8	13.7
2/3	Southern Circulatory Ahead Right	U	C2:A		1	52	-	1333	2090	1477	90.3%	-	-	-	5.6	15.2	15.8
2/4	Southern Circulatory Right	U	C2:A		1	52	-	817	1937	1369	59.7%	-	-	-	1.2	5.1	2.4
			C1 Stre C1 Stre C2 Stre	eam: 1 PR(eam: 2 PR(eam: 1 PR(F	C for Signalle C for Signalle C for Signalle PRC Over Al	ed Lanes (% ed Lanes (% ed Lanes (% I Lanes (%	%): 31. %): -4. %): -0.): -4.	6 3 3 3	Total Delay for S Total Delay for S Total Delay for S Total Delay for S	Signalled Lan Signalled Lan Signalled Lan y Over All Lar	es (pcuHr): es (pcuHr): es (pcuHr): nes(pcuHr):	14.53 42.12 24.35 85.15	Cycle Time (s) Cycle Time (s) Cycle Time (s)): 75): 75): 75			

Basic Results Summary

Basic Results Summary Scenario 10: '2036 WD PM (M1 NB Not Block)' (FG12: '2036 WD PM (Sens) (M1 No Block)', Plan 1: 'Network Control Plan 1') Network Layout Diagram



Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: M1 Junction 21	-	-	-		-	-	-	-	-	-	97.0%	1275	0	0	101.0	-	-
J1: Unnamed Junction	-	-	-		-	-	-	-	-	-	97.0%	1275	0	0	72.4	-	-
1/1	M1 SB Off-Slip Ahead	U	C1:B		1	32	-	524	1975	790	66.3%	-	-	-	3.7	25.1	9.9
1/2+1/3	M1 SB Off-Slip Ahead	U	C1:B		1	32	-	1049	2115:2100	790+784	66.5 : 66.8%	-	-	-	6.7 (3.4+3.4)	23.0 (23.0:23.0)	10.0
3/1	A5460 Ahead	U	C1:D		1	40	-	715	1951	754	94.8%	-	-	-	11.2	56.3	21.1
3/2	A5460 Ahead	U	C1:D		1	40	-	715	1951	858	83.3%	-	-	-	6.1	30.7	15.5
3/3	A5460 Ahead	U	C1:D		1	40	-	865	2089	891	97.0%	-	-	-	14.6	60.7	27.1
3/4	A5460 Ahead	U	C1:D		1	40	-	865	1950	936	92.4%	-	-	-	9.7	40.3	22.1
6/1	M69 EB Left Ahead	0	-		-	-	-	255	2100	419	60.8%	255	0	0	1.5	21.5	4.7
6/2+6/3	M69 EB Ahead	О	-		-	-	-	510	2000:2000	419+419	60.8 : 60.8%	1020	0	0	2.3 (1.1+1.1)	16.1 (16.1:16.1)	4.7
8/1	Northern Circulatory Ahead	U	C1:A		1	31	-	484	1934	825	58.7%	-	-	-	2.1	15.7	9.6
8/2	Northern Circulatory Ahead	U	C1:A		1	31	-	377	2073	884	42.6%	-	-	-	1.2	11.0	6.4
8/3	Northern Circulatory Ahead Right	U	C1:A		1	31	-	377	1945	830	45.4%	-	-	-	1.2	11.7	6.6
9/1	Eastern Circulatory Ahead Right	U	C1:C		1	23	-	528	1941	621	85.0%	-	-	-	3.9	26.8	4.7
9/2	Eastern Circulatory Right	U	C1:C		1	23	-	525	2030	650	80.8%	-	-	-	3.1	21.1	3.7

9/3	Eastern Circulatory Right	U	C1:C		1	23	-	524	1889	604	86.7%	-	-	-	4.1	28.2	4.7
10/1	Western Circulatory Ahead	U	-		-	-	-	887	1934	1934	45.9%	-	-	-	0.5	2.0	1.0
10/2	Western Circulatory Ahead Right	U	-		-	-	-	1094	2110	2110	51.8%	-	-	-	0.5	1.8	0.5
10/3	Western Circulatory Right	U	-		-	-	-	244	1932	1932	12.6%	-	-	-	0.1	1.1	0.1
J2: M1 Junction 21	-	-	-		-	-	-	-	-	-	94.0%	0	0	0	28.5	-	-
1/1	M1 NB Off-Slip Left Ahead	U	C2:B		1	11	-	242	1931	283	85.4%	-	-	-	4.7	70.0	7.5
1/2	M1 NB Off-Slip Ahead	U	C2:B		1	11	-	244	2085	278	87.8%	-	-	-	5.2	76.8	8.0
2/1	Southern Circulatory Ahead	U	C2:A		1	52	-	1238	1940	1371	90.3%	-	-	-	5.5	15.9	15.4
2/2	Southern Circulatory Ahead	U	C2:A		1	52	-	1240	2084	1473	84.2%	-	-	-	3.7	10.7	14.0
2/3	Southern Circulatory Ahead Right	U	C2:A		1	52	-	1389	2090	1477	94.0%	-	-	-	8.1	21.0	18.8
2/4	Southern Circulatory Right	U	C2:A		1	52	-	865	1937	1369	63.2%	-	-	-	1.4	5.7	2.8
		C1 Stre C1 Stre C2 Stre	eam: 1 PR(eam: 2 PR(eam: 1 PR(F	C for Signalle C for Signalle C for Signalle PRC Over Al	ed Lanes (% ed Lanes (% ed Lanes (% I Lanes (%	%): 34. %): -7. %): -4.): -7.	7 8 5 8	Total Delay for S Total Delay for S Total Delay for S Total Delay	Signalled Lan Signalled Lan Signalled Lan y Over All Lar	es (pcuHr): es (pcuHr): es (pcuHr): nes(pcuHr):	14.85 52.66 28.53 100.96	Cycle Time (s) Cycle Time (s) Cycle Time (s)): 75): 75): 75				

Basic Results Summary

Basic Results Summary Scenario 11: '2036 WoD + Dev PM (M1 NB Not Block)' (FG13: '2036 WoD + Dev DM (Sens) (M1 No Block)', Plan 1: 'Network Control Plan 1') Network Layout Diagram



Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: M1 Junction 21	-	-	-		-	-	-	-	-	-	103.1%	1462	0	0	114.6	-	-
J1: Unnamed Junction	-	-	-		-	-	-	-	-	-	103.1%	1462	0	0	87.6	-	-
1/1	M1 SB Off-Slip Ahead	U	C1:B		1	28	-	540	1975	685	78.9%	-	-	-	5.1	34.2	11.9
1/2+1/3	M1 SB Off-Slip Ahead	U	C1:B		1	28	-	1079	2115:2100	677+672	79.6 : 80.4%	-	-	-	9.0 (4.5+4.5)	29.9 (29.9:29.9)	12.2
3/1	A5460 Ahead	U	C1:D		1	39	-	751	1951	728	103.1%	-	-	-	26.2	125.6	36.6
3/2	A5460 Ahead	U	C1:D		1	39	-	750	1951	832	90.1%	-	-	-	8.3	39.9	18.5
3/3	A5460 Ahead	U	C1:D		1	39	-	816	2089	863	94.5%	-	-	-	11.5	50.8	23.0
3/4	A5460 Ahead	U	C1:D		1	39	-	817	1950	910	89.8%	-	-	-	8.2	36.2	19.5
6/1	M69 EB Left Ahead	ο	-		-	-	-	292	2100	450	64.8%	292	0	0	1.8	21.7	5.5
6/2+6/3	M69 EB Ahead	0	-		-	-	-	585	2000:2000	450+450	65.1 : 64.8%	1170	0	0	2.6 (1.3+1.3)	16.1 (16.2:16.1)	5.5
8/1	Northern Circulatory Ahead	U	C1:A		1	35	-	514	1934	928	55.4%	-	-	-	1.7	12.0	9.5
8/2	Northern Circulatory Ahead	U	C1:A		1	35	-	410	2073	995	41.2%	-	-	-	0.9	8.3	5.8
8/3	Northern Circulatory Ahead Right	U	C1:A		1	35	-	409	1945	934	43.8%	-	-	-	1.0	8.9	6.0
9/1	Eastern Circulatory Ahead Right	U	C1:C		1	24	-	544	1940	647	84.1%	-	-	-	3.6	24.0	4.3
9/2	Eastern Circulatory Right	U	C1:C		1	24	-	539	2030	677	79.7%	-	-	-	2.7	18.2	3.2

9/3	Eastern Circulatory Right	U	C1:C		1	24	-	540	1889	630	85.8%	-	-	-	3.9	25.8	4.3
10/1	Western Circulatory Ahead	U	-		-	-	-	838	1934	1934	43.3%	-	-	-	0.4	1.9	0.8
10/2	Western Circulatory Ahead Right	U	-		-	-	-	1039	2109	2109	49.3%	-	-	-	0.5	1.7	0.5
10/3	Western Circulatory Right	U	-		-	-	-	234	1932	1932	12.1%	-	-	-	0.1	1.1	0.1
J2: M1 Junction 21	-	-	-		-	-	-	-	-	-	92.4%	0	0	ο	27.0	-	-
1/1	M1 NB Off-Slip Left Ahead	U	C2:B		1	11	-	235	1931	283	83.0%	-	-	-	4.3	65.3	6.9
1/2	M1 NB Off-Slip Ahead	U	C2:B		1	11	-	234	2085	278	84.2%	-	-	-	4.5	68.6	7.1
2/1	Southern Circulatory Ahead	U	C2:A		1	52	-	1290	1940	1371	92.4%	-	-	-	6.5	18.6	17.0
2/2	Southern Circulatory Ahead	U	C2:A		1	52	-	1289	2084	1473	87.5%	-	-	-	4.4	12.2	15.2
2/3	Southern Circulatory Ahead Right	U	C2:A		1	52	-	1356	2090	1477	91.8%	-	-	-	6.2	16.5	17.0
2/4	Southern Circulatory Right	U	C2:A		1	52	-	817	1937	1369	59.7%	-	-	-	1.2	5.3	2.5
	<u>.</u>	<u>-</u>	C1 Str C1 Str C2 Str	eam: 1 PR eam: 2 PR eam: 1 PR	C for Signal C for Signal C for Signal PRC Over A	led Lanes (led Lanes (led Lanes (All Lanes (%		2.0 4.6 2.7 4.6	Total Delay for Total Delay for Total Delay for Total Delay Total Dela	Signalled Lan Signalled Lan Signalled Lan ay Over All Lar	nes (pcuHr): nes (pcuHr): nes (pcuHr): nes(pcuHr): nes(pcuHr):	17.75 64.43 27.04 114.60	Cycle Time (s Cycle Time (s Cycle Time (s): 75): 75): 75	-		

Basic Results Summary