Tritax Symmetry (Hinckley) Limited

HINCKLEY NATIONAL RAIL FREIGHT INTERCHANGE

The Hinckley National Rail Freight Interchange Development Consent Order

Project reference TR050007

Hinckley NRFI Cross in Hand and Gibbet Roundabout Technical Note

Document reference: 22.2

Revision: 01

27th February 2024

Planning Act 2008

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

[Check previous iteration of document to see text required here]

TRANSPORT TECHNICAL NOTE
Cross-in-Hands & Gibbet Roundabouts
Hinckley National Rail Freight Interchange

PROJECT NAME	Hinckley National Rail Freight Interchange		
DOCUMENT NUMBER	HNRFI-BWB-GEN-XX-RP-TR-0043	BWB REF	NTT 2814
AUTHOR	AJ Oakes	STATUS	S2
CHECKED	Malcolm Ash	REVISION	P01
APPROVED	Shirley Dumigan	DATE	27/02/2024

1. INTRODUCTION

1.1 In November 2023 updated traffic surveys were undertaken at the request of the Highway Authorities. The flows from these surveys were furnessed using the agreed methodology in line with the PRTM model used for the DCO submission. The Gibbet Roundabout and the Cross in Hands roundabout on the A5 were modelled. The modelling demonstrated that there was still an impact at these junctions and improvement schemes were proposed at both roundabouts to mitigate the impact of the development traffic.

1.2 Upon review of these models and proposals, concerns were raised by National Highways (NH) with regards to the distribution of the forecast background traffic at the Gibbet Roundabout, as there was a high proportion of additional traffic turning from the A5 South to the A426 South, once the furnessing process had been undertaken. Similarly, Warwickshire County Council (WCC) also raised concern with the background turning movements predicted in the furnessed background traffic flows at the Gibbet Roundabout as they suggested a high proportion of traffic using Gibbet Lane. In addition, there were also queries raised about the furnessed background traffic flows at Cross in Hands with similar increases shown on the minor arms (Coal Pit Lane & B4027) of the junction.

1.3 BWB reviewed the forecast background flows at the junctions and modelled an additional scenario with the reassigned traffic on both junctions. This was then reviewed to understand the impact a different distribution of background traffic would give at the junctions as a sensitivity test.

1.4 As a result, this Technical Note explains the methodology and processes undertaken to redistribute the background traffic as well as summarising the model outputs and reviewing how they may impact on the operation of the junction.

1.5 It is important to note that the agreed furnessing methodology is double constrained and accounts for rerouting of traffic forecast by PRTM and is considered the more robust assessment.

1.6 TheRugby Rural Area Model RRAM model for the Warwickshire has also already been signed off by NH and WCC and provides a further check of the flows in this area. There are no significant impacts recorded from this model output.

2. RE-FURNESSING METHODS AND MODELLING.

NATIONAL HIGHWAYS RE-FURNESSING AT GIBBET ROUNDABOUT

2.1 Initially, NH queried a single movement at the Gibbet Roundabout as they suggested that the movement appeared to be disproportionate to what they would expect. Flows from the A5 South arm, travelling to the A426 Rugby Road (SW) arm appeared to increase disproportionately to the movements to the A5 North arm and the A426 Rugby Road (NE) arm.

2.2 As a result, the total movements from Arm D (A5 south) were redistributed around the roundabout in proportion to the observed 2023 flows. **Spreadsheet 1** at the back of this report shows how this has changed the movements around the junction. It demonstrates that the total flows entering the junction at Arm D remain the same as the furnessed flows in each of the scenarios, but the flows travelling to A5 North increase, whilst the flows to the other 4 arms reduce to rebalance.

SENSITIVITY TEST MODELLING RESULTS

2.3 A summary of the junction assessments at the existing Gibbet Hill with the redistributed flows has been presented in **Table 1**, a copy of the outputs are presented in **Appendix 1**.

Table 1: Existing Gibbet Roundabout J10 Output

		WoD		WDWS	
		AM Peak Hour (08:00-09:00)			
		RFC	Queue	RFC	Queue
A	Rugby Road	50%	1.0	51%	1.0
B	Gibbet Lane	100%	13.3	110%	26.4
C	A5 (S)	112%	71.6	113%	77.8
D	A426	41%	0.7	41%	0.7
E	A5 (N)	49%	1.0	53%	1.1
Arm		PM Peak Hour (17:00-18:00)			
		RFC	Queue	RFC	Queue
A	Rugby Road	60%	1.5	61%	1.5
B	Gibbet Lane	57%	1.3	60%	1.5
C	A5 (S)	101%	26.2	103%	33.2
D	A426	78%	3.4	80%	3.9
E	A5 (N)	51%	1.0	53%	1.1

2.4 **Table 1** illustrates that Gibbet Lane will operate over capacity in all of the 2036 AM modelling scenarios and A5 South will operate over capacity in all 2036 AM and PM modelling scenarios.

2.5 The mitigation scheme that provided widening on Gibbet Lane, A5 South and A426 Rugby Road (S) was revisited and modelled with the reassigned flows set out above. The mitigation scheme is shown in Appendix 1 of this document.

2.6 A summary of the junction assessments at the mitigated Gibbet Hill with the redistributed flows has been presented in **Table 2**, a copy of the outputs are presented in **Appendix 2**.

Table 2: Mitigated Gibbet Roundabout J10 Output

		2036 WDWS		2036 WDWS	
		AM Peak Hour (08:00-09:00)		PM Peak Hour (17:00-18:00)	
		RFC	Queue	RFC	Queue
A	Rugby Road	51%	1.0	61%	1.5
B	Gibbet Lane	90%	6.6	48%	0.9
C	A5 (S)	107%	51.0	96%	14.7
D	A426	40%	0.7	78%	3.5
E	A5 (N)	53%	1.1	53%	1.1

2.7 **Table 2** illustrates that with the mitigation scheme in place, Gibbet Lane and the A5 South would operate better in the 2036 WD scenario than the 2036 WoD scenario at the existing junction, therefore mitigating the impact of the proposals.

2.8 NH reviewed the flows and the outputs and confirmed that they were happy with the redistribution of the flows within their Deadline 5 response.

WARWICKSHIRE COUNTY COUNCIL RE-FURNESSING AT GIBBET ROUNDABOUT

2.9 Further to the query above from NH, WCC then questioned the furnessed 2036 background traffic flows at the Gibbet Lane arm of the roundabout as well as the A5 South arm. This was due to the flows entering and exiting the roundabout from Gibbet Lane also appearing to increase disproportionately, given that Gibbet Lane is a quiet secondary route.

2.10 The furnessing matrices were revisited and the same methodology for the A5 south arm taken above, was then applied to the full junction. The growth and therefore total 2036 background flows were taken from the furnessing sheet derived from the PRTM model. These were redistributed around the junction in proportion to the observed 2023 turning movements. **Spreadsheet 2** at the back of this report, shows how this has changed the movements around the junction. It demonstrates that the total flows in each of the scenarios remains the same as the furnessed flows, but these have been rebalanced around the whole junction.

2.11 The WD traffic has also been added in line with the furnessed flows originally modelled as shown in the spreadsheet, to ensure the development impact remained on the same arms forecast previously. It is just the background traffic that has been reassigned.

2.12 The change in flows as a result of the proposed development is shown below in **Table 3** and summarises the change in flows at each approach.

Table 3: 2036 Change in flows at Gibbet Roundabout

		WoD	
		Change in Flows	
		AM	PM
A	Rugby Road	8	11
B	Gibbet Lane	13	9
C	A5 (S)	8	38
D	A426	-19	0
E	A5 (N)	60	10
Total		**70**	**68**

2.13 The spreadsheet shows how this is broken down across each movement at the junction. It also presents the changes in flows between the furnessed matrices and the reassigned matrices and how the traffic has been redistributed across all of the movements at the junction.

SENSITIVITY TEST MODELLING RESULTS

2.14 A summary of the junction assessments at the existing Gibbet Hill with the redistributed flows around the whole junction has been presented in **Table 4**; a copy of the outputs is presented in **Appendix 3**.

Table 4: Existing Gibbet Roundabout J10 Output

		2036 WoD		2036 WDWS	
		AM Peak Hour (08:00-09:00)			
		RFC	Queue	RFC	Queue
A	Rugby Road	67%	2.0	69%	2.2
B	Gibbet Lane	52%	1.0	64%	1.6
C	A5 (S)	86%	5.5	88%	6.4
D	A426	47%	0.9	46%	0.8
E	A5 (N)	69%	2.2	73%	2.6
Arm		PM Peak Hour (17:00-18:00)			
		RFC	Queue	RFC	Queue
A	Rugby Road	60%	1.5	61%	1.5
B	Gibbet Lane	41%	0.7	45%	0.8
C	A5 (S)	81%	4.1	83%	4.7
D	A426	89%	7.0	91%	8.9
E	A5 (N)	62%	1.6	63%	1.7

2.15 **Table 4** illustrates that Gibbet Lane will now operate within capacity in all scenarios, however, the A5 south will operate over capacity in all of the 2036 AM modelling scenarios and the A426 South will operate over capacity in all 2036 PM modelling scenarios.

2.16 The mitigation scheme that was previously explored and provided widening on Gibbet Lane, A5 South and A426 Rugby Road (S) was revisited and modelled with the reassigned flows set out above. The mitigation scheme is shown in Appendix 1

2.17 A summary of the junction assessments at the mitigated Gibbet Hill with the redistributed flows has been presented in **Table 5**, a copy of the outputs are presented in **Appendix 4**.

Table 5: Mitigated Gibbet Roundabout J10 Output

		2036 WDWS		2036 WDWS	
		AM Peak Hour (08:00-09:00)		PM Peak Hour (17:00-18:00)	
		RFC	Queue	RFC	Queue
A	Rugby Road	69%	2.2	61%	1.5
B	Gibbet Lane	47%	0.9	36%	0.5
C	A5 (S)	82%	4.2	78%	3.4
D	A426	44%	0.8	88%	6.8
E	A5 (N)	73%	2.6	63%	1.7

2.18 **Table 5** illustrates that with the mitigation scheme in place, the only arm that would be over capacity when including for the development traffic would be the A426(S) at 88% but this is still an improvement over the 89% RFC presented at the existing roundabout in the 2036 background scenario.

2.19 The sensitivity test requested by WCC of reassigning the traffic to understand what if any impact there is at the Gibbet Roundabout, confirms that the proposed mitigation scheme at the junction still mitigates the impact of the development.

2.20 It should be noted that this approach excludes the rerouting of background traffic and committed development traffic changes for forecast years which is represented in the PRTM and therefore the initial approach to use the PRTM flows is still considered the more robust assessment and the proposed scheme of mitigation remains the same

2.21 It is understood that a number of schemes in the area have contributed towards the cost of a larger scheme to improve the general operation of the junction as a result, the mitigation scheme shown in BWB drawing reference **HRF-BWB-GEN-XX-DR-TR-114_P1 (Appendix 1)** has been costed and a suitable contribution put forward to NH for agreement.

WARWICKSHIRE COUNTY COUNCIL RE-FURNESSING AT CROSS-IN-HANDS ROUNDABOUT

2.22 Similar to Gibbet roundabout, WCC also questioned the furnessed 2036 background traffic flows at the Cross-in-Hands roundabout. The furnessed background 2036 traffic flows also appeared to increase traffic flows on the Coal Pit Lane arm of the roundabout as well as the B4027 arm disproportionately to the A5 and A4303 arms. WCC were concerned that the increase in flows proposed at these arms was not relative to what would likely happen at the junction.

2.23 As a result of this, the furnessing matrices were revisited and the same methodology for the Gibbet Roundabout, was then applied to the Cross-in-Hands junction for the full turning movements. The growth and therefore total 2036 background flows were taken from the furnessing sheet derived from the PRTM model. These were redistributed around the junction in proportion to the observed 2023 turning movements. **Spreadsheet 3** at the back of this report shows how this has changed the movements around the junction. It demonstrates that the total flows in each of the scenarios remains the same as the furnessed flows, but these have been rebalanced around the whole junction.

2.24 The WD-WoD traffic has also been added in line with the furnessed flows originally modelled as shown in the spreadsheet, to ensure the development impact remained on the same arms forecast previously. It is the background traffic that has been reassigned.

2.25 The change in flows as a result of the proposed development is shown below in **Table 6** and summarises the change at each approach at the Cross-in-Hands Roundabout.

Table 6: Change in flows (WD-WoD) at Cross-in-Hands Roundabout

		WoD	
		Change in Flows	
		AM	PM
A	A5 (N)	-37	91
B	A4303 (E)	54	-25
C	A5 (S)	47	57
D	B4027 (S)	9	-18
E	Coal Pit Lane (W)	69	-7
Total		**142**	**98**

2.26 The spreadsheet 2 shows how this is broken down across each movement at the junction. It also presents the changes in flows between the furnessed matrices and the reassigned matrices and how the traffic has been redistributed across all of the movements at the junction.

SENSITIVITY TEST MODELLING RESULTS

2.27 A summary of the junction assessments at the existing Cross-in-Hands roundabout with the redistributed flows around the whole junction has been presented in **Table 7**, a copy of the outputs are presented in **Appendix 5**.

Table 7: Existing Cross-in-Hands Roundabout J10 Output

		2036 WoD		2036 WDWS	
		AM Peak Hour (08:00-09:00)			
		RFC	Queue	RFC	Queue
A	A5 (N)	91%	9.0	91%	9.1
B	A4303 (E)	66%	1.9	70%	2.3
C	A5 (S)	55%	1.2	59%	1.2
D	B4027 (S)	34%	0.5	36%	0.5
E	Coal Pit Lane (W)	54%	1.2	69%	1.1
Arm		PM Peak Hour (17:00-18:00)			
		RFC	Queue	RFC	Queue
A	A5 (N)	57%	1.3	62%	1.6
B	A4303 (E)	62%	1.6	62%	1.6
C	A5 (S)	78%	3.4	83%	4.5
D	B4027 (S)	75%	2.9	75%	2.9
E	Coal Pit Lane (W)	40%	0.7	39%	0.6

2.28 **Table 7** illustrates that with the rebalanced traffic flows, the only arm that would be over capacity at the existing junction would be the A5 North arm which is forecast to operate at 91% RFC. This does not however, increase at all when including for the development traffic.

2.29 The test requested by WCC provided results that meant the Authority no longer required the mitigation proposed. However, for the purposes of the DCO, the proposed mitigation will remain, though works would need to be accepted by all three Highway Authorities. The mitigation scheme is shown in **REP5-004 Appendix B**

2.30 It should be noted that this approach excludes the rerouting of background traffic and committed development traffic changes for forecast years. This is represented in the PRTM and therefore the initial approach to use the PRTM flows is still considered the more robust assessment.

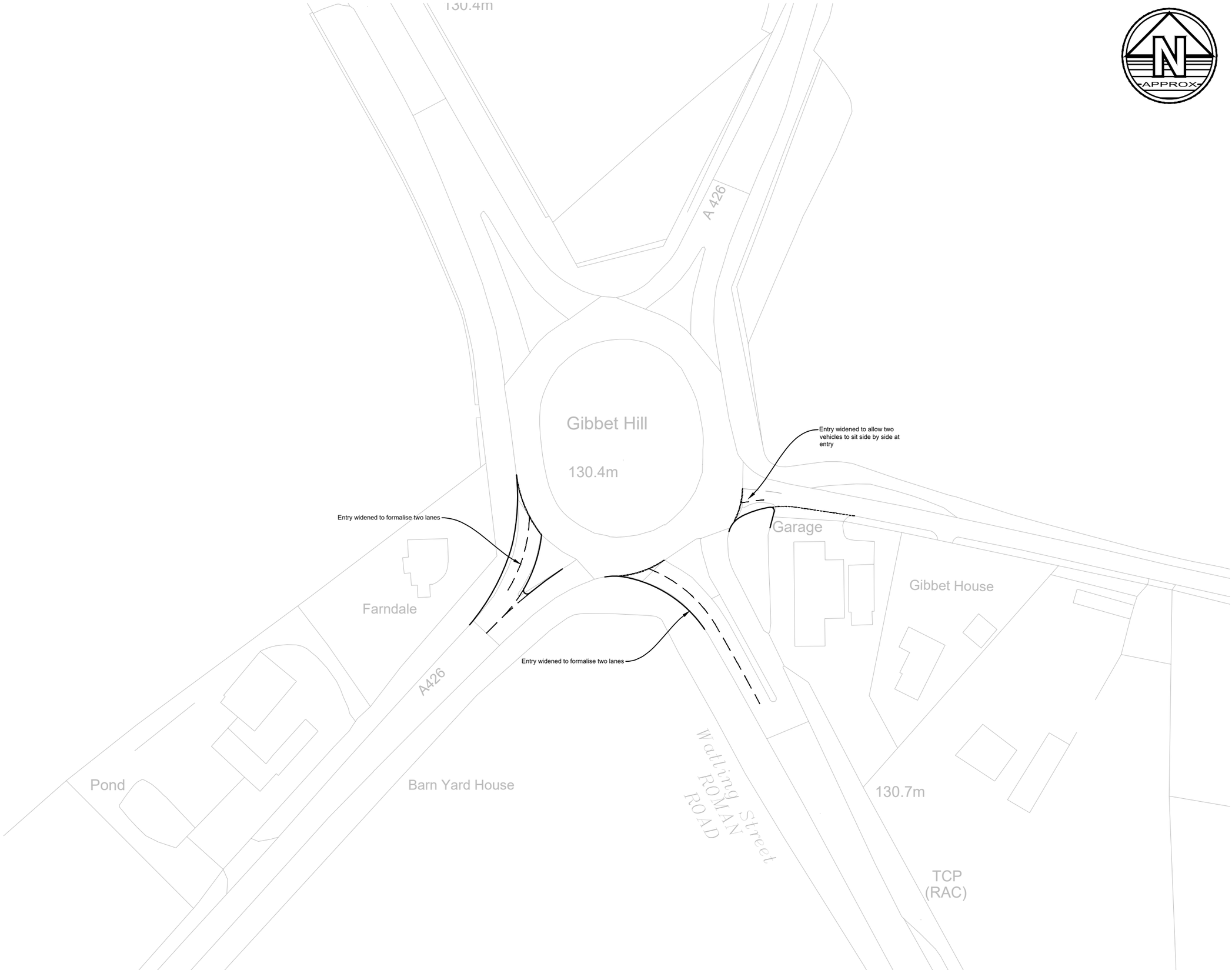
3. SUMMARY & CONCLUSION

3.1 NH initially requested a review of the background traffic flows travelling from the A5 south to the A426 (WoD) compared to those travelling north on the A5 from this approach. This is because they considered the increase disproportionate to what they would expect. As a result the flows were redistributed from the A5 south, to all other arms of the junction based on the turning proportions observed in the 2023 turning counts. This resulted in a balanced distribution from the arm but did not impact the operation of the junction any further to the already identified mitigation scheme. NH confirmed that the rebalancing of the flows was appropriate within their Deadline 5 response.

3.2 WCC also requested a review of the background traffic flows, because they considered that there were disproportionate increases on Gibbet Lane. As a result, the same methodology as described above at the Cross in Hands roundabout was applied and the resultant modelling showed the proposed mitigation scheme remained unchanged. It should be noted that this approach excludes the rerouting of background traffic and committed development traffic changes for forecast years which is represented in the PRTM. Therefore the initial approach to use the PRTM flows is still considered the more robust assessment. The additional assessments provided are to give comfort to WCC that the proposed mitigation is still appropriate. The proposed mitigation scheme at the junction has been costed and an appropriate contribution put forward to NH to agree.

3.3 On review for WCC, the query related to WoD matrices and specifically the growth/redistribution by PRTM between 2019 WoD and 2036 on Coalpit Lane and B4027 Lutterworth East arms. Therefore, WCC asked what would happen if the forecast background turning movements were rebalanced at the junction based on the observed 2023 turning movements. This results in rebalanced flows towards the A5 as a sensitivity test.

3.4 However, it should be noted that this approach excludes the rerouting of forecast background traffic and committed development traffic changes for forecast years which is represented in the PRTM and therefore the initial approach to use the PRTM flows is still considered the more robust assessment. Mitigation is provided on Coalpit Lane and B4027 Lutterworth Road as per the 2023 Assessment. WCC's view is that they do not require the mitigation proposed based on the results of the sensitivity test. However the redline and mitigation scheme is still within the submission and wording proposed in the DCO.

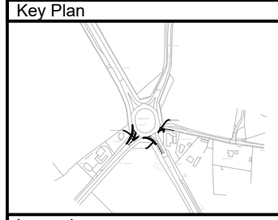


APPROX

Notes

1. Do not scale this drawing. All dimensions must be checked/ verified on site. If in doubt ask.
2. This drawing is to be read in conjunction with all relevant architects, engineers and specialists drawings and specifications.
3. All dimensions in millimetres unless noted otherwise. All levels in metres unless noted otherwise.
4. Any discrepancies noted on site are to be reported to the engineer immediately.

Key Plan



Legend

Rev	Date	Details of issue / revision	Drw	Rev
P1	09.10.23	PRELIMINARY ISSUE	AJ	MA

Issues & Revisions

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Client

TRITAX SYMMETRY (HINCKLEY) LIMITED

Project Title

HINCKLEY RAIL FREIGHT INTERCHANGE

Drawing Title

JUNCTION 26 - GIBBET HILL PROPOSED MITIGATION (HNRFI ONLY)

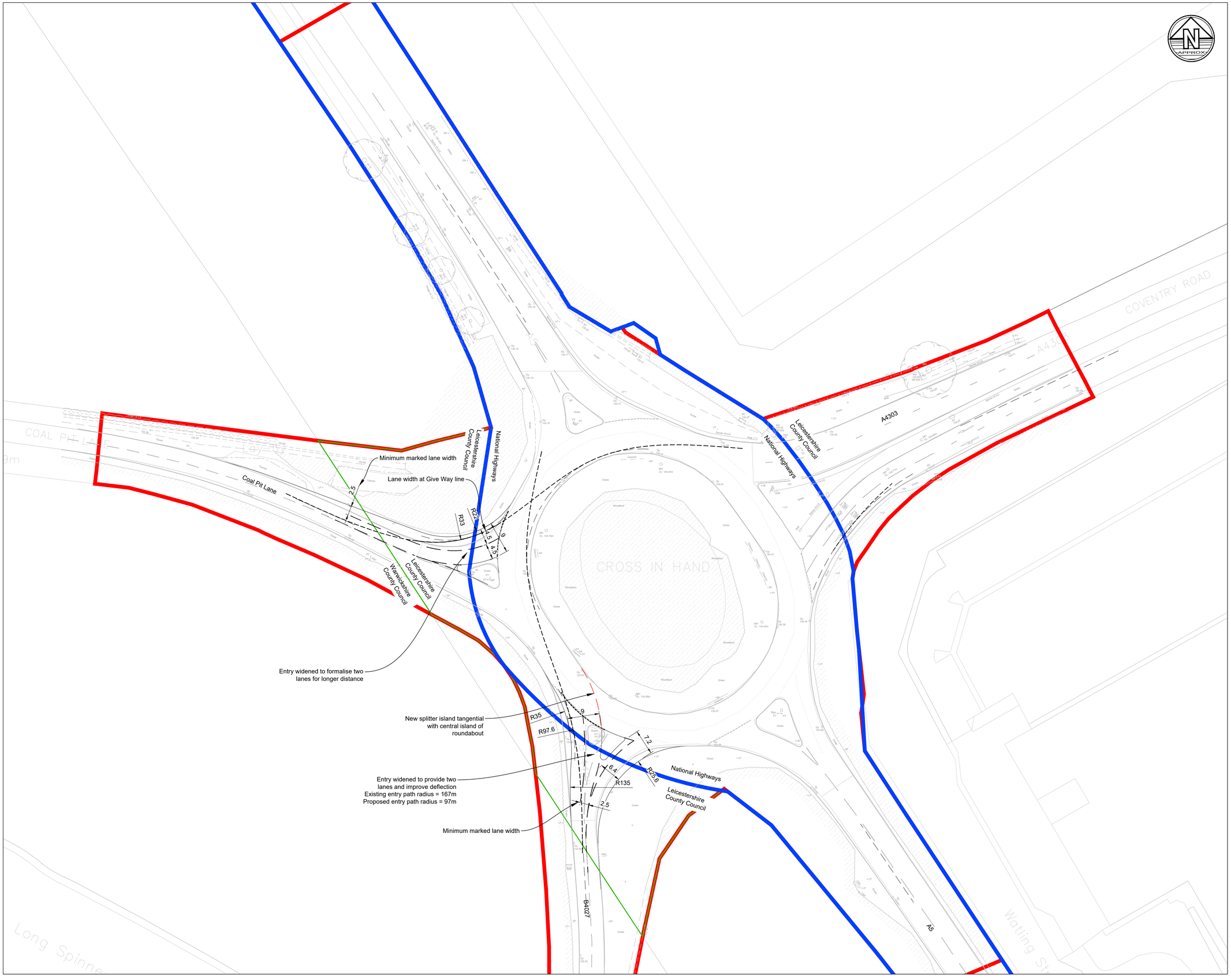
Drawn:	AJ Oakes		Reviewed:	Malclom Ash
BWB Ref:	NTT 2814	Date:	09.10.23	Scale@A3: 1:1000

Drawing Status

PRELIMINARY

Project - Originator - Zone - Level - Type - Role - Number	Status	Rev
HRF-BWB-GEN-XX-DR-TR-114	S2	P1

X:\NTT\NTT2814_Hinckley Rail Freight Interchange\02. Project Delivery\01. WIP\Drawings\Other drawings\HRF-BWB-GEN-XX-DR-TR-114_Gibbet Hill HNRFI Mitigation.dwg



Notes

1. Do not scale from this drawing. All dimensions must be checked/verified on site. If in doubt, ask.
2. This drawing is to be read in conjunction with all relevant architects, engineers and specialists drawings and specifications
3. All dimensions in metres unless noted otherwise. All levels in metres unless noted otherwise
4. Any discrepancies noted on site are to be reported to the engineer immediately
5. For further details on specific areas of works, see the relevant SHW series drawings and appedices
6. All works must be carried out to the requirements of the overseeing organisation.

Legend

- Development Consent Order Limits
- LCC Highway Boundary
- NH Highway Boundary
- Primary Signal Head
- Secondary Signal head
- Noise fence
- Earthwork extents
- Footway Type - Tactile paving in Red (R)
- Footway Type - Tactile paving in Buff (B)

Rev	Date	Details of issue / revision	Drw	Rev
P03	09.02.24	Extents of mitigation amended.	JM	SC
P02	07.12.23	Updated following LCC meeting	JM	SC
P01	10.11.23	Preliminary Issue	JM	SC

Issues & Revisions

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Client

TRITAX SYMMETRY
A TRITAX BIG BOX COMPANY

Project Title

HINCKLEY NATIONAL RAIL FREIGHT INTERCHANGE

Drawing Title

GENERAL ARRANGEMENT SHEET 22

Drawn:	J.Manifold	Reviewed:	S.Carter		
BWB Ref:	NTT2814	Date:	06.11.23	Scale@A1:	1:500

Drawing Status

PRELIMINARY

Project - Originator - Zone - Level - Type - Role - Number	Status	Rev
HRF-BWB-HGN-HW22-DR-CH-0100	S2	P03

Spreadsheets

AM PEAK

Junction Arm	
A	Watling Street N
B	Rugby Road
C	Gibbet Lane
D	Wattling Street S
E	Rugby Road W

GIBBET ROUNDABOUT

2023 Observed Flows

	A	B	C	D	E	TOTAL
A	0	5	32	353	452	842
B	2	0	25	139	547	713
C	20	23	1	5	57	106
D	328	219	32	5	193	777
E	189	215	19	100	0	523
TOTAL	539	462	109	602	1249	2961

WoD 2036 FINAL MATIX

	A	B	C	D	E	TOTAL
A	0	1	32	245	382	660
B	1	0	30	101	506	638
C	46	36	6	10	267	365
D	463	118	87	6	433	**1107**
E	191	138	33	126	0	488
TOTAL	701	293	188	488	1588	3258

WD 2036 FINAL MATIX

	A	B	C	D	E	TOTAL
A	0	1	40	287	392	720
B	1	0	31	105	509	646
C	53	35	6	12	272	378
D	495	106	85	10	419	**1115**
E	199	120	28	122	0	469
TOTAL	748	262	190	536	1592	3328

GIBBET ROUNDABOUT

		A	B	C	D	E	TOTAL
A	Watling Street N	0	5	32	353	452	842
B	Rugby Road	2	0	25	139	547	713
C	Gibbet Lane	20	23	1	5	57	106
D	Wattling Street S	328	219	32	5	193	777
E	Rugby Road W	189	215	19	100	0	523
TOTAL		539	462	109	602	1249	2961

		A	B	C	D	E	TOTAL
A	Watling Street N	0	1	32	245	382	660
B	Rugby Road	1	0	30	101	506	638
C	Gibbet Lane	46	36	6	10	267	365
D	Wattling Street S	467	312	46	7	275	**1107**
E	Rugby Road W	191	138	33	126	0	488
TOTAL		701	293	188	488	1588	3258

		A	B	C	D	E	TOTAL
A	Watling Street N	0	1	40	287	392	720
B	Rugby Road	1	0	31	105	509	646
C	Gibbet Lane	53	35	6	12	272	378
D	Wattling Street S	499	300	44	11	261	**1115**
E	Rugby Road W	199	120	28	122	0	469
TOTAL		748	262	190	536	1592	3328

42.471% Increase

PM PEAK

Junction Arm	
A	Watling Street N
B	Rugby Road
C	Gibbet Lane
D	Wattling Street S
E	Rugby Road W

GIBBET ROUNDABOUT

2023 Observed Flows

	A	B	C	D	E	TOTAL
A	0	5	25	230	362	622
B	1	0	16	163	450	630
C	20	19	0	13	46	98
D	432	125	23	7	134	721
E	290	468	14	111	4	887
TOTAL	743	617	78	524	996	2958

WoD 2036 FINAL MATIX

	A	B	C	D	E	TOTAL
A	0	3	15	246	359	623
B	1	0	17	220	549	787
C	22	20	0	33	93	168
D	469	220	49	15	335	**1088**
E	207	485	13	166	4	875
TOTAL	699	728	94	680	1340	3541

WD 2036 FINAL MATIX

	A	B	C	D	E	TOTAL
A	0	4	15	275	339	633
B	1	0	16	254	527	798
C	22	24	0	35	96	177
D	524	230	47	17	308	**1126**
E	206	496	14	155	4	875
TOTAL	753	754	92	736	1274	3609

GIBBET ROUNDABOUT

		A	B	C	D	E	TOTAL
A	Watling Street N	0	5	25	230	362	622
B	Rugby Road	1	0	16	163	450	630
C	Gibbet Lane	20	19	0	13	46	98
D	Wattling Street S	432	125	23	7	134	721
E	Rugby Road W	290	468	14	111	4	887
TOTAL		743	617	78	524	996	2958

		A	B	C	D	E	TOTAL
A	Watling Street N	0	3	15	246	359	623
B	Rugby Road	1	0	17	220	549	787
C	Gibbet Lane	22	20	0	33	93	168
D	Wattling Street S	651	189	35	11	202	**1088**
E	Rugby Road W	207	485	13	166	4	875
TOTAL		699	728	94	680	1340	3541

		A	B	C	D	E	TOTAL
A	Watling Street N	0	4	15	275	339	633
B	Rugby Road	1	0	16	254	527	798
C	Gibbet Lane	22	24	0	35	96	177
D	Wattling Street S	706	199	33	13	175	**1126**
E	Rugby Road W	206	496	14	155	4	875
TOTAL		753	754	92	736	1274	3609

50.9% Increase

SPREADSHEET 1 - REASSIGNMENT OF TRAFFIC AT GIBBET ROUNDABOUT ON THE A5 (SOUTH) ARM FOR NATIONAL HIGHWAYS

GIBBET ROUNDABOUT

AM Peak

	Junction Arm
A	Watling Street N
B	Rugby Road
C	Gibbet Lane
D	Wattling Street S
E	Rugby Road W

FURNESSED FLOWS

2023 Observed Flows

	A	B	C	D	E	TOTAL
A	0	5	32	353	452	842
B	2	0	25	139	547	713
C	20	23	1	5	57	106
D	328	219	32	5	193	777
E	189	215	19	100	0	523
TOTAL	539	462	109	602	1249	**2961**

WoD 2036 FINAL MATIX

	A	B	C	D	E	TOTAL
A	0	1	32	245	382	660
B	1	0	30	101	506	638
C	46	36	6	10	267	365
D	463	118	87	6	433	1107
E	191	138	33	126	0	488
TOTAL	701	293	188	488	1588	**3258**

WoDWS 2036 FINAL MATIX

	A	B	C	D	E	TOTAL
A	0	1	34	250	377	662
B	1	0	30	103	505	639
C	46	36	5	10	266	363
D	462	117	87	6	436	1108
E	186	133	29	124	0	472
TOTAL	695	287	185	493	1584	**3244**

WD 2036 FINAL MATIX

	A	B	C	D	E	TOTAL
A	0	1	40	287	392	720
B	1	0	31	105	509	646
C	53	35	6	12	272	378
D	495	106	85	10	419	1115
E	199	120	28	122	0	469
TOTAL	748	262	190	536	1592	**3328**

DEVELOPMENT FLOWS FINAL MATIX

	A	B	C	D	E	TOTAL
A	0	0	8	42	10	60
B	0	0	1	4	3	8
C	7	-1	0	2	5	13
D	32	-12	-2	4	-14	8
E	8	-18	-5	-4	0	-19
TOTAL	47	-31	2	48	4	**70**

RE-FURNESSED FLOWS

		A	B	C	D	E	TOTAL
A	Watling Street N	A	0	5	32	353	452	842
B	Rugby Road	B	2	0	25	139	547	713
C	Gibbet Lane	C	20	23	1	5	57	106
D	Wattling Street S	D	328	219	32	5	193	777
E	Rugby Road W	E	189	215	19	100	0	523
		TOTAL	539	462	109	602	1249	**2961**

10.03% Increase (Growth)

	A	B	C	D	E	TOTAL
A	0	6	35	388	497	926
B	2	0	28	153	602	785
C	22	25	1	6	63	117
D	361	241	35	6	212	855
E	208	237	21	110	0	575
TOTAL	593	508	120	662	1374	**3258**

	A	B	C	D	E	TOTAL
A	0	6	37	393	492	928
B	2	0	28	155	601	786
C	22	25	0	6	62	115
D	360	240	35	6	215	856
E	203	232	17	108	0	559
TOTAL	587	502	117	667	1370	**3244**

	A	B	C	D	E	TOTAL
A	0	6	43	430	507	986
B	2	0	29	157	605	793
C	29	24	1	8	68	130
D	393	229	33	10	198	863
E	216	219	16	106	0	556
TOTAL	640	477	122	710	1378	**3328**

	A	B	C	D	E	TOTAL
A	0	0	8	42	10	60
B	0	0	1	4	3	8
C	7	-1	0	2	5	13
D	32	-12	-2	4	-14	8
E	8	-18	-5	-4	0	-19
TOTAL	47	-31	2	48	4	**70**

FLOW DIFFERENCE

		A	B	C	D	E	TOTAL
A	A5 N	A	0	5	3	143	115	266
B	A4303 E	B	1	0	-2	52	96	147
C	A5 S	C	-24	-11	-5	-4	-204	-248
D	B4027 S	D	-102	123	-52	0	-221	-252
E	Coal Pit Lane W	E	17	99	-12	-16	0	87
		TOTAL	-108	215	-68	174	-214	**0**

	A	B	C	D	E	TOTAL
A	0	5	3	143	115	266
B	1	0	-2	52	96	147
C	-24	-11	-5	-4	-204	-248
D	-102	123	-52	0	-221	-252
E	17	99	-12	-16	0	87
TOTAL	-108	215	-68	174	-214	**0**

	A	B	C	D	E	TOTAL
A	0	5	3	143	115	266
B	1	0	-2	52	96	147
C	-24	-11	-5	-4	-204	-248
D	-102	123	-52	0	-221	-252
E	17	99	-12	-16	0	87
TOTAL	-108	215	-68	174	-214	**0**

GIBBET ROUNDABOUT

PM Peak

	Junction Arm
A	Watling Street N
B	Rugby Road
C	Gibbet Lane
D	Wattling Street S
E	Rugby Road W

FURNESSED FLOWS

2023 Observed Flows

	A	B	C	D	E	TOTAL
A	0	5	25	230	362	622
B	1	0	16	163	450	630
C	20	19	0	13	46	98
D	432	125	23	7	134	721
E	290	468	14	111	4	887
TOTAL	743	617	78	524	996	**2958**

WoD 2036 FINAL MATIX

	A	B	C	D	E	TOTAL
A	0	3	15	246	359	623
B	1	0	17	220	549	787
C	22	20	0	33	93	168
D	469	220	49	15	335	1088
E	207	485	13	166	4	875
TOTAL	699	728	94	680	1340	**3541**

WoDWS 2036 FINAL MATIX

	A	B	C	D	E	TOTAL
A	0	4	15	250	353	622
B	1	0	14	225	548	788
C	21	21	0	31	91	164
D	481	217	42	15	327	1082
E	206	471	13	156	4	850
TOTAL	709	713	84	677	1323	**3506**

WD 2036 FINAL MATIX

	A	B	C	D	E	TOTAL
A	0	4	15	275	339	633
B	1	0	16	254	527	798
C	22	24	0	35	96	177
D	524	230	47	17	308	1126
E	206	496	14	155	4	875
TOTAL	753	754	92	736	1274	**3609**

DEVELOPMENT FLOWS FINAL MATIX

	A	B	C	D	E	TOTAL
A	0	1	0	29	-20	10
B	0	0	-1	34	-22	11
C	0	4	0	2	3	9
D	55	10	-2	2	-27	38
E	-1	11	1	-11	0	0
TOTAL	54	26	-2	56	-66	**68**

RE-FURNESSED FLOWS

		A	B	C	D	E	TOTAL
A	Watling Street N	A	0	5	25	230	362	622
B	Rugby Road	B	1	0	16	163	450	630
C	Gibbet Lane	C	20	19	0	13	46	98
D	Wattling Street S	D	432	125	23	7	134	721
E	Rugby Road W	E	290	468	14	111	4	887
		TOTAL	743	617	78	524	996	**2958**

19.70% Increase (Growth)

	A	B	C	D	E	TOTAL
A	0	6	30	275	433	745
B	1	0	19	195	539	754
C	24	23	0	16	55	117
D	517	150	28	8	160	863
E	347	560	17	133	5	1062
TOTAL	889	739	93	627	1192	**3541**

	A	B	C	D	E	TOTAL
A	0	7	30	279	427	744
B	1	0	16	200	538	755
C	23	24	0	14	53	113
D	529	147	21	8	152	857
E	346	546	17	123	5	1037
TOTAL	899	724	83	624	1175	**3506**

	A	B	C	D	E	TOTAL
A	0	7	30	304	413	755
B	1	0	18	229	517	765
C	24	27	0	18	58	126
D	572	160	26	10	133	901
E	346	571	18	122	5	1062
TOTAL	943	765	91	683	1126	**3609**

	A	B	C	D	E	TOTAL
A	0	1	0	29	-20	10
B	0	0	-1	34	-22	11
C	0	4	0	2	3	9
D	55	10	-2	2	-27	38
E	-1	11	1	-11	0	0
TOTAL	54	26	-2	56	-66	**68**

FLOW DIFFERENCE

		A	B	C	D	E	TOTAL
A	A5 N	A	0	3	15	29	74	122
B	A4303 E	B	0	0	2	-25	-10	-33
C	A5 S	C	2	3	0	-17	-38	-51
D	B4027 S	D	48	-70	-21	-7	-175	-225
E	Coal Pit Lane W	E	140	75	4	-33	1	187
		TOTAL	190	11	-1	-53	-148	**0**

	A	B	C	D	E	TOTAL
A	0	3	15	29	74	122
B	0	0	2	-25	-10	-33
C	2	3	0	-17	-38	-51
D	48	-70	-21	-7	-175	-225
E	140	75	4	-33	1	187
TOTAL	190	11	-1	-53	-148	**0**

	A	B	C	D	E	TOTAL
A	0	3	15	29	74	122
B	0	0	2	-25	-10	-33
C	2	3	0	-17	-38	-51
D	48	-70	-21	-7	-175	-225
E	140	75	4	-33	1	187
TOTAL	190	11	-1	-53	-148	**0**

SPREADSHEET 2 - REASSIGNMENT OF TRAFFIC AT GIBBET ROUNDABOUT (FULL JUNCTION REASSIGNMENT)

CROSS-IN-HANDS ROUNDABOUT

AM Peak

	Junction Arm
A	A5 N
B	A4303 E
C	A5 S
D	B4027 S
E	Coal Pit Lane W

FURNESSED FLOWS

2023 Observed Flows

	A	B	C	D	E	TOTAL
A	0	437	503	48	4	992
B	332	0	226	223	76	857
C	216	234	2	13	62	527
D	40	154	19	0	1	214
E	20	149	80	6	0	255
TOTAL	608	974	830	290	143	**2845**

WoD 2036 FINAL MATIX

	A	B	C	D	E	TOTAL
A	0	573	330	43	4	950
B	622	0	217	311	112	1262
C	288	316	2	13	70	689
D	122	455	29	0	2	608
E	37	272	72	19	0	400
TOTAL	1069	1616	650	386	188	**3909**

WoDWS 2036 FINAL MATIX

	A	B	C	D	E	TOTAL
A	0	581	330	41	4	956
B	632	0	221	305	113	1271
C	285	320	2	12	63	682
D	116	453	27	0	2	598
E	34	267	69	19	0	389
TOTAL	1067	1621	649	377	182	**3896**

WD 2036 FINAL MATIX

	A	B	C	D	E	TOTAL
A	0	522	353	32	6	913
B	661	0	239	310	106	1316
C	336	324	2	12	62	736
D	120	464	31	0	2	617
E	42	322	85	20	0	469
TOTAL	1159	1632	710	374	176	**4051**

DEVELOPMENT FLOWS FINAL MATIX

	A	B	C	D	E	TOTAL
A	0	-51	23	-11	2	-37
B	39	0	22	-1	-6	54
C	48	8	0	-1	-8	47
D	-2	9	2	0	0	9
E	5	50	13	1	0	69
TOTAL	90	16	60	-12	-12	**142**

RE-FURNESSED FLOWS

		A	B	C	D	E	TOTAL
A	A5 N	A	0	437	503	48	4	992
B	A4303 E	B	332	0	226	223	76	857
C	A5 S	C	216	234	2	13	62	527
D	B4027 S	D	40	154	19	0	1	214
E	Coal Pit Lane W	E	20	149	80	6	0	255
		TOTAL	608	974	830	290	143	**2845**

37.39% Increase (Growth)

	A	B	C	D	E	TOTAL
A	0	600	691	66	5	1363
B	456	0	311	306	104	1177
C	297	321	3	18	85	724
D	55	212	26	0	1	294
E	27	205	110	8	0	350
TOTAL	835	1338	1140	398	196	**3909**

	A	B	C	D	E	TOTAL
A	0	608	691	64	5	1369
B	466	0	315	300	105	1186
C	294	325	3	17	78	717
D	49	210	24	0	1	284
E	24	200	107	8	0	339
TOTAL	833	1343	1139	389	190	**3896**

	A	B	C	D	E	TOTAL
A	0	549	714	55	7	1326
B	495	0	333	305	98	1231
C	345	329	3	17	77	771
D	53	221	28	0	1	303
E	32	255	123	9	0	419
TOTAL	925	1354	1200	386	184	**4051**

	A	B	C	D	E	TOTAL
A	0	-51	23	-11	2	-37
B	39	0	22	-1	-6	54
C	48	8	0	-1	-8	47
D	-2	9	2	0	0	9
E	5	50	13	1	0	69
TOTAL	90	16	60	-12	-12	**142**

FLOW DIFFERENCE

		A	B	C	D	E	TOTAL
A	A5 N	A	0	27	361	23	1	413
B	A4303 E	B	-166	0	94	-5	-8	-85
C	A5 S	C	9	5	1	5	15	35
D	B4027 S	D	-67	-243	-3	0	-1	-314
E	Coal Pit Lane W	E	-10	-67	38	-11	0	-50
		TOTAL	-234	-278	490	12	8	**0**

	A	B	C	D	E	TOTAL
A	0	27	361	23	1	413
B	-166	0	94	-5	-8	-85
C	9	5	1	5	15	35
D	-67	-243	-3	0	-1	-314
E	-10	-67	38	-11	0	-50
TOTAL	-234	-278	490	12	8	**0**

	A	B	C	D	E	TOTAL
A	0	27	361	23	1	413
B	-166	0	94	-5	-8	-85
C	9	5	1	5	15	35
D	-67	-243	-3	0	-1	-314
E	-10	-67	38	-11	0	-50
TOTAL	-234	-278	490	12	8	**0**

PM Peak

	Junction Arm
A	A5 N
B	A4303 E
C	A5 S
D	B4027 S
E	Coal Pit Lane W

FURNESSED FLOWS

2023 Observed Flows

	A	B	C	D	E	TOTAL
A	0	262	337	26	4	629
B	405	0	236	128	130	899
C	418	203	0	17	108	746
D	74	277	3	0	7	361
E	5	79	43	1	0	128
TOTAL	902	821	619	172	249	**2763**

WoD 2036 FINAL MATIX

	A	B	C	D	E	TOTAL
A	0	539	372	102	7	1020
B	623	0	209	382	247	1461
C	353	214	0	24	109	700
D	87	370	2	0	10	469
E	6	107	36	2	0	151
TOTAL	1069	1230	619	510	373	**3801**

WoDWS 2036 FINAL MATIX

	A	B	C	D	E	TOTAL
A	0	571	367	94	6	1038
B	630	0	218	368	241	1457
C	354	229	0	23	106	712
D	72	336	2	0	12	422
E	6	101	32	2	0	141
TOTAL	1062	1237	619	487	365	**3770**

WD 2036 FINAL MATIX

	A	B	C	D	E	TOTAL
A	0	578	403	123	7	1111
B	626	0	191	379	240	1436
C	409	213	0	25	110	757
D	88	349	2	0	12	451
E	6	101	34	3	0	144
TOTAL	1129	1241	630	530	369	**3899**

DEVELOPMENT FLOWS FINAL MATIX

	A	B	C	D	E	TOTAL
A	0	39	31	21	0	91
B	3	0	-18	-3	-7	-25
C	56	-1	0	1	1	57
D	1	-21	0	0	2	-18
E	0	-6	-2	1	0	-7
TOTAL	60	11	11	20	-4	**98**

RE-FURNESSED FLOWS

		A	B	C	D	E	TOTAL
A	A5 N	A	0	262	337	26	4	629
B	A4303 E	B	405	0	236	128	130	899
C	A5 S	C	418	203	0	17	108	746
D	B4027 S	D	74	277	3	0	7	361
E	Coal Pit Lane W	E	5	79	43	1	0	128
		TOTAL	902	821	619	172	249	**2763**

	A	B	C	D	E	TOTAL
A	0	360	464	36	6	865
B	557	0	325	176	179	1237
C	575	279	0	23	149	1026
D	102	381	4	0	10	497
E	7	109	59	1	0	176
TOTAL	1241	1129	851	237	343	**3801**

	A	B	C	D	E	TOTAL
A	0	392	459	28	5	883
B	564	0	334	162	173	1233
C	576	294	0	22	146	1038
D	87	347	4	0	12	450
E	7	103	55	1	0	166
TOTAL	1234	1136	851	214	335	**3770**

	A	B	C	D	E	TOTAL
A	0	399	495	57	6	956
B	560	0	307	173	172	1212
C	631	278	0	24	150	1083
D	103	360	4	0	12	479
E	7	103	57	2	0	169
TOTAL	1301	1140	862	257	339	**3899**

	A	B	C	D	E	TOTAL
A	0	39	31	21	0	91
B	3	0	-18	-3	-7	-25
C	56	-1	0	1	1	57
D	1	-21	0	0	2	-18
E	0	-6	-2	1	0	-7
TOTAL	60	11	11	20	-4	**98**

37.56% Increase (Growth)

FLOW DIFFERENCE

		A	B	C	D	E	TOTAL
A	A5 N	A	0	-179	92	-66	-1	-155
B	A4303 E	B	-66	0	116	-206	-68	-224
C	A5 S	C	222	65	0	-1	40	326
D	B4027 S	D	15	11	2	0	0	28
E	Coal Pit Lane W	E	1	2	23	-1	0	25
		TOTAL	172	-101	232	-273	-30	**0**

	A	B	C	D	E	TOTAL
A	0	-179	92	-66	-1	-155
B	-66	0	116	-206	-68	-224
C	222	65	0	-1	40	326
D	15	11	2	0	0	28
E	1	2	23	-1	0	25
TOTAL	172	-101	232	-273	-30	**0**

	A	B	C	D	E	TOTAL
A	0	-179	92	-66	-1	-155
B	-66	0	116	-206	-68	-224
C	222	65	0	-1	40	326
D	15	11	2	0	0	28
E	1	2	23	-1	0	25
TOTAL	172	-101	232	-273	-30	**0**

SPREADSHEET 3 - REASSIGNMENT OF TRAFFIC AT CROSS-IN-HANDS ROUNDABOUT (FULL JUNCTION REASSIGNMENT)

Appendices

Appendix 1: Existing Gibbet Roundabout J10 Output (A5S Reassignment)

Junctions 10

ARCADY 10 - Roundabout Module

Version: 10.0.2.1574

For sales and distribution information, program advice and maintenance, contact TRL Software:
+44 (0)1344 379777 software@trl.co.uk trlsoftware.com

Filename: J26 231214 - A5_A426_Gibbet Lane (existing) NH Sens.j10
Path: X:\NTT\NTT2814_Hinckley Rail Freight Interchange\02. Project Delivery\01. WIP\Design and Calculations\T&I Planning\04 Junction Modelling\J26_JTC 47 - A5 - A426 - Gibbet Lane
Report generation date: 06/02/2024 19:21:21

Summary of junction performance

	AM						PM					
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity
	2023											
A - A5 (North)	D1	1.6	6.19	0.61	A	12 % [C - Gibbet Lane]	D2	0.9	4.91	0.48	A	24 % [E - A426]
B - Rugby Road		1.4	6.36	0.58	A			0.9	4.55	0.47	A	
C - Gibbet Lane		0.6	18.54	0.38	C			0.3	11.67	0.26	B	
D - A5 (South)		2.7	11.82	0.74	B			1.6	7.53	0.62	A	
E - A426		0.7	4.43	0.41	A			2.3	8.71	0.70	A	
	2036 WoD											
A - A5 (North)	D3	1.0	4.77	0.49	A	-12 % [D - A5 (South)]	D4	1.0	5.55	0.51	A	-6 % [D - A5 (South)]
B - Rugby Road		1.0	4.97	0.49	A			1.5	6.26	0.60	A	
C - Gibbet Lane		14.0	126.76	1.00	F			1.3	25.17	0.57	D	
D - A5 (South)		72.9	193.13	1.12	F			26.2	77.59	1.01	F	
E - A426		0.7	4.87	0.42	A			3.4	13.30	0.78	B	
	2036 WoDWS											
A - A5 (North)	D5	1.0	4.74	0.49	A	-12 % [D - A5 (South)]	D6	1.0	5.39	0.51	A	-5 % [D - A5 (South)]
B - Rugby Road		1.0	4.96	0.49	A			1.5	6.16	0.60	A	
C - Gibbet Lane		13.3	122.06	1.00	F			1.2	23.93	0.55	C	
D - A5 (South)		71.6	189.53	1.12	F			23.2	70.24	1.00	F	
E - A426		0.7	4.75	0.41	A			3.1	12.23	0.76	B	
	2036 WD											
A - A5 (North)	D7	1.1	5.06	0.53	A	-14 % [C - Gibbet Lane]	D8	1.1	5.71	0.53	A	-7 % [D - A5 (South)]
B - Rugby Road		1.0	5.27	0.51	A			1.5	6.39	0.61	A	
C - Gibbet Lane		26.4	215.94	1.10	F			1.5	27.97	0.60	D	
D - A5 (South)		77.8	206.26	1.13	F			33.2	92.00	1.03	F	
E - A426		0.7	4.79	0.41	A			3.9	15.07	0.80	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. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

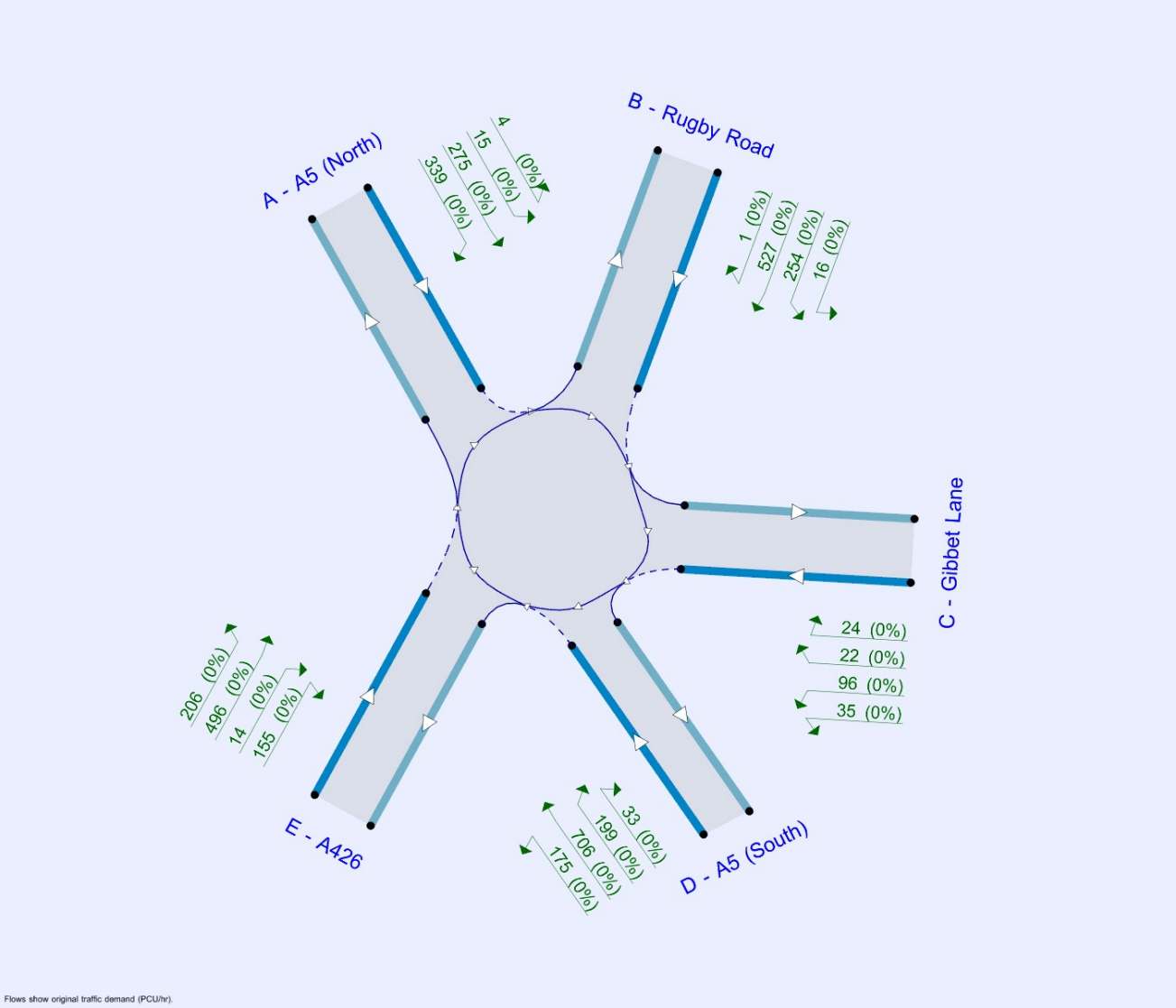
File summary

File Description

Title	J47 - A5/A426/Gibbet Lane
Location	
Site number	J47
Date	18/12/2020
Version	V0.1
Status	Existing
Identifier	
Client	
Jobnumber	NTT2814
Enumerator	BWB
Description	

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	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2023	AM	Observed Flows	ONE HOUR	07:45	09:15	15	✓
D2	2023	PM	Observed Flows	ONE HOUR	16:45	18:15	15	✓
D3	2036 WoD	AM	PRTM 2.2 Demand Flows	ONE HOUR	07:45	09:15	15	✓
D4	2036 WoD	PM	PRTM 2.2 Demand Flows	ONE HOUR	16:45	18:15	15	✓
D5	2036 WoDWS	AM	PRTM 2.2 Demand Flows	ONE HOUR	07:45	09:15	15	✓
D6	2036 WoDWS	PM	PRTM 2.2 Demand Flows	ONE HOUR	16:45	18:15	15	✓
D7	2036 WD	AM	PRTM 2.2 Demand Flows	ONE HOUR	07:45	09:15	15	✓
D8	2036 WD	PM	PRTM 2.2 Demand Flows	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2023, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	B - Rugby Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J47	A5/A426/Gibbet Lane	Standard Roundabout		A, B, C, D, E	7.84	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	12	C - Gibbet Lane	7.84	A

Arms

Arms

Arm	Name	Description	No give-way line
A	A5 (North)		
B	Rugby Road		
C	Gibbet Lane		
D	A5 (South)		
E	A426		

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
A - A5 (North)	3.86	8.86	15.8	28.0	70.0	43.0		
B - Rugby Road	3.20	6.69	54.0	45.0	71.0	20.0		
C - Gibbet Lane	2.65	5.50	3.2	7.7	73.0	33.0		
D - A5 (South)	3.95	7.46	17.0	30.0	70.0	44.0		
E - A426	3.42	6.38	25.8	35.0	71.0	27.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - A5 (North)	0.524	1862
B - Rugby Road	0.556	1960
C - Gibbet Lane	0.356	936
D - A5 (South)	0.510	1778
E - A426	0.516	1745

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2023	AM	Observed Flows	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 - A5 (North)		ONE HOUR	✓	842	100.000
B - Rugby Road		ONE HOUR	✓	713	100.000
C - Gibbet Lane		ONE HOUR	✓	106	100.000
D - A5 (South)		ONE HOUR	✓	777	100.000
E - A426		ONE HOUR	✓	523	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	5	32	353	452
	B - Rugby Road	2	0	25	139	547
	C - Gibbet Lane	20	23	1	5	57
	D - A5 (South)	328	219	32	5	193
	E - A426	189	215	19	100	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	0	0	0	0
	B - Rugby Road	0	0	0	0	0
	C - Gibbet Lane	0	0	0	0	0
	D - A5 (South)	0	0	0	0	0
	E - A426	0	0	0	0	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)
A - A5 (North)	0.61	6.19	1.6	A	773	1159
B - Rugby Road	0.58	6.36	1.4	A	654	981
C - Gibbet Lane	0.38	18.54	0.6	C	97	146
D - A5 (South)	0.74	11.82	2.7	B	713	1069
E - A426	0.41	4.43	0.7	A	480	720

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	634	158	460	1621	0.391	631	404	0.0	0.6	3.627	A
B - Rugby Road	537	134	745	1545	0.347	535	346	0.0	0.5	3.554	A
C - Gibbet Lane	80	20	1198	510	0.156	79	82	0.0	0.2	8.335	A
D - A5 (South)	585	146	826	1357	0.431	582	451	0.0	0.8	4.630	A
E - A426	394	98	472	1502	0.262	392	936	0.0	0.4	3.239	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	757	189	551	1574	0.481	756	484	0.6	0.9	4.394	A
B - Rugby Road	641	160	892	1464	0.438	640	415	0.5	0.8	4.365	A
C - Gibbet Lane	95	24	1434	426	0.224	95	98	0.2	0.3	10.851	B
D - A5 (South)	699	175	989	1273	0.549	697	540	0.8	1.2	6.224	A
E - A426	470	118	565	1454	0.323	470	1121	0.4	0.5	3.655	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	927	232	673	1510	0.614	924	590	0.9	1.6	6.123	A
B - Rugby Road	785	196	1091	1353	0.580	783	506	0.8	1.4	6.288	A
C - Gibbet Lane	117	29	1754	312	0.374	116	120	0.3	0.6	18.175	C
D - A5 (South)	855	214	1209	1161	0.737	850	661	1.2	2.7	11.343	B
E - A426	576	144	689	1390	0.414	575	1370	0.5	0.7	4.411	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	927	232	676	1508	0.615	927	593	1.6	1.6	6.188	A
B - Rugby Road	785	196	1094	1351	0.581	785	509	1.4	1.4	6.358	A
C - Gibbet Lane	117	29	1759	311	0.376	117	120	0.6	0.6	18.538	C
D - A5 (South)	855	214	1213	1159	0.738	855	663	2.7	2.7	11.819	B
E - A426	576	144	693	1388	0.415	576	1375	0.7	0.7	4.433	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	757	189	555	1572	0.482	760	488	1.6	0.9	4.444	A
B - Rugby Road	641	160	897	1461	0.439	643	418	1.4	0.8	4.414	A
C - Gibbet Lane	95	24	1441	424	0.225	96	98	0.6	0.3	11.040	B
D - A5 (South)	699	175	995	1270	0.550	705	543	2.7	1.2	6.427	A
E - A426	470	118	571	1451	0.324	471	1128	0.7	0.5	3.680	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	634	158	463	1620	0.391	635	407	0.9	0.6	3.659	A
B - Rugby Road	537	134	750	1543	0.348	538	349	0.8	0.5	3.587	A
C - Gibbet Lane	80	20	1205	508	0.157	80	82	0.3	0.2	8.428	A
D - A5 (South)	585	146	831	1354	0.432	587	454	1.2	0.8	4.705	A
E - A426	394	98	476	1500	0.263	394	942	0.5	0.4	3.259	A

2023, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	B - Rugby Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J47	A5/A426/Gibbet Lane	Standard Roundabout		A, B, C, D, E	6.84	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	24	E - A426	6.84	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2023	PM	Observed Flows	ONE HOUR	16:45	18:15	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 - A5 (North)		ONE HOUR	✓	622	100.000
B - Rugby Road		ONE HOUR	✓	630	100.000
C - Gibbet Lane		ONE HOUR	✓	98	100.000
D - A5 (South)		ONE HOUR	✓	721	100.000
E - A426		ONE HOUR	✓	887	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	5	25	230	362
	B - Rugby Road	1	0	16	163	450
	C - Gibbet Lane	20	19	0	13	46
	D - A5 (South)	432	125	23	7	134
	E - A426	290	468	14	111	4

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	0	0	0	0
	B - Rugby Road	0	0	0	0	0
	C - Gibbet Lane	0	0	0	0	0
	D - A5 (South)	0	0	0	0	0
	E - A426	0	0	0	0	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)
A - A5 (North)	0.48	4.91	0.9	A	571	856
B - Rugby Road	0.47	4.55	0.9	A	578	867
C - Gibbet Lane	0.26	11.67	0.3	B	90	135
D - A5 (South)	0.62	7.53	1.6	A	662	992
E - A426	0.70	8.71	2.3	A	814	1221

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	468	117	578	1560	0.300	467	557	0.0	0.4	3.289	A
B - Rugby Road	474	119	582	1636	0.290	473	462	0.0	0.4	3.090	A
C - Gibbet Lane	74	18	996	582	0.127	73	58	0.0	0.1	7.067	A
D - A5 (South)	543	136	676	1433	0.379	540	393	0.0	0.6	4.023	A
E - A426	668	167	470	1503	0.444	665	747	0.0	0.8	4.277	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	559	140	692	1500	0.373	559	667	0.4	0.6	3.821	A
B - Rugby Road	566	142	697	1572	0.360	566	554	0.4	0.6	3.574	A
C - Gibbet Lane	88	22	1192	512	0.172	88	70	0.1	0.2	8.475	A
D - A5 (South)	648	162	810	1365	0.475	647	470	0.6	0.9	5.007	A
E - A426	797	199	563	1455	0.548	796	894	0.8	1.2	5.446	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	685	171	845	1420	0.482	684	815	0.6	0.9	4.880	A
B - Rugby Road	694	173	852	1486	0.467	692	676	0.6	0.9	4.538	A
C - Gibbet Lane	108	27	1459	417	0.258	107	86	0.2	0.3	11.587	B
D - A5 (South)	794	198	991	1272	0.624	791	575	0.9	1.6	7.433	A
E - A426	977	244	688	1391	0.702	972	1094	1.2	2.3	8.516	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	685	171	849	1418	0.483	685	818	0.9	0.9	4.910	A
B - Rugby Road	694	173	854	1485	0.467	694	679	0.9	0.9	4.550	A
C - Gibbet Lane	108	27	1462	416	0.259	108	86	0.3	0.3	11.668	B
D - A5 (South)	794	198	993	1271	0.624	794	577	1.6	1.6	7.535	A
E - A426	977	244	690	1389	0.703	976	1097	2.3	2.3	8.709	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	559	140	697	1498	0.373	560	671	0.9	0.6	3.846	A
B - Rugby Road	566	142	700	1571	0.361	568	558	0.9	0.6	3.595	A
C - Gibbet Lane	88	22	1197	511	0.173	89	70	0.3	0.2	8.541	A
D - A5 (South)	648	162	813	1363	0.475	651	473	1.6	0.9	5.077	A
E - A426	797	199	566	1453	0.549	802	898	2.3	1.2	5.563	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	468	117	582	1558	0.301	469	561	0.6	0.4	3.310	A
B - Rugby Road	474	119	585	1634	0.290	475	466	0.6	0.4	3.108	A
C - Gibbet Lane	74	18	1001	580	0.127	74	59	0.2	0.1	7.116	A
D - A5 (South)	543	136	680	1431	0.379	544	395	0.9	0.6	4.063	A
E - A426	668	167	473	1501	0.445	669	751	1.2	0.8	4.336	A

2036 WoD, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	B - Rugby Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J47	A5/A426/Gibbet Lane	Standard Roundabout		A, B, C, D, E	82.49	F

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	-12	D - A5 (South)	82.49	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2036 WoD	AM	PRTM 2.2 Demand Flows	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 - A5 (North)		ONE HOUR	✓	660	100.000
B - Rugby Road		ONE HOUR	✓	638	100.000
C - Gibbet Lane		ONE HOUR	✓	365	100.000
D - A5 (South)		ONE HOUR	✓	1107	100.000
E - A426		ONE HOUR	✓	488	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	1	32	245	382
	B - Rugby Road	1	0	30	101	506
	C - Gibbet Lane	46	36	6	10	267
	D - A5 (South)	467	312	46	7	275
	E - A426	191	138	33	126	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	0	0	0	0
	B - Rugby Road	0	0	0	0	0
	C - Gibbet Lane	0	0	0	0	0
	D - A5 (South)	0	0	0	0	0
	E - A426	0	0	0	0	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)
A - A5 (North)	0.49	4.77	1.0	A	606	908
B - Rugby Road	0.49	4.97	1.0	A	585	878
C - Gibbet Lane	1.00	126.76	14.0	F	335	502
D - A5 (South)	1.12	193.13	72.9	F	1016	1524
E - A426	0.42	4.87	0.7	A	448	672

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	497	124	526	1587	0.313	495	527	0.0	0.5	3.292	A
B - Rugby Road	480	120	658	1594	0.301	479	364	0.0	0.4	3.223	A
C - Gibbet Lane	275	69	1026	571	0.481	271	110	0.0	0.9	11.855	B
D - A5 (South)	833	208	931	1303	0.640	826	367	0.0	1.7	7.449	A
E - A426	367	92	687	1391	0.264	366	1070	0.0	0.4	3.508	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	593	148	629	1533	0.387	593	629	0.5	0.6	3.826	A
B - Rugby Road	574	143	787	1522	0.377	573	434	0.4	0.6	3.791	A
C - Gibbet Lane	328	82	1228	500	0.657	325	132	0.9	1.8	20.159	C
D - A5 (South)	995	249	1114	1210	0.823	985	439	1.7	4.2	15.383	C
E - A426	439	110	820	1323	0.332	438	1279	0.4	0.5	4.067	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	727	182	725	1483	0.490	725	713	0.6	1.0	4.744	A
B - Rugby Road	702	176	957	1428	0.492	701	493	0.6	1.0	4.944	A
C - Gibbet Lane	402	100	1502	402	1.000	370	155	1.8	9.8	77.141	F
D - A5 (South)	1219	305	1337	1096	1.112	1078	536	4.2	39.4	85.094	F
E - A426	537	134	901	1281	0.419	536	1514	0.5	0.7	4.829	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	727	182	729	1481	0.491	727	718	1.0	1.0	4.774	A
B - Rugby Road	702	176	959	1426	0.492	702	497	1.0	1.0	4.971	A
C - Gibbet Lane	402	100	1505	401	1.002	385	156	9.8	14.0	126.762	F
D - A5 (South)	1219	305	1353	1088	1.121	1085	537	39.4	72.9	193.127	F
E - A426	537	134	909	1276	0.421	537	1529	0.7	0.7	4.870	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	593	148	695	1498	0.396	595	713	1.0	0.7	3.988	A
B - Rugby Road	574	143	799	1516	0.378	575	491	1.0	0.6	3.832	A
C - Gibbet Lane	328	82	1234	498	0.659	376	140	14.0	2.1	38.839	E
D - A5 (South)	995	249	1166	1183	0.841	1167	443	72.9	29.9	161.254	F
E - A426	439	110	969	1246	0.352	439	1365	0.7	0.5	4.469	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	497	124	568	1565	0.317	498	579	0.7	0.5	3.377	A
B - Rugby Road	480	120	667	1589	0.302	481	399	0.6	0.4	3.250	A
C - Gibbet Lane	275	69	1032	569	0.483	279	116	2.1	1.0	12.605	B
D - A5 (South)	833	208	942	1297	0.642	946	370	29.9	1.9	14.005	B
E - A426	367	92	779	1344	0.273	368	1109	0.5	0.4	3.691	A

2036 WoD, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	B - Rugby Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J47	A5/A426/Gibbet Lane	Standard Roundabout		A, B, C, D, E	30.69	D

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	-6	D - A5 (South)	30.69	D

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2036 WoD	PM	PRTM 2.2 Demand Flows	ONE HOUR	16:45	18:15	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 - A5 (North)		ONE HOUR	✓	623	100.000
B - Rugby Road		ONE HOUR	✓	787	100.000
C - Gibbet Lane		ONE HOUR	✓	168	100.000
D - A5 (South)		ONE HOUR	✓	1088	100.000
E - A426		ONE HOUR	✓	875	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	3	15	246	359
	B - Rugby Road	1	0	17	220	549
	C - Gibbet Lane	22	20	0	33	93
	D - A5 (South)	651	189	35	11	202
	E - A426	207	485	13	166	4

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	0	0	0	0
	B - Rugby Road	0	0	0	0	0
	C - Gibbet Lane	0	0	0	0	0
	D - A5 (South)	0	0	0	0	0
	E - A426	0	0	0	0	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)
A - A5 (North)	0.51	5.55	1.0	A	572	858
B - Rugby Road	0.60	6.26	1.5	A	722	1083
C - Gibbet Lane	0.57	25.17	1.3	D	154	231
D - A5 (South)	1.01	77.59	26.2	F	998	1498
E - A426	0.78	13.30	3.4	B	803	1204

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	469	117	691	1501	0.313	467	659	0.0	0.5	3.477	A
B - Rugby Road	592	148	636	1606	0.369	590	522	0.0	0.6	3.537	A
C - Gibbet Lane	126	32	1167	521	0.243	125	60	0.0	0.3	9.056	A
D - A5 (South)	819	205	785	1377	0.595	813	507	0.0	1.4	6.322	A
E - A426	659	165	694	1387	0.475	655	904	0.0	0.9	4.895	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	560	140	827	1430	0.392	559	788	0.5	0.6	4.133	A
B - Rugby Road	707	177	762	1536	0.461	706	624	0.6	0.8	4.333	A
C - Gibbet Lane	151	38	1397	440	0.343	150	72	0.3	0.5	12.397	B
D - A5 (South)	978	245	940	1298	0.753	972	606	1.4	2.9	10.845	B
E - A426	787	197	830	1317	0.597	784	1082	0.9	1.5	6.728	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	686	171	997	1340	0.512	684	932	0.6	1.0	5.477	A
B - Rugby Road	867	217	929	1443	0.600	864	753	0.8	1.5	6.190	A
C - Gibbet Lane	185	46	1707	329	0.562	182	86	0.5	1.2	24.035	C
D - A5 (South)	1198	299	1149	1192	1.005	1138	740	2.9	17.9	44.600	E
E - A426	963	241	973	1243	0.775	956	1314	1.5	3.2	12.239	B

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	686	171	1008	1334	0.514	686	950	1.0	1.0	5.551	A
B - Rugby Road	867	217	933	1441	0.601	866	761	1.5	1.5	6.265	A
C - Gibbet Lane	185	46	1713	327	0.565	185	87	1.2	1.3	25.175	D
D - A5 (South)	1198	299	1154	1189	1.007	1165	744	17.9	26.2	77.593	F
E - A426	963	241	996	1232	0.782	963	1323	3.2	3.4	13.298	B

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	560	140	855	1414	0.396	562	849	1.0	0.7	4.230	A
B - Rugby Road	707	177	770	1531	0.462	710	647	1.5	0.9	4.397	A
C - Gibbet Lane	151	38	1405	437	0.346	154	75	1.3	0.5	12.855	B
D - A5 (South)	978	245	947	1295	0.755	1070	612	26.2	3.3	22.104	C
E - A426	787	197	910	1276	0.617	794	1106	3.4	1.6	7.579	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	469	117	699	1497	0.313	470	668	0.7	0.5	3.511	A
B - Rugby Road	592	148	641	1603	0.370	594	528	0.9	0.6	3.567	A
C - Gibbet Lane	126	32	1174	519	0.244	127	61	0.5	0.3	9.213	A
D - A5 (South)	819	205	791	1374	0.596	826	510	3.3	1.5	6.651	A
E - A426	659	165	705	1382	0.477	662	912	1.6	0.9	5.022	A

2036 WoDWS, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	B - Rugby Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J47	A5/A426/Gibbet Lane	Standard Roundabout		A, B, C, D, E	81.03	F

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	-12	D - A5 (South)	81.03	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2036 WoDWS	AM	PRTM 2.2 Demand Flows	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 - A5 (North)		ONE HOUR	✓	662	100.000
B - Rugby Road		ONE HOUR	✓	639	100.000
C - Gibbet Lane		ONE HOUR	✓	363	100.000
D - A5 (South)		ONE HOUR	✓	1108	100.000
E - A426		ONE HOUR	✓	472	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	1	34	250	377
	B - Rugby Road	1	0	30	103	505
	C - Gibbet Lane	46	36	5	10	266
	D - A5 (South)	466	311	46	7	278
	E - A426	186	133	29	124	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	0	0	0	0
	B - Rugby Road	0	0	0	0	0
	C - Gibbet Lane	0	0	0	0	0
	D - A5 (South)	0	0	0	0	0
	E - A426	0	0	0	0	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)
A - A5 (North)	0.49	4.74	1.0	A	607	911
B - Rugby Road	0.49	4.96	1.0	A	586	880
C - Gibbet Lane	1.00	122.06	13.3	F	333	500
D - A5 (South)	1.12	189.53	71.6	F	1017	1525
E - A426	0.41	4.75	0.7	A	433	650

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	498	125	517	1592	0.313	497	522	0.0	0.5	3.281	A
B - Rugby Road	481	120	654	1596	0.301	479	359	0.0	0.4	3.219	A
C - Gibbet Lane	273	68	1025	572	0.478	270	108	0.0	0.9	11.790	B
D - A5 (South)	834	209	925	1306	0.639	827	370	0.0	1.7	7.413	A
E - A426	355	89	685	1392	0.255	354	1067	0.0	0.3	3.463	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	595	149	617	1539	0.387	594	624	0.5	0.6	3.809	A
B - Rugby Road	574	144	783	1525	0.377	574	429	0.4	0.6	3.784	A
C - Gibbet Lane	326	82	1227	500	0.653	323	129	0.9	1.8	19.940	C
D - A5 (South)	996	249	1107	1213	0.821	986	443	1.7	4.2	15.222	C
E - A426	424	106	817	1324	0.320	424	1276	0.3	0.5	3.998	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	729	182	711	1490	0.489	728	707	0.6	0.9	4.715	A
B - Rugby Road	704	176	951	1431	0.492	702	487	0.6	1.0	4.931	A
C - Gibbet Lane	400	100	1501	402	0.993	369	152	1.8	9.4	75.239	F
D - A5 (South)	1220	305	1329	1100	1.109	1082	541	4.2	38.8	83.798	F
E - A426	520	130	900	1281	0.406	519	1511	0.5	0.7	4.717	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	729	182	716	1488	0.490	729	712	0.9	1.0	4.744	A
B - Rugby Road	704	176	954	1429	0.492	704	491	1.0	1.0	4.959	A
C - Gibbet Lane	400	100	1504	401	0.996	384	153	9.4	13.3	122.062	F
D - A5 (South)	1220	305	1346	1091	1.118	1089	543	38.8	71.6	189.527	F
E - A426	520	130	909	1277	0.407	520	1526	0.7	0.7	4.755	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	595	149	684	1504	0.396	596	708	1.0	0.7	3.970	A
B - Rugby Road	574	144	794	1518	0.378	576	486	1.0	0.6	3.828	A
C - Gibbet Lane	326	82	1233	498	0.655	371	138	13.3	2.1	36.772	E
D - A5 (South)	996	249	1157	1188	0.839	1172	447	71.6	27.7	155.621	F
E - A426	424	106	967	1246	0.340	425	1361	0.7	0.5	4.387	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	498	125	555	1572	0.317	499	571	0.7	0.5	3.360	A
B - Rugby Road	481	120	662	1591	0.302	482	392	0.6	0.4	3.245	A
C - Gibbet Lane	273	68	1031	570	0.480	278	113	2.1	0.9	12.513	B
D - A5 (South)	834	209	936	1301	0.641	938	373	27.7	1.8	13.119	B
E - A426	355	89	770	1348	0.264	356	1104	0.5	0.4	3.631	A

2036 WoDWS, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	B - Rugby Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J47	A5/A426/Gibbet Lane	Standard Roundabout		A, B, C, D, E	28.10	D

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	-5	D - A5 (South)	28.10	D

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2036 WoDWS	PM	PRTM 2.2 Demand Flows	ONE HOUR	16:45	18:15	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 - A5 (North)		ONE HOUR	✓	622	100.000
B - Rugby Road		ONE HOUR	✓	788	100.000
C - Gibbet Lane		ONE HOUR	✓	164	100.000
D - A5 (South)		ONE HOUR	✓	1082	100.000
E - A426		ONE HOUR	✓	850	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	4	15	250	353
	B - Rugby Road	1	0	14	225	548
	C - Gibbet Lane	21	21	0	31	91
	D - A5 (South)	663	186	28	11	194
	E - A426	206	471	13	156	4

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	0	0	0	0
	B - Rugby Road	0	0	0	0	0
	C - Gibbet Lane	0	0	0	0	0
	D - A5 (South)	0	0	0	0	0
	E - A426	0	0	0	0	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)
A - A5 (North)	0.51	5.39	1.0	A	571	856
B - Rugby Road	0.60	6.16	1.5	A	723	1085
C - Gibbet Lane	0.55	23.93	1.2	C	150	226
D - A5 (South)	1.00	70.24	23.2	F	993	1489
E - A426	0.76	12.23	3.1	B	780	1170

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	468	117	666	1514	0.309	466	666	0.0	0.4	3.432	A
B - Rugby Road	593	148	622	1614	0.368	591	510	0.0	0.6	3.512	A
C - Gibbet Lane	123	31	1161	524	0.236	122	52	0.0	0.3	8.944	A
D - A5 (South)	815	204	779	1381	0.590	809	504	0.0	1.4	6.236	A
E - A426	640	160	696	1386	0.462	637	892	0.0	0.8	4.780	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	559	140	797	1445	0.387	558	797	0.4	0.6	4.057	A
B - Rugby Road	708	177	745	1546	0.458	707	611	0.6	0.8	4.289	A
C - Gibbet Lane	147	37	1389	442	0.333	147	63	0.3	0.5	12.152	B
D - A5 (South)	973	243	932	1302	0.747	967	604	1.4	2.8	10.561	B
E - A426	764	191	832	1316	0.581	762	1067	0.8	1.4	6.472	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	685	171	964	1358	0.504	683	946	0.6	1.0	5.325	A
B - Rugby Road	868	217	909	1454	0.597	865	738	0.8	1.5	6.086	A
C - Gibbet Lane	181	45	1699	332	0.543	178	75	0.5	1.1	22.970	C
D - A5 (South)	1191	298	1139	1197	0.995	1137	737	2.8	16.4	41.822	E
E - A426	936	234	980	1240	0.755	930	1296	1.4	2.9	11.371	B

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	685	171	974	1352	0.506	685	964	1.0	1.0	5.391	A
B - Rugby Road	868	217	913	1452	0.597	868	746	1.5	1.5	6.157	A
C - Gibbet Lane	181	45	1704	330	0.546	180	76	1.1	1.2	23.934	C
D - A5 (South)	1191	298	1144	1194	0.997	1164	741	16.4	23.2	70.237	F
E - A426	936	234	1003	1228	0.762	935	1305	2.9	3.1	12.235	B

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	559	140	822	1432	0.390	561	852	1.0	0.6	4.139	A
B - Rugby Road	708	177	752	1542	0.459	711	631	1.5	0.9	4.345	A
C - Gibbet Lane	147	37	1397	439	0.336	150	65	1.2	0.5	12.551	B
D - A5 (South)	973	243	939	1299	0.749	1053	609	23.2	3.2	19.123	C
E - A426	764	191	903	1279	0.597	770	1088	3.1	1.5	7.156	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	468	117	673	1510	0.310	469	676	0.6	0.5	3.460	A
B - Rugby Road	593	148	626	1611	0.368	594	516	0.9	0.6	3.544	A
C - Gibbet Lane	123	31	1168	521	0.237	124	53	0.5	0.3	9.090	A
D - A5 (South)	815	204	784	1378	0.591	821	508	3.2	1.5	6.545	A
E - A426	640	160	707	1381	0.463	642	899	1.5	0.9	4.891	A

2036 WD, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	B - Rugby Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J47	A5/A426/Gibbet Lane	Standard Roundabout		A, B, C, D, E	96.42	F

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	-14	C - Gibbet Lane	96.42	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2036 WD	AM	PRTM 2.2 Demand Flows	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 - A5 (North)		ONE HOUR	✓	720	100.000
B - Rugby Road		ONE HOUR	✓	646	100.000
C - Gibbet Lane		ONE HOUR	✓	378	100.000
D - A5 (South)		ONE HOUR	✓	1115	100.000
E - A426		ONE HOUR	✓	469	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	1	40	287	392
	B - Rugby Road	1	0	31	105	509
	C - Gibbet Lane	53	35	6	12	272
	D - A5 (South)	499	300	44	11	261
	E - A426	199	120	28	122	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	0	0	0	0
	B - Rugby Road	0	0	0	0	0
	C - Gibbet Lane	0	0	0	0	0
	D - A5 (South)	0	0	0	0	0
	E - A426	0	0	0	0	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)
A - A5 (North)	0.53	5.06	1.1	A	661	991
B - Rugby Road	0.51	5.27	1.0	A	593	889
C - Gibbet Lane	1.10	215.94	26.4	F	347	520
D - A5 (South)	1.13	206.26	77.8	F	1023	1535
E - A426	0.41	4.79	0.7	A	430	646

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	542	136	498	1602	0.338	540	562	0.0	0.5	3.385	A
B - Rugby Road	486	122	697	1572	0.309	485	341	0.0	0.4	3.304	A
C - Gibbet Lane	285	71	1070	556	0.512	281	112	0.0	1.0	12.899	B
D - A5 (South)	839	210	948	1294	0.649	832	403	0.0	1.8	7.678	A
E - A426	353	88	708	1380	0.256	352	1072	0.0	0.3	3.495	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	647	162	594	1551	0.417	646	670	0.5	0.7	3.976	A
B - Rugby Road	581	145	834	1496	0.388	580	406	0.4	0.6	3.928	A
C - Gibbet Lane	340	85	1281	481	0.707	335	133	1.0	2.2	23.942	C
D - A5 (South)	1002	251	1134	1199	0.836	991	482	1.8	4.6	16.477	C
E - A426	422	105	843	1310	0.322	421	1282	0.3	0.5	4.045	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	793	198	679	1507	0.526	791	753	0.7	1.1	5.019	A
B - Rugby Road	711	178	1014	1396	0.510	710	456	0.6	1.0	5.235	A
C - Gibbet Lane	416	104	1566	379	1.097	362	157	2.2	15.7	112.376	F
D - A5 (South)	1228	307	1342	1094	1.123	1078	587	4.6	42.1	90.089	F
E - A426	516	129	917	1273	0.406	516	1503	0.5	0.7	4.750	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	793	198	683	1505	0.527	793	758	1.1	1.1	5.055	A
B - Rugby Road	711	178	1016	1395	0.510	711	460	1.0	1.0	5.267	A
C - Gibbet Lane	416	104	1570	378	1.101	373	158	15.7	26.4	215.940	F
D - A5 (South)	1228	307	1355	1087	1.130	1085	588	42.1	77.8	206.258	F
E - A426	516	129	925	1268	0.407	516	1515	0.7	0.7	4.786	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	647	162	651	1521	0.425	649	749	1.1	0.7	4.131	A
B - Rugby Road	581	145	846	1489	0.390	582	454	1.0	0.6	3.976	A
C - Gibbet Lane	340	85	1287	479	0.710	433	141	26.4	3.0	107.268	F
D - A5 (South)	1002	251	1233	1149	0.872	1135	488	77.8	44.8	195.260	F
E - A426	422	105	978	1241	0.340	422	1390	0.7	0.5	4.399	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	542	136	557	1571	0.345	543	644	0.7	0.5	3.507	A
B - Rugby Road	486	122	710	1565	0.311	487	390	0.6	0.5	3.341	A
C - Gibbet Lane	285	71	1078	553	0.515	292	119	3.0	1.1	14.176	B
D - A5 (South)	839	210	963	1287	0.652	1011	407	44.8	2.0	24.043	C
E - A426	353	88	848	1308	0.270	354	1126	0.5	0.4	3.775	A

2036 WD, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	B - Rugby Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J47	A5/A426/Gibbet Lane	Standard Roundabout		A, B, C, D, E	36.14	E

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	-7	D - A5 (South)	36.14	E

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2036 WD	PM	PRTM 2.2 Demand Flows	ONE HOUR	16:45	18:15	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 - A5 (North)		ONE HOUR	✓	633	100.000
B - Rugby Road		ONE HOUR	✓	798	100.000
C - Gibbet Lane		ONE HOUR	✓	177	100.000
D - A5 (South)		ONE HOUR	✓	1126	100.000
E - A426		ONE HOUR	✓	875	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	4	15	275	339
	B - Rugby Road	1	0	16	254	527
	C - Gibbet Lane	22	24	0	35	96
	D - A5 (South)	706	199	33	13	175
	E - A426	206	496	14	155	4

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	0	0	0	0
	B - Rugby Road	0	0	0	0	0
	C - Gibbet Lane	0	0	0	0	0
	D - A5 (South)	0	0	0	0	0
	E - A426	0	0	0	0	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)
A - A5 (North)	0.53	5.71	1.1	A	581	871
B - Rugby Road	0.61	6.39	1.5	A	732	1098
C - Gibbet Lane	0.60	27.97	1.5	D	162	244
D - A5 (South)	1.03	92.00	33.2	F	1033	1550
E - A426	0.80	15.07	3.9	C	803	1204

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	477	119	702	1495	0.319	475	699	0.0	0.5	3.523	A
B - Rugby Road	601	150	636	1606	0.374	598	541	0.0	0.6	3.565	A
C - Gibbet Lane	133	33	1176	518	0.257	132	58	0.0	0.3	9.285	A
D - A5 (South)	848	212	759	1391	0.610	842	549	0.0	1.5	6.485	A
E - A426	659	165	746	1361	0.484	655	855	0.0	0.9	5.075	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	569	142	840	1423	0.400	568	836	0.5	0.7	4.210	A
B - Rugby Road	717	179	761	1537	0.467	716	647	0.6	0.9	4.383	A
C - Gibbet Lane	159	40	1407	436	0.365	158	70	0.3	0.6	12.924	B
D - A5 (South)	1012	253	909	1314	0.770	1006	657	1.5	3.2	11.423	B
E - A426	787	197	891	1286	0.612	784	1023	0.9	1.5	7.142	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	697	174	1010	1333	0.523	695	981	0.7	1.1	5.626	A
B - Rugby Road	879	220	927	1444	0.608	876	778	0.9	1.5	6.309	A
C - Gibbet Lane	195	49	1720	325	0.600	192	84	0.6	1.4	26.388	D
D - A5 (South)	1240	310	1110	1212	1.023	1167	801	3.2	21.4	49.725	E
E - A426	963	241	1036	1211	0.796	955	1240	1.5	3.6	13.650	B

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	697	174	1022	1327	0.525	697	1000	1.1	1.1	5.709	A
B - Rugby Road	879	220	931	1442	0.609	879	787	1.5	1.5	6.389	A
C - Gibbet Lane	195	49	1726	323	0.604	195	84	1.4	1.5	27.970	D
D - A5 (South)	1240	310	1115	1209	1.025	1193	805	21.4	33.2	91.999	F
E - A426	963	241	1059	1199	0.803	962	1249	3.6	3.9	15.068	C

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	569	142	876	1404	0.405	571	917	1.1	0.7	4.330	A
B - Rugby Road	717	179	770	1531	0.468	720	676	1.5	0.9	4.450	A
C - Gibbet Lane	159	40	1417	433	0.368	163	74	1.5	0.6	13.496	B
D - A5 (South)	1012	253	916	1311	0.772	1130	663	33.2	3.7	31.122	D
E - A426	787	197	998	1231	0.639	795	1049	3.9	1.8	8.409	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	477	119	711	1490	0.320	477	710	0.7	0.5	3.556	A
B - Rugby Road	601	150	640	1604	0.375	602	548	0.9	0.6	3.596	A
C - Gibbet Lane	133	33	1183	516	0.258	134	59	0.6	0.4	9.462	A
D - A5 (South)	848	212	765	1388	0.611	856	553	3.7	1.6	6.870	A
E - A426	659	165	759	1354	0.486	662	862	1.8	1.0	5.229	A

Appendix 2: Mitigated Gibbet Roundabout J10 Output (A5S Reassignment)

Junctions 10

ARCADY 10 - Roundabout Module

Version: 10.0.2.1574

For sales and distribution information, program advice and maintenance, contact TRL Software:
+44 (0)1344 379777 software@trl.co.uk trlsoftware.com

Filename: J26 231214 - A5_A426_Gibbet Lane (HNRFI Mitigation) NH Sens.j10
Path: X:\NTT\NTT2814_Hinckley Rail Freight Interchange\02. Project Delivery\01. WIP\Design and Calculations\T&I Planning\04 Junction Modelling\J26_JTC 47 - A5 - A426 - Gibbet Lane
Report generation date: 06/02/2024 19:26:31

Summary of junction performance

	AM						PM					
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity
	2023											
A - A5 (North)	D1	1.6	6.19	0.61	A	20 % [D - A5 (South)]	D2	0.9	4.91	0.48	A	28 % [E - A426]
B - Rugby Road		1.4	6.36	0.58	A			0.9	4.55	0.47	A	
C - Gibbet Lane		0.4	13.01	0.30	B			0.3	9.09	0.21	A	
D - A5 (South)		2.2	9.33	0.69	A			1.4	6.40	0.59	A	
E - A426		0.7	4.19	0.40	A			2.1	7.81	0.68	A	
	2036 WoD											
A - A5 (North)	D3	1.0	4.85	0.49	A	-8 % [D - A5 (South)]	D4	1.1	5.58	0.52	A	-1 % [D - A5 (South)]
B - Rugby Road		1.0	4.98	0.49	A			1.5	6.27	0.60	A	
C - Gibbet Lane		4.2	39.74	0.82	E			0.8	15.94	0.45	C	
D - A5 (South)		42.8	116.25	1.05	F			12.0	38.34	0.94	E	
E - A426		0.7	4.75	0.41	A			3.1	11.82	0.76	B	
	2036 WoDWS											
A - A5 (North)	D5	1.0	4.82	0.49	A	-8 % [D - A5 (South)]	D6	1.0	5.41	0.51	A	0 % [D - A5 (South)]
B - Rugby Road		1.0	4.97	0.49	A			1.5	6.16	0.60	A	
C - Gibbet Lane		4.0	38.73	0.82	E			0.8	15.42	0.44	C	
D - A5 (South)		41.5	113.07	1.05	F			10.9	35.04	0.93	E	
E - A426		0.7	4.64	0.40	A			2.8	10.91	0.74	B	
	2036 WD											
A - A5 (North)	D7	1.1	5.14	0.53	A	-9 % [D - A5 (South)]	D8	1.1	5.75	0.53	A	-2 % [D - A5 (South)]
B - Rugby Road		1.0	5.28	0.51	A			1.5	6.40	0.61	A	
C - Gibbet Lane		6.6	61.72	0.90	F			0.9	17.05	0.48	C	
D - A5 (South)		51.0	135.20	1.07	F			14.7	45.27	0.96	E	
E - A426		0.7	4.67	0.40	A			3.5	13.47	0.78	B	

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. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

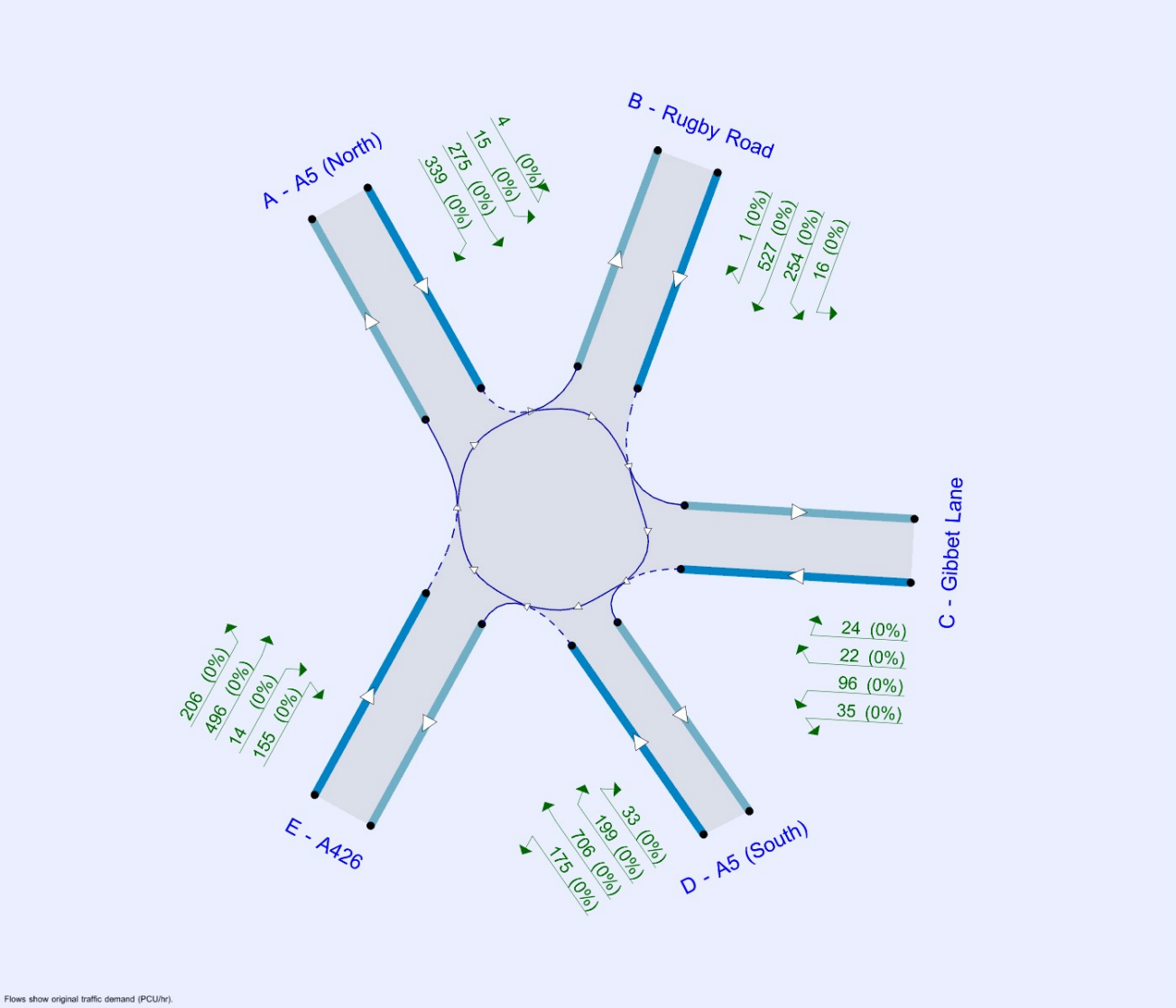
File summary

File Description

Title	J47 - A5/A426/Gibbet Lane
Location	
Site number	J47
Date	18/12/2020
Version	V0.1
Status	Existing
Identifier	
Client	
Jobnumber	NTT2814
Enumerator	BWB
Description	

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	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2023	AM	Observed Flows	ONE HOUR	07:45	09:15	15	✓
D2	2023	PM	Observed Flows	ONE HOUR	16:45	18:15	15	✓
D3	2036 WoD	AM	PRTM 2.2 Demand Flows	ONE HOUR	07:45	09:15	15	✓
D4	2036 WoD	PM	PRTM 2.2 Demand Flows	ONE HOUR	16:45	18:15	15	✓
D5	2036 WoDWS	AM	PRTM 2.2 Demand Flows	ONE HOUR	07:45	09:15	15	✓
D6	2036 WoDWS	PM	PRTM 2.2 Demand Flows	ONE HOUR	16:45	18:15	15	✓
D7	2036 WD	AM	PRTM 2.2 Demand Flows	ONE HOUR	07:45	09:15	15	✓
D8	2036 WD	PM	PRTM 2.2 Demand Flows	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2023, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	B - Rugby Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J47	A5/A426/Gibbet Lane	Standard Roundabout		A, B, C, D, E	6.95	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	20	D - A5 (South)	6.95	A

Arms

Arms

Arm	Name	Description	No give-way line
A	A5 (North)		
B	Rugby Road		
C	Gibbet Lane		
D	A5 (South)		
E	A426		

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
A - A5 (North)	3.86	8.86	15.8	28.0	70.0	43.0		
B - Rugby Road	3.20	6.69	54.0	45.0	71.0	20.0		
C - Gibbet Lane	2.65	7.00	5.0	7.7	73.0	33.0		
D - A5 (South)	3.95	8.00	20.0	30.0	70.0	44.0		
E - A426	3.42	7.50	17.5	35.0	71.0	27.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - A5 (North)	0.524	1862
B - Rugby Road	0.556	1960
C - Gibbet Lane	0.373	1049
D - A5 (South)	0.526	1879
E - A426	0.524	1799

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2023	AM	Observed Flows	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 - A5 (North)		ONE HOUR	✓	842	100.000
B - Rugby Road		ONE HOUR	✓	713	100.000
C - Gibbet Lane		ONE HOUR	✓	106	100.000
D - A5 (South)		ONE HOUR	✓	777	100.000
E - A426		ONE HOUR	✓	523	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	5	32	353	452
	B - Rugby Road	2	0	25	139	547
	C - Gibbet Lane	20	23	1	5	57
	D - A5 (South)	328	219	32	5	193
	E - A426	189	215	19	100	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	0	0	0	0
	B - Rugby Road	0	0	0	0	0
	C - Gibbet Lane	0	0	0	0	0
	D - A5 (South)	0	0	0	0	0
	E - A426	0	0	0	0	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)
A - A5 (North)	0.61	6.19	1.6	A	773	1159
B - Rugby Road	0.58	6.36	1.4	A	654	981
C - Gibbet Lane	0.30	13.01	0.4	B	97	146
D - A5 (South)	0.69	9.33	2.2	A	713	1069
E - A426	0.40	4.19	0.7	A	480	720

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	634	158	460	1621	0.391	631	404	0.0	0.6	3.627	A
B - Rugby Road	537	134	745	1545	0.347	535	346	0.0	0.5	3.554	A
C - Gibbet Lane	80	20	1198	602	0.132	79	82	0.0	0.2	6.873	A
D - A5 (South)	585	146	826	1444	0.405	582	451	0.0	0.7	4.164	A
E - A426	394	98	472	1552	0.254	392	936	0.0	0.3	3.103	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	757	189	551	1574	0.481	756	484	0.6	0.9	4.394	A
B - Rugby Road	641	160	892	1464	0.438	640	415	0.5	0.8	4.365	A
C - Gibbet Lane	95	24	1434	514	0.185	95	98	0.2	0.2	8.577	A
D - A5 (South)	699	175	989	1359	0.514	697	540	0.7	1.0	5.430	A
E - A426	470	118	565	1503	0.313	470	1121	0.3	0.5	3.482	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	927	232	674	1510	0.614	924	591	0.9	1.6	6.126	A
B - Rugby Road	785	196	1091	1353	0.580	783	507	0.8	1.4	6.288	A
C - Gibbet Lane	117	29	1755	395	0.295	116	120	0.2	0.4	12.865	B
D - A5 (South)	855	214	1209	1243	0.688	851	661	1.0	2.1	9.092	A
E - A426	576	144	690	1437	0.401	575	1370	0.5	0.7	4.170	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	927	232	676	1508	0.615	927	593	1.6	1.6	6.188	A
B - Rugby Road	785	196	1094	1351	0.581	785	509	1.4	1.4	6.358	A
C - Gibbet Lane	117	29	1759	393	0.297	117	120	0.4	0.4	13.015	B
D - A5 (South)	855	214	1213	1241	0.690	855	663	2.1	2.2	9.333	A
E - A426	576	144	694	1435	0.401	576	1375	0.7	0.7	4.187	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	757	189	554	1572	0.481	760	487	1.6	0.9	4.442	A
B - Rugby Road	641	160	897	1461	0.439	643	417	1.4	0.8	4.415	A
C - Gibbet Lane	95	24	1441	512	0.186	96	98	0.4	0.2	8.674	A
D - A5 (South)	699	175	995	1356	0.515	703	543	2.2	1.1	5.553	A
E - A426	470	118	570	1500	0.313	471	1128	0.7	0.5	3.499	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	634	158	463	1620	0.391	635	407	0.9	0.6	3.661	A
B - Rugby Road	537	134	750	1543	0.348	538	349	0.8	0.5	3.584	A
C - Gibbet Lane	80	20	1205	600	0.133	80	82	0.2	0.2	6.932	A
D - A5 (South)	585	146	831	1442	0.406	587	454	1.1	0.7	4.217	A
E - A426	394	98	476	1550	0.254	394	942	0.5	0.3	3.116	A

2023, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	B - Rugby Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J47	A5/A426/Gibbet Lane	Standard Roundabout		A, B, C, D, E	6.20	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	28	E - A426	6.20	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2023	PM	Observed Flows	ONE HOUR	16:45	18:15	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 - A5 (North)		ONE HOUR	✓	622	100.000
B - Rugby Road		ONE HOUR	✓	630	100.000
C - Gibbet Lane		ONE HOUR	✓	98	100.000
D - A5 (South)		ONE HOUR	✓	721	100.000
E - A426		ONE HOUR	✓	887	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	5	25	230	362
	B - Rugby Road	1	0	16	163	450
	C - Gibbet Lane	20	19	0	13	46
	D - A5 (South)	432	125	23	7	134
	E - A426	290	468	14	111	4

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	0	0	0	0
	B - Rugby Road	0	0	0	0	0
	C - Gibbet Lane	0	0	0	0	0
	D - A5 (South)	0	0	0	0	0
	E - A426	0	0	0	0	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)
A - A5 (North)	0.48	4.91	0.9	A	571	856
B - Rugby Road	0.47	4.55	0.9	A	578	867
C - Gibbet Lane	0.21	9.09	0.3	A	90	135
D - A5 (South)	0.59	6.40	1.4	A	662	992
E - A426	0.68	7.81	2.1	A	814	1221

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	468	117	578	1560	0.300	467	557	0.0	0.4	3.289	A
B - Rugby Road	474	119	582	1636	0.290	473	462	0.0	0.4	3.090	A
C - Gibbet Lane	74	18	996	678	0.109	73	58	0.0	0.1	5.949	A
D - A5 (South)	543	136	676	1523	0.356	541	393	0.0	0.6	3.657	A
E - A426	668	167	470	1553	0.430	665	747	0.0	0.7	4.041	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	559	140	692	1500	0.373	559	667	0.4	0.6	3.821	A
B - Rugby Road	566	142	697	1572	0.360	566	554	0.4	0.6	3.574	A
C - Gibbet Lane	88	22	1192	605	0.146	88	70	0.1	0.2	6.965	A
D - A5 (South)	648	162	810	1453	0.446	647	470	0.6	0.8	4.463	A
E - A426	797	199	563	1504	0.530	796	894	0.7	1.1	5.074	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	685	171	846	1420	0.482	684	815	0.6	0.9	4.882	A
B - Rugby Road	694	173	852	1486	0.467	692	677	0.6	0.9	4.538	A
C - Gibbet Lane	108	27	1459	505	0.214	108	86	0.2	0.3	9.043	A
D - A5 (South)	794	198	991	1357	0.585	791	576	0.8	1.4	6.333	A
E - A426	977	244	688	1438	0.679	973	1094	1.1	2.1	7.673	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	685	171	849	1418	0.483	685	818	0.9	0.9	4.910	A
B - Rugby Road	694	173	854	1485	0.467	694	679	0.9	0.9	4.550	A
C - Gibbet Lane	108	27	1462	504	0.214	108	86	0.3	0.3	9.086	A
D - A5 (South)	794	198	993	1356	0.585	794	577	1.4	1.4	6.397	A
E - A426	977	244	690	1437	0.680	976	1097	2.1	2.1	7.809	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	559	140	696	1498	0.373	560	671	0.9	0.6	3.847	A
B - Rugby Road	566	142	700	1571	0.361	568	557	0.9	0.6	3.591	A
C - Gibbet Lane	88	22	1197	603	0.146	88	70	0.3	0.2	7.003	A
D - A5 (South)	648	162	813	1451	0.447	651	472	1.4	0.8	4.508	A
E - A426	797	199	566	1502	0.531	801	898	2.1	1.1	5.162	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	468	117	582	1558	0.301	469	561	0.6	0.4	3.310	A
B - Rugby Road	474	119	585	1634	0.290	475	466	0.6	0.4	3.108	A
C - Gibbet Lane	74	18	1001	676	0.109	74	59	0.2	0.1	5.983	A
D - A5 (South)	543	136	680	1521	0.357	544	395	0.8	0.6	3.689	A
E - A426	668	167	473	1551	0.431	669	751	1.1	0.8	4.091	A

2036 WoD, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	B - Rugby Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J47	A5/A426/Gibbet Lane	Standard Roundabout		A, B, C, D, E	46.62	E

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	-8	D - A5 (South)	46.62	E

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2036 WoD	AM	PRTM 2.2 Demand Flows	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 - A5 (North)		ONE HOUR	✓	660	100.000
B - Rugby Road		ONE HOUR	✓	638	100.000
C - Gibbet Lane		ONE HOUR	✓	365	100.000
D - A5 (South)		ONE HOUR	✓	1107	100.000
E - A426		ONE HOUR	✓	488	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	1	32	245	382
	B - Rugby Road	1	0	30	101	506
	C - Gibbet Lane	46	36	6	10	267
	D - A5 (South)	467	312	46	7	275
	E - A426	191	138	33	126	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	0	0	0	0
	B - Rugby Road	0	0	0	0	0
	C - Gibbet Lane	0	0	0	0	0
	D - A5 (South)	0	0	0	0	0
	E - A426	0	0	0	0	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)
A - A5 (North)	0.49	4.85	1.0	A	606	908
B - Rugby Road	0.49	4.98	1.0	A	585	878
C - Gibbet Lane	0.82	39.74	4.2	E	335	502
D - A5 (South)	1.05	116.25	42.8	F	1016	1524
E - A426	0.41	4.75	0.7	A	448	672

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	497	124	527	1587	0.313	495	527	0.0	0.5	3.292	A
B - Rugby Road	480	120	658	1594	0.301	479	364	0.0	0.4	3.223	A
C - Gibbet Lane	275	69	1026	667	0.412	272	110	0.0	0.7	9.062	A
D - A5 (South)	833	208	931	1389	0.600	828	367	0.0	1.5	6.348	A
E - A426	367	92	688	1438	0.255	366	1071	0.0	0.3	3.353	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	593	148	630	1532	0.387	593	630	0.5	0.6	3.829	A
B - Rugby Road	574	143	787	1522	0.377	573	436	0.4	0.6	3.791	A
C - Gibbet Lane	328	82	1228	591	0.555	326	132	0.7	1.2	13.466	B
D - A5 (South)	995	249	1115	1292	0.770	988	439	1.5	3.2	11.596	B
E - A426	439	110	822	1368	0.321	438	1281	0.3	0.5	3.870	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	727	182	744	1473	0.493	725	737	0.6	1.0	4.807	A
B - Rugby Road	702	176	960	1426	0.493	701	510	0.6	1.0	4.954	A
C - Gibbet Lane	402	100	1503	489	0.822	391	158	1.2	3.8	33.893	D
D - A5 (South)	1219	305	1358	1165	1.046	1130	537	3.2	25.5	57.884	F
E - A426	537	134	945	1304	0.412	536	1543	0.5	0.7	4.684	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	727	182	752	1469	0.495	727	747	1.0	1.0	4.851	A
B - Rugby Road	702	176	962	1425	0.493	702	517	1.0	1.0	4.984	A
C - Gibbet Lane	402	100	1506	488	0.824	400	159	3.8	4.2	39.739	E
D - A5 (South)	1219	305	1368	1159	1.052	1150	538	25.5	42.8	116.250	F
E - A426	537	134	962	1295	0.415	537	1556	0.7	0.7	4.751	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	593	148	686	1503	0.395	595	701	1.0	0.7	3.968	A
B - Rugby Road	574	143	798	1516	0.378	575	483	1.0	0.6	3.829	A
C - Gibbet Lane	328	82	1234	589	0.557	340	139	4.2	1.3	15.028	C
D - A5 (South)	995	249	1131	1284	0.775	1151	442	42.8	3.8	47.912	E
E - A426	439	110	948	1302	0.337	439	1334	0.7	0.5	4.176	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	497	124	534	1583	0.314	498	535	0.7	0.5	3.318	A
B - Rugby Road	480	120	662	1592	0.302	481	370	0.6	0.4	3.242	A
C - Gibbet Lane	275	69	1032	665	0.413	277	111	1.3	0.7	9.343	A
D - A5 (South)	833	208	940	1384	0.602	843	369	3.8	1.5	6.751	A
E - A426	367	92	701	1432	0.257	368	1082	0.5	0.3	3.386	A

2036 WoD, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	B - Rugby Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J47	A5/A426/Gibbet Lane	Standard Roundabout		A, B, C, D, E	17.83	C

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	-1	D - A5 (South)	17.83	C

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2036 WoD	PM	PRTM 2.2 Demand Flows	ONE HOUR	16:45	18:15	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 - A5 (North)		ONE HOUR	✓	623	100.000
B - Rugby Road		ONE HOUR	✓	787	100.000
C - Gibbet Lane		ONE HOUR	✓	168	100.000
D - A5 (South)		ONE HOUR	✓	1088	100.000
E - A426		ONE HOUR	✓	875	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	3	15	246	359
	B - Rugby Road	1	0	17	220	549
	C - Gibbet Lane	22	20	0	33	93
	D - A5 (South)	651	189	35	11	202
	E - A426	207	485	13	166	4

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	0	0	0	0
	B - Rugby Road	0	0	0	0	0
	C - Gibbet Lane	0	0	0	0	0
	D - A5 (South)	0	0	0	0	0
	E - A426	0	0	0	0	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)
A - A5 (North)	0.52	5.58	1.1	A	572	858
B - Rugby Road	0.60	6.27	1.5	A	722	1083
C - Gibbet Lane	0.45	15.94	0.8	C	154	231
D - A5 (South)	0.94	38.34	12.0	E	998	1498
E - A426	0.76	11.82	3.1	B	803	1204

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	469	117	691	1501	0.313	467	659	0.0	0.5	3.478	A
B - Rugby Road	592	148	636	1606	0.369	590	522	0.0	0.6	3.537	A
C - Gibbet Lane	126	32	1167	614	0.206	125	60	0.0	0.3	7.350	A
D - A5 (South)	819	205	785	1466	0.559	814	507	0.0	1.2	5.484	A
E - A426	659	165	695	1435	0.459	655	905	0.0	0.8	4.601	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	560	140	827	1429	0.392	559	789	0.5	0.6	4.135	A
B - Rugby Road	707	177	762	1536	0.461	706	625	0.6	0.8	4.334	A
C - Gibbet Lane	151	38	1397	529	0.286	150	72	0.3	0.4	9.508	A
D - A5 (South)	978	245	941	1384	0.707	974	607	1.2	2.3	8.681	A
E - A426	787	197	831	1363	0.577	785	1083	0.8	1.3	6.201	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	686	171	1005	1336	0.513	684	950	0.6	1.0	5.508	A
B - Rugby Road	867	217	931	1442	0.601	864	758	0.8	1.5	6.198	A
C - Gibbet Lane	185	46	1708	413	0.448	183	87	0.4	0.8	15.605	C
D - A5 (South)	1198	299	1150	1274	0.940	1167	741	2.3	10.1	27.987	D
E - A426	963	241	997	1276	0.755	957	1320	1.3	2.9	11.060	B

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	686	171	1014	1331	0.515	686	965	1.0	1.1	5.577	A
B - Rugby Road	867	217	934	1440	0.602	866	766	1.5	1.5	6.272	A
C - Gibbet Lane	185	46	1713	411	0.451	185	88	0.8	0.8	15.942	C
D - A5 (South)	1198	299	1154	1272	0.942	1190	744	10.1	12.0	38.344	E
E - A426	963	241	1017	1266	0.761	963	1327	2.9	3.1	11.820	B

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	560	140	843	1421	0.394	562	816	1.1	0.7	4.198	A
B - Rugby Road	707	177	768	1533	0.462	710	637	1.5	0.9	4.390	A
C - Gibbet Lane	151	38	1404	526	0.287	153	73	0.8	0.4	9.692	A
D - A5 (South)	978	245	946	1381	0.708	1016	611	12.0	2.5	10.823	B
E - A426	787	197	866	1345	0.585	793	1096	3.1	1.4	6.602	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	469	117	698	1497	0.313	470	667	0.7	0.5	3.509	A
B - Rugby Road	592	148	641	1604	0.369	594	527	0.9	0.6	3.570	A
C - Gibbet Lane	126	32	1174	612	0.207	127	60	0.4	0.3	7.440	A
D - A5 (South)	819	205	791	1463	0.560	824	510	2.5	1.3	5.678	A
E - A426	659	165	704	1430	0.461	661	911	1.4	0.9	4.695	A

2036 WoDWS, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	B - Rugby Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J47	A5/A426/Gibbet Lane	Standard Roundabout		A, B, C, D, E	45.59	E

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	-8	D - A5 (South)	45.59	E

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2036 WoDWS	AM	PRTM 2.2 Demand Flows	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 - A5 (North)		ONE HOUR	✓	662	100.000
B - Rugby Road		ONE HOUR	✓	639	100.000
C - Gibbet Lane		ONE HOUR	✓	363	100.000
D - A5 (South)		ONE HOUR	✓	1108	100.000
E - A426		ONE HOUR	✓	472	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	1	34	250	377
	B - Rugby Road	1	0	30	103	505
	C - Gibbet Lane	46	36	5	10	266
	D - A5 (South)	466	311	46	7	278
	E - A426	186	133	29	124	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	0	0	0	0
	B - Rugby Road	0	0	0	0	0
	C - Gibbet Lane	0	0	0	0	0
	D - A5 (South)	0	0	0	0	0
	E - A426	0	0	0	0	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)
A - A5 (North)	0.49	4.82	1.0	A	607	911
B - Rugby Road	0.49	4.97	1.0	A	586	880
C - Gibbet Lane	0.82	38.73	4.0	E	333	500
D - A5 (South)	1.05	113.07	41.5	F	1017	1525
E - A426	0.40	4.64	0.7	A	433	650

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	498	125	517	1592	0.313	497	523	0.0	0.5	3.281	A
B - Rugby Road	481	120	654	1596	0.301	479	360	0.0	0.4	3.220	A
C - Gibbet Lane	273	68	1025	667	0.410	271	108	0.0	0.7	9.023	A
D - A5 (South)	834	209	925	1392	0.599	828	370	0.0	1.5	6.324	A
E - A426	355	89	686	1439	0.247	354	1068	0.0	0.3	3.312	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	595	149	618	1539	0.387	594	625	0.5	0.6	3.811	A
B - Rugby Road	574	144	783	1525	0.377	574	430	0.4	0.6	3.785	A
C - Gibbet Lane	326	82	1227	592	0.552	324	129	0.7	1.2	13.363	B
D - A5 (South)	996	249	1108	1296	0.769	989	443	1.5	3.2	11.495	B
E - A426	424	106	820	1369	0.310	424	1278	0.3	0.4	3.805	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	729	182	731	1480	0.493	728	731	0.6	1.0	4.776	A
B - Rugby Road	704	176	954	1429	0.492	702	504	0.6	1.0	4.941	A
C - Gibbet Lane	400	100	1502	489	0.817	390	155	1.2	3.7	33.251	D
D - A5 (South)	1220	305	1349	1169	1.043	1133	542	3.2	24.9	56.769	F
E - A426	520	130	943	1305	0.398	519	1539	0.4	0.7	4.576	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	729	182	739	1476	0.494	729	742	1.0	1.0	4.821	A
B - Rugby Road	704	176	957	1428	0.493	704	511	1.0	1.0	4.971	A
C - Gibbet Lane	400	100	1505	488	0.819	398	156	3.7	4.0	38.733	E
D - A5 (South)	1220	305	1359	1164	1.048	1154	543	24.9	41.5	113.065	F
E - A426	520	130	961	1295	0.401	520	1552	0.7	0.7	4.640	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	595	149	672	1510	0.394	596	694	1.0	0.7	3.944	A
B - Rugby Road	574	144	793	1519	0.378	576	476	1.0	0.6	3.822	A
C - Gibbet Lane	326	82	1233	590	0.553	337	136	4.0	1.3	14.848	B
D - A5 (South)	996	249	1124	1288	0.774	1147	446	41.5	3.8	44.873	E
E - A426	424	106	941	1306	0.325	425	1330	0.7	0.5	4.090	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	498	125	524	1588	0.314	499	531	0.7	0.5	3.307	A
B - Rugby Road	481	120	658	1594	0.302	482	365	0.6	0.4	3.240	A
C - Gibbet Lane	273	68	1031	665	0.411	276	109	1.3	0.7	9.298	A
D - A5 (South)	834	209	934	1388	0.601	843	373	3.8	1.5	6.715	A
E - A426	355	89	698	1433	0.248	356	1078	0.5	0.3	3.346	A

2036 WoDWS, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	B - Rugby Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J47	A5/A426/Gibbet Lane	Standard Roundabout		A, B, C, D, E	16.52	C

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	0	D - A5 (South)	16.52	C

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2036 WoDWS	PM	PRTM 2.2 Demand Flows	ONE HOUR	16:45	18:15	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 - A5 (North)		ONE HOUR	✓	622	100.000
B - Rugby Road		ONE HOUR	✓	788	100.000
C - Gibbet Lane		ONE HOUR	✓	164	100.000
D - A5 (South)		ONE HOUR	✓	1082	100.000
E - A426		ONE HOUR	✓	850	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	4	15	250	353
	B - Rugby Road	1	0	14	225	548
	C - Gibbet Lane	21	21	0	31	91
	D - A5 (South)	663	186	28	11	194
	E - A426	206	471	13	156	4

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	0	0	0	0
	B - Rugby Road	0	0	0	0	0
	C - Gibbet Lane	0	0	0	0	0
	D - A5 (South)	0	0	0	0	0
	E - A426	0	0	0	0	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)
A - A5 (North)	0.51	5.41	1.0	A	571	856
B - Rugby Road	0.60	6.16	1.5	A	723	1085
C - Gibbet Lane	0.44	15.42	0.8	C	150	226
D - A5 (South)	0.93	35.04	10.9	E	993	1489
E - A426	0.74	10.91	2.8	B	780	1170

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	468	117	666	1513	0.309	466	667	0.0	0.4	3.432	A
B - Rugby Road	593	148	622	1614	0.368	591	511	0.0	0.6	3.512	A
C - Gibbet Lane	123	31	1161	616	0.200	122	52	0.0	0.2	7.272	A
D - A5 (South)	815	204	779	1469	0.554	810	504	0.0	1.2	5.419	A
E - A426	640	160	697	1434	0.446	637	892	0.0	0.8	4.498	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	559	140	798	1445	0.387	558	798	0.4	0.6	4.058	A
B - Rugby Road	708	177	745	1546	0.458	707	611	0.6	0.8	4.289	A
C - Gibbet Lane	147	37	1390	531	0.278	147	63	0.2	0.4	9.355	A
D - A5 (South)	973	243	932	1388	0.701	969	604	1.2	2.3	8.490	A
E - A426	764	191	833	1362	0.561	762	1068	0.8	1.3	5.983	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	685	171	970	1355	0.506	683	962	0.6	1.0	5.350	A
B - Rugby Road	868	217	910	1454	0.597	865	743	0.8	1.5	6.092	A
C - Gibbet Lane	181	45	1699	416	0.434	179	76	0.4	0.7	15.122	C
D - A5 (South)	1191	298	1140	1279	0.931	1163	738	2.3	9.3	26.363	D
E - A426	936	234	1002	1274	0.735	930	1302	1.3	2.7	10.307	B

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	685	171	978	1350	0.507	685	977	1.0	1.0	5.410	A
B - Rugby Road	868	217	913	1452	0.598	868	750	1.5	1.5	6.162	A
C - Gibbet Lane	181	45	1704	414	0.436	181	77	0.7	0.8	15.420	C
D - A5 (South)	1191	298	1144	1277	0.933	1185	741	9.3	10.9	35.039	E
E - A426	936	234	1020	1264	0.740	935	1309	2.7	2.8	10.910	B

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	559	140	812	1437	0.389	561	823	1.0	0.6	4.114	A
B - Rugby Road	708	177	750	1543	0.459	711	622	1.5	0.9	4.340	A
C - Gibbet Lane	147	37	1397	528	0.279	149	64	0.8	0.4	9.522	A
D - A5 (South)	973	243	938	1386	0.702	1006	608	10.9	2.4	10.296	B
E - A426	764	191	865	1346	0.568	770	1079	2.8	1.3	6.315	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	468	117	673	1510	0.310	469	674	0.6	0.5	3.459	A
B - Rugby Road	593	148	626	1612	0.368	594	515	0.9	0.6	3.541	A
C - Gibbet Lane	123	31	1168	614	0.201	124	53	0.4	0.3	7.359	A
D - A5 (South)	815	204	784	1467	0.555	819	508	2.4	1.3	5.603	A
E - A426	640	160	705	1430	0.448	642	898	1.3	0.8	4.584	A

2036 WD, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	B - Rugby Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J47	A5/A426/Gibbet Lane	Standard Roundabout		A, B, C, D, E	55.10	F

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	-9	D - A5 (South)	55.10	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2036 WD	AM	PRTM 2.2 Demand Flows	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 - A5 (North)		ONE HOUR	✓	720	100.000
B - Rugby Road		ONE HOUR	✓	646	100.000
C - Gibbet Lane		ONE HOUR	✓	378	100.000
D - A5 (South)		ONE HOUR	✓	1115	100.000
E - A426		ONE HOUR	✓	469	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	1	40	287	392
	B - Rugby Road	1	0	31	105	509
	C - Gibbet Lane	53	35	6	12	272
	D - A5 (South)	499	300	44	11	261
	E - A426	199	120	28	122	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	0	0	0	0
	B - Rugby Road	0	0	0	0	0
	C - Gibbet Lane	0	0	0	0	0
	D - A5 (South)	0	0	0	0	0
	E - A426	0	0	0	0	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)
A - A5 (North)	0.53	5.14	1.1	A	661	991
B - Rugby Road	0.51	5.28	1.0	A	593	889
C - Gibbet Lane	0.90	61.72	6.6	F	347	520
D - A5 (South)	1.07	135.20	51.0	F	1023	1535
E - A426	0.40	4.67	0.7	A	430	646

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	542	136	498	1601	0.338	540	562	0.0	0.5	3.386	A
B - Rugby Road	486	122	697	1572	0.309	485	341	0.0	0.4	3.304	A
C - Gibbet Lane	285	71	1070	650	0.438	282	112	0.0	0.8	9.688	A
D - A5 (South)	839	210	949	1380	0.608	833	403	0.0	1.5	6.521	A
E - A426	353	88	709	1427	0.247	352	1073	0.0	0.3	3.342	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	647	162	596	1550	0.417	646	672	0.5	0.7	3.979	A
B - Rugby Road	581	145	835	1496	0.388	580	408	0.4	0.6	3.928	A
C - Gibbet Lane	340	85	1281	572	0.595	337	134	0.8	1.4	15.194	C
D - A5 (South)	1002	251	1136	1281	0.782	995	482	1.5	3.4	12.270	B
E - A426	422	105	847	1355	0.311	421	1285	0.3	0.4	3.853	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	793	198	698	1497	0.530	791	779	0.7	1.1	5.090	A
B - Rugby Road	711	178	1017	1394	0.510	710	473	0.6	1.0	5.250	A
C - Gibbet Lane	416	104	1567	465	0.895	399	160	1.4	5.6	46.436	E
D - A5 (South)	1228	307	1378	1154	1.064	1125	589	3.4	29.1	64.241	F
E - A426	516	129	962	1295	0.399	516	1541	0.4	0.7	4.615	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	793	198	705	1493	0.531	793	788	1.1	1.1	5.138	A
B - Rugby Road	711	178	1020	1393	0.511	711	478	1.0	1.0	5.282	A
C - Gibbet Lane	416	104	1570	464	0.897	412	161	5.6	6.6	61.715	F
D - A5 (South)	1228	307	1392	1147	1.071	1140	590	29.1	51.0	135.199	F
E - A426	516	129	977	1287	0.401	516	1555	0.7	0.7	4.671	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	647	162	661	1517	0.427	649	762	1.1	0.8	4.156	A
B - Rugby Road	581	145	847	1489	0.390	582	462	1.0	0.6	3.980	A
C - Gibbet Lane	340	85	1288	569	0.597	360	142	6.6	1.5	18.746	C
D - A5 (South)	1002	251	1162	1268	0.791	1188	486	51.0	4.5	71.266	F
E - A426	422	105	1001	1275	0.331	422	1349	0.7	0.5	4.229	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	542	136	506	1598	0.339	543	572	0.8	0.5	3.418	A
B - Rugby Road	486	122	702	1569	0.310	487	347	0.6	0.5	3.327	A
C - Gibbet Lane	285	71	1076	648	0.439	288	113	1.5	0.8	10.068	B
D - A5 (South)	839	210	959	1375	0.611	851	405	4.5	1.6	7.020	A
E - A426	353	88	724	1420	0.249	354	1086	0.5	0.3	3.379	A

2036 WD, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	B - Rugby Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J47	A5/A426/Gibbet Lane	Standard Roundabout		A, B, C, D, E	20.65	C

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	-2	D - A5 (South)	20.65	C

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2036 WD	PM	PRTM 2.2 Demand Flows	ONE HOUR	16:45	18:15	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 - A5 (North)		ONE HOUR	✓	633	100.000
B - Rugby Road		ONE HOUR	✓	798	100.000
C - Gibbet Lane		ONE HOUR	✓	177	100.000
D - A5 (South)		ONE HOUR	✓	1126	100.000
E - A426		ONE HOUR	✓	875	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	4	15	275	339
	B - Rugby Road	1	0	16	254	527
	C - Gibbet Lane	22	24	0	35	96
	D - A5 (South)	706	199	33	13	175
	E - A426	206	496	14	155	4

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	0	0	0	0
	B - Rugby Road	0	0	0	0	0
	C - Gibbet Lane	0	0	0	0	0
	D - A5 (South)	0	0	0	0	0
	E - A426	0	0	0	0	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)
A - A5 (North)	0.53	5.75	1.1	A	581	871
B - Rugby Road	0.61	6.40	1.5	A	732	1098
C - Gibbet Lane	0.48	17.05	0.9	C	162	244
D - A5 (South)	0.96	45.27	14.7	E	1033	1550
E - A426	0.78	13.47	3.5	B	803	1204

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	477	119	702	1495	0.319	475	700	0.0	0.5	3.523	A
B - Rugby Road	601	150	636	1606	0.374	598	541	0.0	0.6	3.565	A
C - Gibbet Lane	133	33	1176	611	0.218	132	58	0.0	0.3	7.503	A
D - A5 (South)	848	212	759	1479	0.573	842	549	0.0	1.3	5.606	A
E - A426	659	165	747	1408	0.468	655	855	0.0	0.9	4.763	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	569	142	840	1422	0.400	568	837	0.5	0.7	4.212	A
B - Rugby Road	717	179	761	1537	0.467	716	648	0.6	0.9	4.383	A
C - Gibbet Lane	159	40	1407	525	0.303	159	70	0.3	0.4	9.819	A
D - A5 (South)	1012	253	909	1401	0.723	1007	657	1.3	2.5	9.045	A
E - A426	787	197	893	1331	0.591	784	1024	0.9	1.4	6.561	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	697	174	1019	1329	0.524	695	1004	0.7	1.1	5.666	A
B - Rugby Road	879	220	929	1443	0.609	876	785	0.9	1.5	6.319	A
C - Gibbet Lane	195	49	1720	408	0.478	193	85	0.4	0.9	16.630	C
D - A5 (South)	1240	310	1111	1294	0.958	1202	802	2.5	11.9	31.078	D
E - A426	963	241	1067	1240	0.777	956	1247	1.4	3.3	12.364	B

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	697	174	1030	1323	0.527	697	1022	1.1	1.1	5.747	A
B - Rugby Road	879	220	933	1441	0.610	879	794	1.5	1.5	6.399	A
C - Gibbet Lane	195	49	1726	406	0.480	195	86	0.9	0.9	17.055	C
D - A5 (South)	1240	310	1115	1292	0.959	1228	806	11.9	14.7	45.270	E
E - A426	963	241	1089	1228	0.784	963	1254	3.3	3.5	13.471	B

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	569	142	860	1412	0.403	571	873	1.1	0.7	4.288	A
B - Rugby Road	717	179	768	1533	0.468	720	663	1.5	0.9	4.444	A
C - Gibbet Lane	159	40	1416	521	0.305	161	72	0.9	0.4	10.038	B
D - A5 (South)	1012	253	915	1398	0.724	1060	662	14.7	2.7	12.119	B
E - A426	787	197	938	1307	0.602	794	1037	3.5	1.5	7.122	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	477	119	709	1491	0.320	477	708	0.7	0.5	3.556	A
B - Rugby Road	601	150	640	1604	0.375	602	547	0.9	0.6	3.595	A
C - Gibbet Lane	133	33	1183	608	0.219	134	59	0.4	0.3	7.599	A
D - A5 (South)	848	212	764	1477	0.574	853	552	2.7	1.4	5.824	A
E - A426	659	165	756	1403	0.470	661	861	1.5	0.9	4.872	A

Appendix 3: Existing Gibbet Roundabout J10 Output (Full Reassignment)

Junctions 10

ARCADY 10 - Roundabout Module

Filename: J26 240214 - A5_A426_Gibbet Lane (existing) Flow Amends.j10
Path: X:\NTT\NTT2814_Hinckley Rail Freight Interchange\02. Project Delivery\01. WIP\Design and Calculations\T&I Planning\04 Junction Modelling\J26_JTC 47 - A5 - A426 - Gibbet Lane
Report generation date: 14/02/2024 10:41:34

Summary of junction performance

	AM						PM					
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity
	2023											
A - A5 (North)	D1	1.6	6.19	0.61	A	12 % [C - Gibbet Lane]	D2	0.9	4.91	0.48	A	24 % [E - A426]
B - Rugby Road		1.4	6.36	0.58	A			0.9	4.55	0.47	A	
C - Gibbet Lane		0.6	18.54	0.38	C			0.3	11.67	0.26	B	
D - A5 (South)		2.7	11.82	0.74	B			1.6	7.53	0.62	A	
E - A426		0.7	4.43	0.41	A			2.3	8.71	0.70	A	
	2036 WoD											
A - A5 (North)	D3	2.2	7.93	0.69	A	2 % [C - Gibbet Lane]	D4	1.6	7.03	0.62	A	4 % [E - A426]
B - Rugby Road		2.0	8.44	0.67	A			1.5	6.41	0.60	A	
C - Gibbet Lane		1.0	30.02	0.52	D			0.7	19.49	0.41	C	
D - A5 (South)		5.5	22.31	0.86	C			4.1	16.09	0.81	C	
E - A426		0.9	5.01	0.47	A			7.0	22.83	0.89	C	
	2036 WoDWS											
A - A5 (North)	D5	2.2	7.84	0.69	A	2 % [C - Gibbet Lane]	D6	1.5	6.77	0.61	A	6 % [E - A426]
B - Rugby Road		2.0	8.40	0.67	A			1.4	6.30	0.59	A	
C - Gibbet Lane		1.0	29.41	0.51	D			0.6	18.73	0.40	C	
D - A5 (South)		5.4	21.88	0.86	C			3.9	15.31	0.80	C	
E - A426		0.8	4.88	0.46	A			6.0	19.80	0.87	C	
	2036 WD											
A - A5 (North)	D7	2.6	8.78	0.73	A	-2 % [C - Gibbet Lane]	D8	1.7	7.30	0.63	A	1 % [E - A426]
B - Rugby Road		2.2	9.33	0.69	A			1.5	6.55	0.61	A	
C - Gibbet Lane		1.6	43.13	0.64	E			0.8	21.14	0.45	C	
D - A5 (South)		6.4	25.49	0.88	D			4.7	17.77	0.83	C	
E - A426		0.8	4.97	0.46	A			8.9	29.17	0.91	D	

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. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

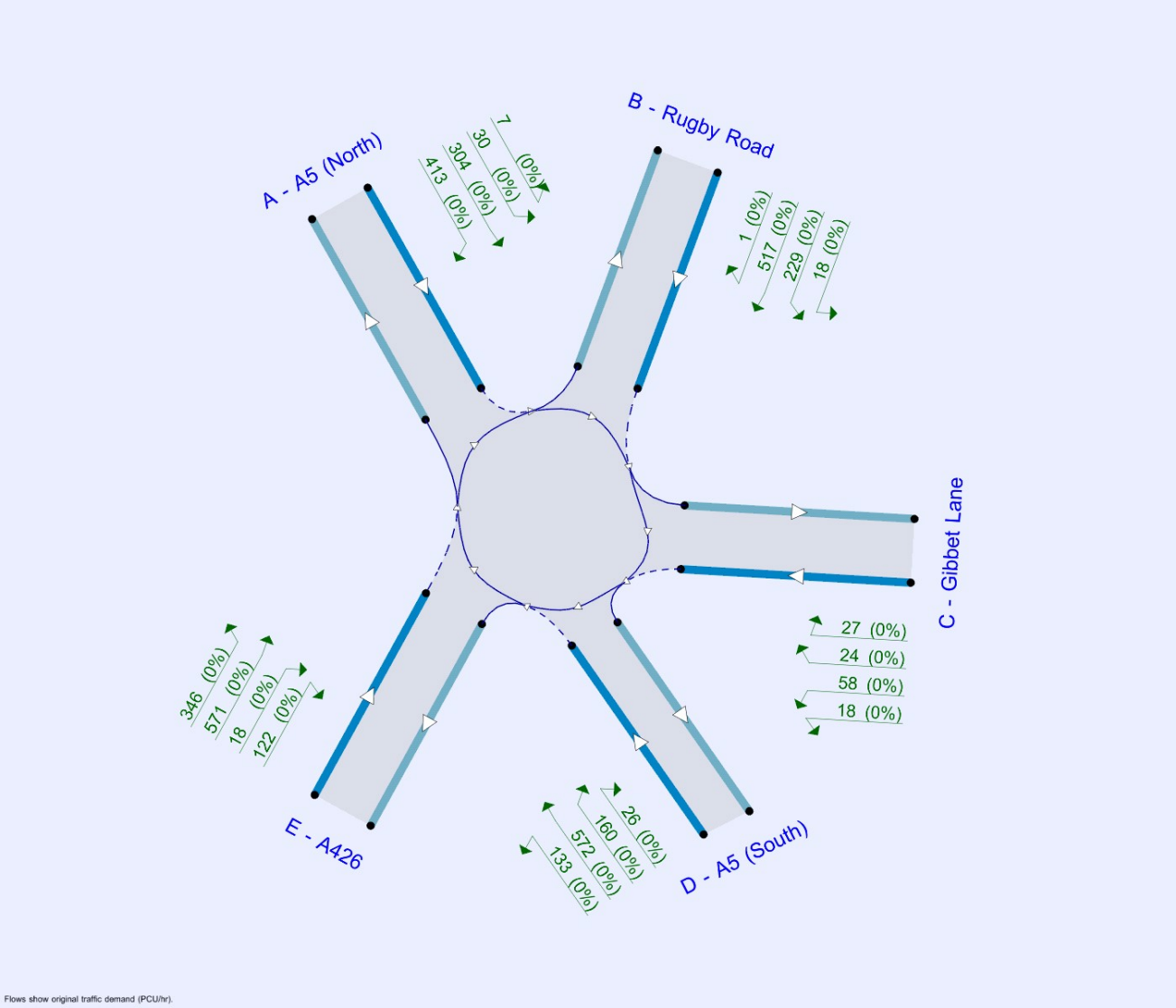
File summary

File Description

Title	J47 - A5/A426/Gibbet Lane
Location	
Site number	J47
Date	18/12/2020
Version	V0.1
Status	Existing
Identifier	
Client	
Jobnumber	NTT2814
Enumerator	BWB
Description	

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	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2023	AM	Observed Flows	ONE HOUR	07:45	09:15	15	✓
D2	2023	PM	Observed Flows	ONE HOUR	16:45	18:15	15	✓
D3	2036 WoD	AM	PRTM 2.2 Demand Flows	ONE HOUR	07:45	09:15	15	✓
D4	2036 WoD	PM	PRTM 2.2 Demand Flows	ONE HOUR	16:45	18:15	15	✓
D5	2036 WoDWS	AM	PRTM 2.2 Demand Flows	ONE HOUR	07:45	09:15	15	✓
D6	2036 WoDWS	PM	PRTM 2.2 Demand Flows	ONE HOUR	16:45	18:15	15	✓
D7	2036 WD	AM	PRTM 2.2 Demand Flows	ONE HOUR	07:45	09:15	15	✓
D8	2036 WD	PM	PRTM 2.2 Demand Flows	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2023, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	B - Rugby Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J47	A5/A426/Gibbet Lane	Standard Roundabout		A, B, C, D, E	7.84	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	12	C - Gibbet Lane	7.84	A

Arms

Arms

Arm	Name	Description	No give-way line
A	A5 (North)		
B	Rugby Road		
C	Gibbet Lane		
D	A5 (South)		
E	A426		

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
A - A5 (North)	3.86	8.86	15.8	28.0	70.0	43.0		
B - Rugby Road	3.20	6.69	54.0	45.0	71.0	20.0		
C - Gibbet Lane	2.65	5.50	3.2	7.7	73.0	33.0		
D - A5 (South)	3.95	7.46	17.0	30.0	70.0	44.0		
E - A426	3.42	6.38	25.8	35.0	71.0	27.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - A5 (North)	0.524	1862
B - Rugby Road	0.556	1960
C - Gibbet Lane	0.356	936
D - A5 (South)	0.510	1778
E - A426	0.516	1745

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2023	AM	Observed Flows	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 - A5 (North)		ONE HOUR	✓	842	100.000
B - Rugby Road		ONE HOUR	✓	713	100.000
C - Gibbet Lane		ONE HOUR	✓	106	100.000
D - A5 (South)		ONE HOUR	✓	777	100.000
E - A426		ONE HOUR	✓	523	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	5	32	353	452
	B - Rugby Road	2	0	25	139	547
	C - Gibbet Lane	20	23	1	5	57
	D - A5 (South)	328	219	32	5	193
	E - A426	189	215	19	100	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	0	0	0	0
	B - Rugby Road	0	0	0	0	0
	C - Gibbet Lane	0	0	0	0	0
	D - A5 (South)	0	0	0	0	0
	E - A426	0	0	0	0	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)
A - A5 (North)	0.61	6.19	1.6	A	773	1159
B - Rugby Road	0.58	6.36	1.4	A	654	981
C - Gibbet Lane	0.38	18.54	0.6	C	97	146
D - A5 (South)	0.74	11.82	2.7	B	713	1069
E - A426	0.41	4.43	0.7	A	480	720

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	634	158	460	1621	0.391	631	404	0.0	0.6	3.627	A
B - Rugby Road	537	134	745	1545	0.347	535	346	0.0	0.5	3.554	A
C - Gibbet Lane	80	20	1198	510	0.156	79	82	0.0	0.2	8.335	A
D - A5 (South)	585	146	826	1357	0.431	582	451	0.0	0.8	4.630	A
E - A426	394	98	472	1502	0.262	392	936	0.0	0.4	3.239	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	757	189	551	1574	0.481	756	484	0.6	0.9	4.394	A
B - Rugby Road	641	160	892	1464	0.438	640	415	0.5	0.8	4.365	A
C - Gibbet Lane	95	24	1434	426	0.224	95	98	0.2	0.3	10.851	B
D - A5 (South)	699	175	989	1273	0.549	697	540	0.8	1.2	6.224	A
E - A426	470	118	565	1454	0.323	470	1121	0.4	0.5	3.655	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	927	232	673	1510	0.614	924	590	0.9	1.6	6.123	A
B - Rugby Road	785	196	1091	1353	0.580	783	506	0.8	1.4	6.288	A
C - Gibbet Lane	117	29	1754	312	0.374	116	120	0.3	0.6	18.175	C
D - A5 (South)	855	214	1209	1161	0.737	850	661	1.2	2.7	11.343	B
E - A426	576	144	689	1390	0.414	575	1370	0.5	0.7	4.411	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	927	232	676	1508	0.615	927	593	1.6	1.6	6.188	A
B - Rugby Road	785	196	1094	1351	0.581	785	509	1.4	1.4	6.358	A
C - Gibbet Lane	117	29	1759	311	0.376	117	120	0.6	0.6	18.538	C
D - A5 (South)	855	214	1213	1159	0.738	855	663	2.7	2.7	11.819	B
E - A426	576	144	693	1388	0.415	576	1375	0.7	0.7	4.433	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	757	189	555	1572	0.482	760	488	1.6	0.9	4.444	A
B - Rugby Road	641	160	897	1461	0.439	643	418	1.4	0.8	4.414	A
C - Gibbet Lane	95	24	1441	424	0.225	96	98	0.6	0.3	11.040	B
D - A5 (South)	699	175	995	1270	0.550	705	543	2.7	1.2	6.427	A
E - A426	470	118	571	1451	0.324	471	1128	0.7	0.5	3.680	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	634	158	463	1620	0.391	635	407	0.9	0.6	3.659	A
B - Rugby Road	537	134	750	1543	0.348	538	349	0.8	0.5	3.587	A
C - Gibbet Lane	80	20	1205	508	0.157	80	82	0.3	0.2	8.428	A
D - A5 (South)	585	146	831	1354	0.432	587	454	1.2	0.8	4.705	A
E - A426	394	98	476	1500	0.263	394	942	0.5	0.4	3.259	A

2023, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	B - Rugby Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J47	A5/A426/Gibbet Lane	Standard Roundabout		A, B, C, D, E	6.84	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	24	E - A426	6.84	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2023	PM	Observed Flows	ONE HOUR	16:45	18:15	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 - A5 (North)		ONE HOUR	✓	622	100.000
B - Rugby Road		ONE HOUR	✓	630	100.000
C - Gibbet Lane		ONE HOUR	✓	98	100.000
D - A5 (South)		ONE HOUR	✓	721	100.000
E - A426		ONE HOUR	✓	887	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	5	25	230	362
	B - Rugby Road	1	0	16	163	450
	C - Gibbet Lane	20	19	0	13	46
	D - A5 (South)	432	125	23	7	134
	E - A426	290	468	14	111	4

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	0	0	0	0
	B - Rugby Road	0	0	0	0	0
	C - Gibbet Lane	0	0	0	0	0
	D - A5 (South)	0	0	0	0	0
	E - A426	0	0	0	0	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)
A - A5 (North)	0.48	4.91	0.9	A	571	856
B - Rugby Road	0.47	4.55	0.9	A	578	867
C - Gibbet Lane	0.26	11.67	0.3	B	90	135
D - A5 (South)	0.62	7.53	1.6	A	662	992
E - A426	0.70	8.71	2.3	A	814	1221

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	468	117	578	1560	0.300	467	557	0.0	0.4	3.289	A
B - Rugby Road	474	119	582	1636	0.290	473	462	0.0	0.4	3.090	A
C - Gibbet Lane	74	18	996	582	0.127	73	58	0.0	0.1	7.067	A
D - A5 (South)	543	136	676	1433	0.379	540	393	0.0	0.6	4.023	A
E - A426	668	167	470	1503	0.444	665	747	0.0	0.8	4.277	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	559	140	692	1500	0.373	559	667	0.4	0.6	3.821	A
B - Rugby Road	566	142	697	1572	0.360	566	554	0.4	0.6	3.574	A
C - Gibbet Lane	88	22	1192	512	0.172	88	70	0.1	0.2	8.475	A
D - A5 (South)	648	162	810	1365	0.475	647	470	0.6	0.9	5.007	A
E - A426	797	199	563	1455	0.548	796	894	0.8	1.2	5.446	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	685	171	845	1420	0.482	684	815	0.6	0.9	4.880	A
B - Rugby Road	694	173	852	1486	0.467	692	676	0.6	0.9	4.538	A
C - Gibbet Lane	108	27	1459	417	0.258	107	86	0.2	0.3	11.587	B
D - A5 (South)	794	198	991	1272	0.624	791	575	0.9	1.6	7.433	A
E - A426	977	244	688	1391	0.702	972	1094	1.2	2.3	8.516	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	685	171	849	1418	0.483	685	818	0.9	0.9	4.910	A
B - Rugby Road	694	173	854	1485	0.467	694	679	0.9	0.9	4.550	A
C - Gibbet Lane	108	27	1462	416	0.259	108	86	0.3	0.3	11.668	B
D - A5 (South)	794	198	993	1271	0.624	794	577	1.6	1.6	7.535	A
E - A426	977	244	690	1389	0.703	976	1097	2.3	2.3	8.709	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	559	140	697	1498	0.373	560	671	0.9	0.6	3.846	A
B - Rugby Road	566	142	700	1571	0.361	568	558	0.9	0.6	3.595	A
C - Gibbet Lane	88	22	1197	511	0.173	89	70	0.3	0.2	8.541	A
D - A5 (South)	648	162	813	1363	0.475	651	473	1.6	0.9	5.077	A
E - A426	797	199	566	1453	0.549	802	898	2.3	1.2	5.563	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	468	117	582	1558	0.301	469	561	0.6	0.4	3.310	A
B - Rugby Road	474	119	585	1634	0.290	475	466	0.6	0.4	3.108	A
C - Gibbet Lane	74	18	1001	580	0.127	74	59	0.2	0.1	7.116	A
D - A5 (South)	543	136	680	1431	0.379	544	395	0.9	0.6	4.063	A
E - A426	668	167	473	1501	0.445	669	751	1.2	0.8	4.336	A

2036 WoD, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	B - Rugby Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J47	A5/A426/Gibbet Lane	Standard Roundabout		A, B, C, D, E	12.10	B

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	2	C - Gibbet Lane	12.10	B

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2036 WoD	AM	PRTM 2.2 Demand Flows	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 - A5 (North)		ONE HOUR	✓	926	100.000
B - Rugby Road		ONE HOUR	✓	785	100.000
C - Gibbet Lane		ONE HOUR	✓	117	100.000
D - A5 (South)		ONE HOUR	✓	855	100.000
E - A426		ONE HOUR	✓	576	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	6	35	388	497
	B - Rugby Road	2	0	28	153	602
	C - Gibbet Lane	22	25	1	6	63
	D - A5 (South)	361	241	35	6	212
	E - A426	208	237	21	110	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	0	0	0	0
	B - Rugby Road	0	0	0	0	0
	C - Gibbet Lane	0	0	0	0	0
	D - A5 (South)	0	0	0	0	0
	E - A426	0	0	0	0	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)
A - A5 (North)	0.69	7.93	2.2	A	850	1275
B - Rugby Road	0.67	8.44	2.0	A	720	1080
C - Gibbet Lane	0.52	30.02	1.0	D	107	161
D - A5 (South)	0.86	22.31	5.5	C	785	1177
E - A426	0.47	5.01	0.9	A	529	793

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	697	174	506	1597	0.436	694	444	0.0	0.8	3.972	A
B - Rugby Road	591	148	819	1504	0.393	588	381	0.0	0.6	3.920	A
C - Gibbet Lane	88	22	1318	468	0.188	87	90	0.0	0.2	9.437	A
D - A5 (South)	644	161	908	1315	0.490	640	497	0.0	0.9	5.305	A
E - A426	434	108	518	1478	0.293	432	1029	0.0	0.4	3.431	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	832	208	606	1545	0.539	831	532	0.8	1.2	5.030	A
B - Rugby Road	706	176	981	1414	0.499	704	456	0.6	1.0	5.062	A
C - Gibbet Lane	105	26	1577	375	0.280	105	108	0.2	0.4	13.262	B
D - A5 (South)	769	192	1087	1223	0.628	766	595	0.9	1.7	7.818	A
E - A426	518	129	621	1425	0.363	517	1232	0.4	0.6	3.962	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	1020	255	738	1476	0.691	1015	646	1.2	2.2	7.752	A
B - Rugby Road	864	216	1198	1293	0.668	860	555	1.0	2.0	8.244	A
C - Gibbet Lane	129	32	1928	251	0.513	126	131	0.4	1.0	28.383	D
D - A5 (South)	941	235	1327	1101	0.855	927	727	1.7	5.1	19.371	C
E - A426	634	159	752	1358	0.467	633	1503	0.6	0.9	4.959	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	1020	255	744	1473	0.692	1019	652	2.2	2.2	7.929	A
B - Rugby Road	864	216	1203	1291	0.670	864	560	2.0	2.0	8.438	A
C - Gibbet Lane	129	32	1935	248	0.519	129	132	1.0	1.0	30.015	D
D - A5 (South)	941	235	1334	1097	0.858	940	730	5.1	5.5	22.307	C
E - A426	634	159	762	1353	0.469	634	1512	0.9	0.9	5.011	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	832	208	614	1541	0.540	837	540	2.2	1.2	5.140	A
B - Rugby Road	706	176	988	1410	0.500	710	463	2.0	1.0	5.166	A
C - Gibbet Lane	105	26	1588	371	0.283	108	109	1.0	0.4	13.776	B
D - A5 (South)	769	192	1097	1218	0.631	784	599	5.5	1.8	8.562	A
E - A426	518	129	635	1418	0.365	519	1246	0.9	0.6	4.011	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	697	174	511	1595	0.437	699	448	1.2	0.8	4.024	A
B - Rugby Road	591	148	825	1501	0.394	592	384	1.0	0.7	3.967	A
C - Gibbet Lane	88	22	1327	465	0.190	89	91	0.4	0.2	9.594	A
D - A5 (South)	644	161	915	1311	0.491	647	500	1.8	1.0	5.445	A
E - A426	434	108	524	1475	0.294	434	1038	0.6	0.4	3.463	A

2036 WoD, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	B - Rugby Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J47	A5/A426/Gibbet Lane	Standard Roundabout		A, B, C, D, E	14.26	B

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	4	E - A426	14.26	B

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2036 WoD	PM	PRTM 2.2 Demand Flows	ONE HOUR	16:45	18:15	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 - A5 (North)		ONE HOUR	✓	744	100.000
B - Rugby Road		ONE HOUR	✓	754	100.000
C - Gibbet Lane		ONE HOUR	✓	118	100.000
D - A5 (South)		ONE HOUR	✓	863	100.000
E - A426		ONE HOUR	✓	1062	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	6	30	275	433
	B - Rugby Road	1	0	19	195	539
	C - Gibbet Lane	24	23	0	16	55
	D - A5 (South)	517	150	28	8	160
	E - A426	347	560	17	133	5

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	0	0	0	0
	B - Rugby Road	0	0	0	0	0
	C - Gibbet Lane	0	0	0	0	0
	D - A5 (South)	0	0	0	0	0
	E - A426	0	0	0	0	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)
A - A5 (North)	0.62	7.03	1.6	A	683	1024
B - Rugby Road	0.60	6.41	1.5	A	692	1038
C - Gibbet Lane	0.41	19.49	0.7	C	108	162
D - A5 (South)	0.81	16.09	4.1	C	792	1188
E - A426	0.89	22.83	7.0	C	975	1462

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	560	140	691	1500	0.373	558	665	0.0	0.6	3.809	A
B - Rugby Road	568	142	696	1573	0.361	565	553	0.0	0.6	3.567	A
C - Gibbet Lane	89	22	1191	513	0.173	88	70	0.0	0.2	8.460	A
D - A5 (South)	650	162	809	1365	0.476	646	470	0.0	0.9	4.982	A
E - A426	800	200	562	1455	0.549	795	893	0.0	1.2	5.410	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	669	167	828	1429	0.468	668	796	0.6	0.9	4.722	A
B - Rugby Road	678	169	833	1496	0.453	677	662	0.6	0.8	4.387	A
C - Gibbet Lane	106	27	1426	429	0.247	106	84	0.2	0.3	11.107	B
D - A5 (South)	776	194	969	1284	0.604	773	562	0.9	1.5	7.022	A
E - A426	955	239	673	1398	0.683	951	1070	1.2	2.1	7.987	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	819	205	1003	1337	0.613	816	967	0.9	1.6	6.880	A
B - Rugby Road	830	208	1017	1394	0.596	828	803	0.8	1.4	6.329	A
C - Gibbet Lane	130	32	1742	317	0.410	129	103	0.3	0.7	18.982	C
D - A5 (South)	950	238	1184	1174	0.810	941	686	1.5	3.9	14.858	B
E - A426	1169	292	818	1323	0.884	1152	1307	2.1	6.4	19.347	C

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	819	205	1016	1331	0.616	819	978	1.6	1.6	7.034	A
B - Rugby Road	830	208	1022	1391	0.597	830	812	1.4	1.5	6.413	A
C - Gibbet Lane	130	32	1749	314	0.413	130	103	0.7	0.7	19.491	C
D - A5 (South)	950	238	1189	1171	0.811	949	690	3.9	4.1	16.085	C
E - A426	1169	292	826	1319	0.886	1167	1312	6.4	7.0	22.833	C

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	669	167	846	1419	0.471	672	812	1.6	0.9	4.830	A
B - Rugby Road	678	169	841	1492	0.454	680	676	1.5	0.8	4.450	A
C - Gibbet Lane	106	27	1436	426	0.249	107	85	0.7	0.3	11.365	B
D - A5 (South)	776	194	976	1280	0.606	786	568	4.1	1.6	7.427	A
E - A426	955	239	684	1393	0.686	974	1078	7.0	2.2	8.966	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	560	140	699	1496	0.374	561	672	0.9	0.6	3.856	A
B - Rugby Road	568	142	701	1570	0.362	569	559	0.8	0.6	3.601	A
C - Gibbet Lane	89	22	1199	510	0.174	89	71	0.3	0.2	8.570	A
D - A5 (South)	650	162	815	1362	0.477	652	473	1.6	0.9	5.091	A
E - A426	800	200	568	1453	0.550	804	900	2.2	1.2	5.582	A

2036 WoDWS, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	B - Rugby Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J47	A5/A426/Gibbet Lane	Standard Roundabout		A, B, C, D, E	11.93	B

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	2	C - Gibbet Lane	11.93	B

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2036 WoDWS	AM	PRTM 2.2 Demand Flows	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 - A5 (North)		ONE HOUR	✓	928	100.000
B - Rugby Road		ONE HOUR	✓	786	100.000
C - Gibbet Lane		ONE HOUR	✓	115	100.000
D - A5 (South)		ONE HOUR	✓	856	100.000
E - A426		ONE HOUR	✓	560	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	6	37	393	492
	B - Rugby Road	2	0	28	155	601
	C - Gibbet Lane	22	25	0	6	62
	D - A5 (South)	360	240	35	6	215
	E - A426	203	232	17	108	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	0	0	0	0
	B - Rugby Road	0	0	0	0	0
	C - Gibbet Lane	0	0	0	0	0
	D - A5 (South)	0	0	0	0	0
	E - A426	0	0	0	0	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)
A - A5 (North)	0.69	7.84	2.2	A	852	1277
B - Rugby Road	0.67	8.40	2.0	A	721	1082
C - Gibbet Lane	0.51	29.41	1.0	D	106	158
D - A5 (South)	0.86	21.88	5.4	C	785	1178
E - A426	0.46	4.88	0.8	A	514	771

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	699	175	497	1602	0.436	696	440	0.0	0.8	3.956	A
B - Rugby Road	592	148	816	1506	0.393	589	377	0.0	0.6	3.914	A
C - Gibbet Lane	87	22	1317	468	0.185	86	88	0.0	0.2	9.395	A
D - A5 (South)	644	161	902	1318	0.489	641	501	0.0	0.9	5.287	A
E - A426	422	105	516	1479	0.285	420	1026	0.0	0.4	3.395	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	834	209	595	1551	0.538	833	526	0.8	1.2	5.000	A
B - Rugby Road	707	177	976	1417	0.499	705	451	0.6	1.0	5.050	A
C - Gibbet Lane	103	26	1577	376	0.275	103	105	0.2	0.4	13.162	B
D - A5 (South)	770	192	1080	1227	0.627	767	599	0.9	1.6	7.773	A
E - A426	503	126	618	1427	0.353	503	1229	0.4	0.5	3.894	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	1022	255	724	1483	0.689	1018	640	1.2	2.2	7.662	A
B - Rugby Road	865	216	1193	1296	0.668	862	549	1.0	2.0	8.209	A
C - Gibbet Lane	127	32	1927	251	0.504	124	128	0.4	1.0	27.865	D
D - A5 (South)	942	236	1318	1105	0.853	929	733	1.6	5.1	19.080	C
E - A426	617	154	749	1359	0.454	615	1499	0.5	0.8	4.833	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	1022	255	729	1480	0.690	1022	646	2.2	2.2	7.840	A
B - Rugby Road	865	216	1198	1294	0.669	865	553	2.0	2.0	8.398	A
C - Gibbet Lane	127	32	1934	249	0.509	126	129	1.0	1.0	29.414	D
D - A5 (South)	942	236	1325	1102	0.855	941	735	5.1	5.4	21.878	C
E - A426	617	154	758	1354	0.455	617	1508	0.8	0.8	4.880	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	834	209	602	1547	0.539	838	535	2.2	1.2	5.106	A
B - Rugby Road	707	177	983	1413	0.500	711	457	2.0	1.0	5.154	A
C - Gibbet Lane	103	26	1587	372	0.278	106	106	1.0	0.4	13.650	B
D - A5 (South)	770	192	1090	1222	0.630	784	603	5.4	1.7	8.492	A
E - A426	503	126	632	1419	0.355	505	1242	0.8	0.6	3.941	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	699	175	501	1600	0.437	700	444	1.2	0.8	4.006	A
B - Rugby Road	592	148	821	1503	0.394	593	380	1.0	0.7	3.963	A
C - Gibbet Lane	87	22	1326	465	0.186	87	88	0.4	0.2	9.550	A
D - A5 (South)	644	161	909	1314	0.490	648	504	1.7	1.0	5.425	A
E - A426	422	105	522	1476	0.286	422	1034	0.6	0.4	3.416	A

2036 WoDWS, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	B - Rugby Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J47	A5/A426/Gibbet Lane	Standard Roundabout		A, B, C, D, E	13.00	B

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	6	E - A426	13.00	B

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2036 WoDWS	PM	PRTM 2.2 Demand Flows	ONE HOUR	16:45	18:15	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 - A5 (North)		ONE HOUR	✓	743	100.000
B - Rugby Road		ONE HOUR	✓	755	100.000
C - Gibbet Lane		ONE HOUR	✓	114	100.000
D - A5 (South)		ONE HOUR	✓	857	100.000
E - A426		ONE HOUR	✓	1037	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	7	30	279	427
	B - Rugby Road	1	0	16	200	538
	C - Gibbet Lane	23	24	0	14	53
	D - A5 (South)	529	147	21	8	152
	E - A426	346	546	17	123	5

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	0	0	0	0
	B - Rugby Road	0	0	0	0	0
	C - Gibbet Lane	0	0	0	0	0
	D - A5 (South)	0	0	0	0	0
	E - A426	0	0	0	0	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)
A - A5 (North)	0.61	6.77	1.5	A	682	1023
B - Rugby Road	0.59	6.30	1.4	A	693	1039
C - Gibbet Lane	0.40	18.73	0.6	C	105	157
D - A5 (South)	0.80	15.31	3.9	C	786	1180
E - A426	0.87	19.80	6.0	C	952	1427

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	559	140	667	1513	0.370	557	673	0.0	0.6	3.755	A
B - Rugby Road	568	142	682	1581	0.360	566	542	0.0	0.6	3.542	A
C - Gibbet Lane	86	21	1185	515	0.167	85	63	0.0	0.2	8.361	A
D - A5 (South)	645	161	803	1368	0.471	642	468	0.0	0.9	4.930	A
E - A426	781	195	564	1455	0.537	776	881	0.0	1.1	5.272	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	668	167	798	1444	0.462	667	806	0.6	0.9	4.623	A
B - Rugby Road	679	170	816	1506	0.451	678	649	0.6	0.8	4.342	A
C - Gibbet Lane	102	26	1419	432	0.237	102	75	0.2	0.3	10.903	B
D - A5 (South)	770	193	961	1288	0.598	768	560	0.9	1.5	6.899	A
E - A426	932	233	675	1397	0.667	929	1054	1.1	2.0	7.633	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	818	205	969	1355	0.604	815	979	0.9	1.5	6.642	A
B - Rugby Road	831	208	997	1405	0.592	829	788	0.8	1.4	6.220	A
C - Gibbet Lane	126	31	1734	320	0.393	124	92	0.3	0.6	18.298	C
D - A5 (South)	944	236	1175	1179	0.801	935	683	1.5	3.7	14.248	B
E - A426	1142	285	821	1322	0.864	1127	1288	2.0	5.6	17.354	C

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	818	205	980	1349	0.606	818	989	1.5	1.5	6.772	A
B - Rugby Road	831	208	1002	1403	0.593	831	796	1.4	1.4	6.296	A
C - Gibbet Lane	126	31	1740	317	0.395	125	92	0.6	0.6	18.734	C
D - A5 (South)	944	236	1179	1176	0.802	943	687	3.7	3.9	15.309	C
E - A426	1142	285	829	1318	0.866	1140	1293	5.6	6.0	19.799	C

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	668	167	814	1436	0.465	671	819	1.5	0.9	4.715	A
B - Rugby Road	679	170	823	1502	0.452	681	661	1.4	0.8	4.399	A
C - Gibbet Lane	102	26	1428	428	0.239	104	76	0.6	0.3	11.131	B
D - A5 (South)	770	193	967	1285	0.600	780	565	3.9	1.5	7.260	A
E - A426	932	233	685	1392	0.670	948	1062	6.0	2.1	8.375	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	559	140	674	1510	0.371	561	680	0.9	0.6	3.796	A
B - Rugby Road	568	142	687	1578	0.360	569	548	0.8	0.6	3.575	A
C - Gibbet Lane	86	21	1193	512	0.168	86	63	0.3	0.2	8.463	A
D - A5 (South)	645	161	808	1366	0.472	648	471	1.5	0.9	5.030	A
E - A426	781	195	569	1452	0.538	784	887	2.1	1.2	5.421	A

2036 WD, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	B - Rugby Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J47	A5/A426/Gibbet Lane	Standard Roundabout		A, B, C, D, E	13.95	B

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	-2	C - Gibbet Lane	13.95	B

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2036 WD	AM	PRTM 2.2 Demand Flows	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 - A5 (North)		ONE HOUR	✓	986	100.000
B - Rugby Road		ONE HOUR	✓	793	100.000
C - Gibbet Lane		ONE HOUR	✓	130	100.000
D - A5 (South)		ONE HOUR	✓	863	100.000
E - A426		ONE HOUR	✓	557	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	6	43	430	507
	B - Rugby Road	2	0	29	157	605
	C - Gibbet Lane	29	24	1	8	68
	D - A5 (South)	393	229	33	10	198
	E - A426	216	219	16	106	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	0	0	0	0
	B - Rugby Road	0	0	0	0	0
	C - Gibbet Lane	0	0	0	0	0
	D - A5 (South)	0	0	0	0	0
	E - A426	0	0	0	0	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)
A - A5 (North)	0.73	8.78	2.6	A	905	1357
B - Rugby Road	0.69	9.33	2.2	A	728	1092
C - Gibbet Lane	0.64	43.13	1.6	E	119	179
D - A5 (South)	0.88	25.49	6.4	D	792	1188
E - A426	0.46	4.97	0.8	A	511	767

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	742	186	478	1612	0.460	739	479	0.0	0.8	4.107	A
B - Rugby Road	597	149	859	1482	0.403	594	358	0.0	0.7	4.043	A
C - Gibbet Lane	98	24	1362	452	0.216	97	91	0.0	0.3	10.103	B
D - A5 (South)	650	162	926	1306	0.498	646	533	0.0	1.0	5.425	A
E - A426	419	105	539	1467	0.286	418	1032	0.0	0.4	3.426	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	886	222	572	1563	0.567	885	574	0.8	1.3	5.294	A
B - Rugby Road	713	178	1028	1388	0.514	711	429	0.7	1.0	5.309	A
C - Gibbet Lane	117	29	1630	357	0.328	116	109	0.3	0.5	14.913	B
D - A5 (South)	776	194	1108	1213	0.640	773	638	1.0	1.7	8.129	A
E - A426	501	125	645	1412	0.355	500	1236	0.4	0.5	3.943	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	1086	271	696	1498	0.725	1081	696	1.3	2.5	8.522	A
B - Rugby Road	873	218	1256	1261	0.692	869	521	1.0	2.2	9.063	A
C - Gibbet Lane	143	36	1991	228	0.627	139	133	0.5	1.5	38.699	E
D - A5 (South)	950	238	1351	1089	0.873	934	779	1.7	5.8	21.373	C
E - A426	613	153	780	1343	0.457	612	1505	0.5	0.8	4.915	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	1086	271	702	1495	0.726	1085	703	2.5	2.6	8.776	A
B - Rugby Road	873	218	1261	1258	0.694	873	526	2.2	2.2	9.335	A
C - Gibbet Lane	143	36	2000	225	0.636	143	134	1.5	1.6	43.129	E
D - A5 (South)	950	238	1360	1084	0.876	948	783	5.8	6.4	25.489	D
E - A426	613	153	792	1337	0.459	613	1516	0.8	0.8	4.973	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	886	222	581	1558	0.569	891	585	2.6	1.3	5.440	A
B - Rugby Road	713	178	1036	1383	0.515	717	436	2.2	1.1	5.444	A
C - Gibbet Lane	117	29	1643	352	0.332	121	111	1.6	0.5	15.890	C
D - A5 (South)	776	194	1121	1206	0.643	794	643	6.4	1.9	9.099	A
E - A426	501	125	664	1403	0.357	502	1251	0.8	0.6	3.999	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	742	186	482	1610	0.461	744	484	1.3	0.9	4.168	A
B - Rugby Road	597	149	865	1479	0.404	599	361	1.1	0.7	4.097	A
C - Gibbet Lane	98	24	1371	449	0.218	99	92	0.5	0.3	10.316	B
D - A5 (South)	650	162	934	1302	0.499	653	537	1.9	1.0	5.580	A
E - A426	419	105	546	1464	0.286	420	1041	0.6	0.4	3.449	A

2036 WD, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	B - Rugby Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J47	A5/A426/Gibbet Lane	Standard Roundabout		A, B, C, D, E	16.68	C

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	1	E - A426	16.68	C

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2036 WD	PM	PRTM 2.2 Demand Flows	ONE HOUR	16:45	18:15	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 - A5 (North)		ONE HOUR	✓	754	100.000
B - Rugby Road		ONE HOUR	✓	765	100.000
C - Gibbet Lane		ONE HOUR	✓	127	100.000
D - A5 (South)		ONE HOUR	✓	901	100.000
E - A426		ONE HOUR	✓	1062	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	7	30	304	413
	B - Rugby Road	1	0	18	229	517
	C - Gibbet Lane	24	27	0	18	58
	D - A5 (South)	572	160	26	10	133
	E - A426	346	571	18	122	5

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	0	0	0	0
	B - Rugby Road	0	0	0	0	0
	C - Gibbet Lane	0	0	0	0	0
	D - A5 (South)	0	0	0	0	0
	E - A426	0	0	0	0	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)
A - A5 (North)	0.63	7.30	1.7	A	692	1038
B - Rugby Road	0.61	6.55	1.5	A	702	1053
C - Gibbet Lane	0.45	21.14	0.8	C	117	175
D - A5 (South)	0.83	17.77	4.7	C	827	1240
E - A426	0.91	29.17	8.9	D	975	1462

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	568	142	703	1495	0.380	565	706	0.0	0.6	3.863	A
B - Rugby Road	576	144	695	1573	0.366	574	572	0.0	0.6	3.595	A
C - Gibbet Lane	96	24	1200	510	0.188	95	69	0.0	0.2	8.658	A
D - A5 (South)	678	170	783	1378	0.492	674	512	0.0	1.0	5.086	A
E - A426	800	200	614	1429	0.560	795	844	0.0	1.3	5.632	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	678	169	841	1422	0.477	677	845	0.6	0.9	4.821	A
B - Rugby Road	688	172	832	1497	0.459	687	685	0.6	0.8	4.438	A
C - Gibbet Lane	114	29	1437	425	0.268	114	82	0.2	0.4	11.525	B
D - A5 (South)	810	202	938	1300	0.623	807	613	1.0	1.6	7.273	A
E - A426	955	239	735	1366	0.699	951	1010	1.3	2.2	8.577	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	830	208	1016	1330	0.624	827	1024	0.9	1.6	7.115	A
B - Rugby Road	842	211	1015	1395	0.604	840	828	0.8	1.5	6.451	A
C - Gibbet Lane	140	35	1755	312	0.448	138	100	0.4	0.8	20.469	C
D - A5 (South)	992	248	1146	1194	0.831	981	747	1.6	4.5	16.124	C
E - A426	1169	292	893	1285	0.910	1147	1234	2.2	7.8	23.116	C

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	830	208	1031	1323	0.628	830	1036	1.6	1.7	7.302	A
B - Rugby Road	842	211	1021	1392	0.605	842	840	1.5	1.5	6.546	A
C - Gibbet Lane	140	35	1762	310	0.451	140	101	0.8	0.8	21.144	C
D - A5 (South)	992	248	1150	1191	0.833	991	751	4.5	4.7	17.775	C
E - A426	1169	292	902	1280	0.913	1165	1239	7.8	8.9	29.166	D

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	678	169	864	1410	0.481	681	864	1.7	0.9	4.957	A
B - Rugby Road	688	172	841	1492	0.461	690	704	1.5	0.9	4.504	A
C - Gibbet Lane	114	29	1448	421	0.271	116	84	0.8	0.4	11.842	B
D - A5 (South)	810	202	944	1296	0.625	822	619	4.7	1.7	7.776	A
E - A426	955	239	748	1360	0.702	980	1018	8.9	2.4	10.105	B

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	568	142	711	1490	0.381	569	713	0.9	0.6	3.914	A
B - Rugby Road	576	144	701	1570	0.367	577	579	0.9	0.6	3.628	A
C - Gibbet Lane	96	24	1208	507	0.189	96	69	0.4	0.2	8.783	A
D - A5 (South)	678	170	789	1376	0.493	681	516	1.7	1.0	5.206	A
E - A426	800	200	620	1426	0.561	804	850	2.4	1.3	5.835	A

Appendix 4: Mitigated Gibbet Roundabout J10 Output (Full Reassignment)

Junctions 10

ARCADY 10 - Roundabout Module

Filename: J26 240214 - A5_A426_Gibbet Lane (Miti) Flow Amends.j10
Path: X:\NTT\NTT2814_Hinckley Rail Freight Interchange\02. Project Delivery\01. WIP\Design and Calculations\T&I Planning\04 Junction Modelling\J26_JTC 47 - A5 - A426 - Gibbet Lane
Report generation date: 14/02/2024 13:24:53

Summary of junction performance

	AM						PM					
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity
	2036 WoDWS											
A - A5 (North)	D5	2.2	7.84	0.69	A	9 % [D - A5 (South)]	D6	1.5	6.78	0.61	A	9 % [E - A426]
B - Rugby Road		2.0	8.40	0.67	A			1.4	6.30	0.59	A	
C - Gibbet Lane		0.6	17.86	0.39	C			0.5	13.10	0.31	B	
D - A5 (South)		3.8	14.91	0.80	B			2.9	11.39	0.75	B	
E - A426		0.8	4.59	0.44	A			4.9	15.92	0.84	C	
	2036 WD											
A - A5 (North)	D7	2.6	8.78	0.73	A	6 % [C - Gibbet Lane]	D8	1.7	7.31	0.63	A	4 % [E - A426]
B - Rugby Road		2.2	9.34	0.69	A			1.5	6.55	0.61	A	
C - Gibbet Lane		0.9	22.40	0.47	C			0.5	14.26	0.36	B	
D - A5 (South)		4.2	16.67	0.82	C			3.4	12.71	0.78	B	
E - A426		0.8	4.67	0.44	A			6.8	21.98	0.88	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. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

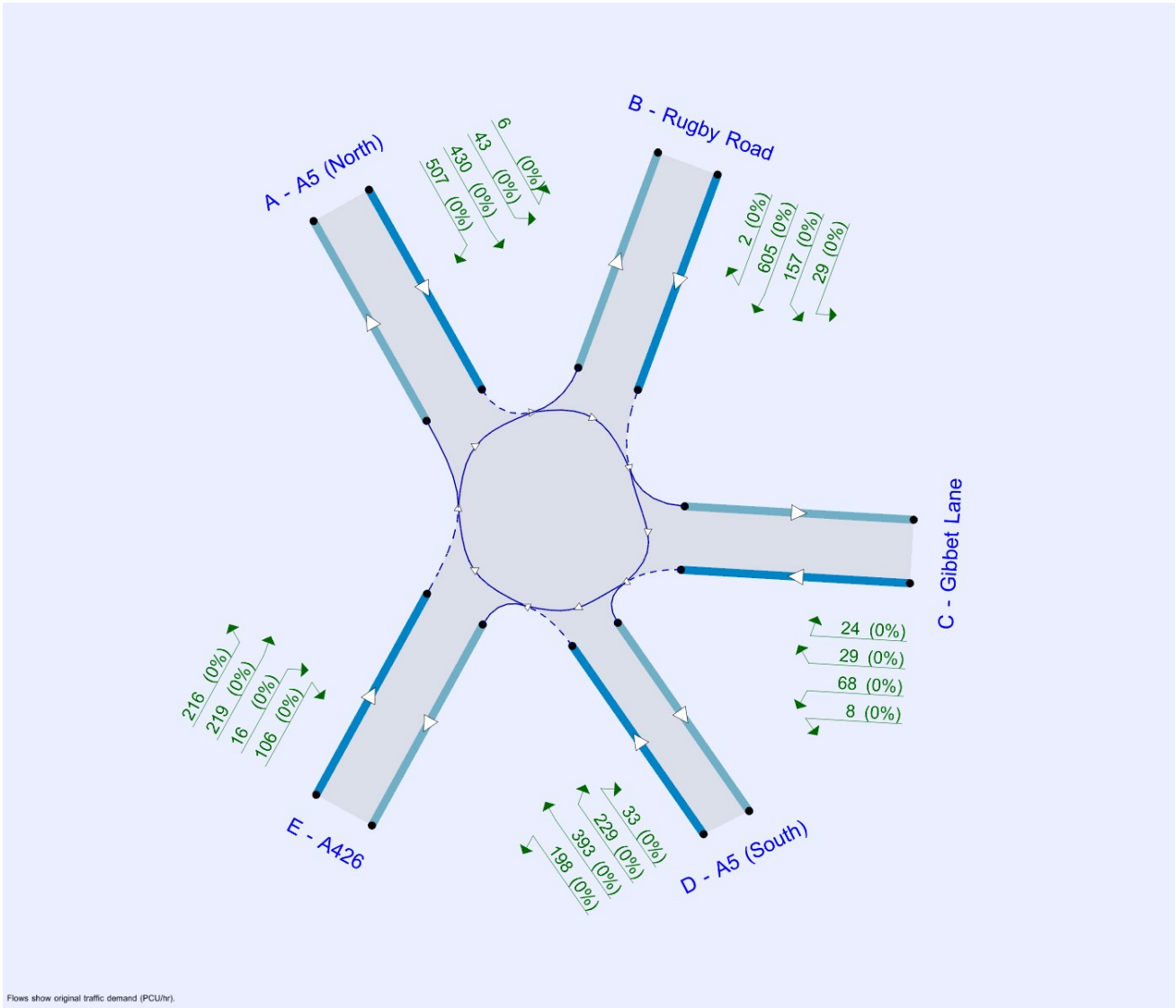
File summary

File Description

Title	J47 - A5/A426/Gibbet Lane
Location	
Site number	J47
Date	18/12/2020
Version	V0.1
Status	Existing
Identifier	
Client	
Jobnumber	NTT2814
Enumerator	BWB
Description	

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	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2036 WoDWS	AM	PRTM 2.2 Demand Flows	ONE HOUR	07:45	09:15	15	✓
D6	2036 WoDWS	PM	PRTM 2.2 Demand Flows	ONE HOUR	16:45	18:15	15	✓
D7	2036 WD	AM	PRTM 2.2 Demand Flows	ONE HOUR	07:45	09:15	15	✓
D8	2036 WD	PM	PRTM 2.2 Demand Flows	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2036 WoDWS, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	B - Rugby Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J47	A5/A426/Gibbet Lane	Standard Roundabout		A, B, C, D, E	9.64	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	9	D - A5 (South)	9.64	A

Arms

Arms

Arm	Name	Description	No give-way line
A	A5 (North)		
B	Rugby Road		
C	Gibbet Lane		
D	A5 (South)		
E	A426		

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
A - A5 (North)	3.86	8.86	15.8	28.0	70.0	43.0		
B - Rugby Road	3.20	6.69	54.0	45.0	71.0	20.0		
C - Gibbet Lane	2.65	7.00	5.0	7.7	73.0	33.0		
D - A5 (South)	3.95	8.00	20.0	30.0	70.0	44.0		
E - A426	3.42	7.50	17.5	35.0	71.0	27.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - A5 (North)	0.524	1862
B - Rugby Road	0.556	1960
C - Gibbet Lane	0.373	1049
D - A5 (South)	0.526	1879
E - A426	0.524	1799

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2036 WoDWS	AM	PRTM 2.2 Demand Flows	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 - A5 (North)		ONE HOUR	✓	928	100.000
B - Rugby Road		ONE HOUR	✓	786	100.000
C - Gibbet Lane		ONE HOUR	✓	115	100.000
D - A5 (South)		ONE HOUR	✓	856	100.000
E - A426		ONE HOUR	✓	560	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	6	37	393	492
	B - Rugby Road	2	0	28	155	601
	C - Gibbet Lane	22	25	0	6	62
	D - A5 (South)	360	240	35	6	215
	E - A426	203	232	17	108	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	0	0	0	0
	B - Rugby Road	0	0	0	0	0
	C - Gibbet Lane	0	0	0	0	0
	D - A5 (South)	0	0	0	0	0
	E - A426	0	0	0	0	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)
A - A5 (North)	0.69	7.84	2.2	A	852	1277
B - Rugby Road	0.67	8.40	2.0	A	721	1082
C - Gibbet Lane	0.39	17.86	0.6	C	106	158
D - A5 (South)	0.80	14.91	3.8	B	785	1178
E - A426	0.44	4.59	0.8	A	514	771

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	699	175	497	1602	0.436	696	440	0.0	0.8	3.957	A
B - Rugby Road	592	148	816	1506	0.393	589	377	0.0	0.6	3.914	A
C - Gibbet Lane	87	22	1317	558	0.155	86	88	0.0	0.2	7.611	A
D - A5 (South)	644	161	902	1404	0.459	641	501	0.0	0.8	4.696	A
E - A426	422	105	517	1528	0.276	420	1027	0.0	0.4	3.244	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	834	209	595	1551	0.538	833	526	0.8	1.2	5.001	A
B - Rugby Road	707	177	976	1417	0.499	705	451	0.6	1.0	5.050	A
C - Gibbet Lane	103	26	1577	461	0.224	103	105	0.2	0.3	10.033	B
D - A5 (South)	770	192	1080	1311	0.587	767	599	0.8	1.4	6.597	A
E - A426	503	126	618	1475	0.341	503	1229	0.4	0.5	3.702	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	1022	255	726	1482	0.689	1018	642	1.2	2.2	7.683	A
B - Rugby Road	865	216	1193	1296	0.668	862	551	1.0	2.0	8.211	A
C - Gibbet Lane	127	32	1927	331	0.383	125	128	0.3	0.6	17.413	C
D - A5 (South)	942	236	1319	1185	0.795	934	733	1.4	3.6	13.862	B
E - A426	617	154	753	1405	0.439	616	1500	0.5	0.8	4.557	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	1022	255	730	1480	0.690	1022	646	2.2	2.2	7.842	A
B - Rugby Road	865	216	1198	1294	0.669	865	554	2.0	2.0	8.399	A
C - Gibbet Lane	127	32	1934	328	0.386	127	129	0.6	0.6	17.857	C
D - A5 (South)	942	236	1325	1182	0.798	942	735	3.6	3.8	14.915	B
E - A426	617	154	759	1401	0.440	617	1508	0.8	0.8	4.588	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	834	209	600	1548	0.539	838	532	2.2	1.2	5.100	A
B - Rugby Road	707	177	983	1413	0.500	711	456	2.0	1.0	5.153	A
C - Gibbet Lane	103	26	1587	457	0.226	105	106	0.6	0.3	10.245	B
D - A5 (South)	770	192	1089	1306	0.589	779	603	3.8	1.5	6.944	A
E - A426	503	126	628	1470	0.342	504	1240	0.8	0.5	3.734	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	699	175	500	1600	0.437	700	443	1.2	0.8	4.007	A
B - Rugby Road	592	148	821	1503	0.394	593	380	1.0	0.7	3.963	A
C - Gibbet Lane	87	22	1326	555	0.156	87	88	0.3	0.2	7.700	A
D - A5 (South)	644	161	909	1401	0.460	647	504	1.5	0.9	4.789	A
E - A426	422	105	521	1526	0.276	422	1034	0.5	0.4	3.265	A

2036 WoDWS, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	B - Rugby Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J47	A5/A426/Gibbet Lane	Standard Roundabout		A, B, C, D, E	10.71	B

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	9	E - A426	10.71	B

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2036 WoDWS	PM	PRTM 2.2 Demand Flows	ONE HOUR	16:45	18:15	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 - A5 (North)		ONE HOUR	✓	743	100.000
B - Rugby Road		ONE HOUR	✓	755	100.000
C - Gibbet Lane		ONE HOUR	✓	114	100.000
D - A5 (South)		ONE HOUR	✓	857	100.000
E - A426		ONE HOUR	✓	1037	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	7	30	279	427
	B - Rugby Road	1	0	16	200	538
	C - Gibbet Lane	23	24	0	14	53
	D - A5 (South)	529	147	21	8	152
	E - A426	346	546	17	123	5

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	0	0	0	0
	B - Rugby Road	0	0	0	0	0
	C - Gibbet Lane	0	0	0	0	0
	D - A5 (South)	0	0	0	0	0
	E - A426	0	0	0	0	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)
A - A5 (North)	0.61	6.78	1.5	A	682	1023
B - Rugby Road	0.59	6.30	1.4	A	693	1039
C - Gibbet Lane	0.31	13.10	0.5	B	105	157
D - A5 (South)	0.75	11.39	2.9	B	786	1180
E - A426	0.84	15.92	4.9	C	952	1427

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	559	140	667	1513	0.370	557	673	0.0	0.6	3.756	A
B - Rugby Road	568	142	682	1581	0.360	566	542	0.0	0.6	3.542	A
C - Gibbet Lane	86	21	1185	607	0.141	85	63	0.0	0.2	6.886	A
D - A5 (South)	645	161	803	1457	0.443	642	468	0.0	0.8	4.403	A
E - A426	781	195	564	1503	0.519	776	881	0.0	1.1	4.924	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	668	167	799	1444	0.463	667	806	0.6	0.9	4.624	A
B - Rugby Road	679	170	817	1506	0.451	678	649	0.6	0.8	4.342	A
C - Gibbet Lane	102	26	1419	520	0.197	102	75	0.2	0.2	8.606	A
D - A5 (South)	770	193	961	1373	0.561	769	560	0.8	1.3	5.934	A
E - A426	932	233	675	1445	0.645	929	1054	1.1	1.8	6.942	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	818	205	972	1353	0.604	815	982	0.9	1.5	6.660	A
B - Rugby Road	831	208	998	1405	0.592	829	790	0.8	1.4	6.223	A
C - Gibbet Lane	126	31	1734	403	0.312	125	92	0.2	0.4	12.921	B
D - A5 (South)	944	236	1175	1261	0.748	937	684	1.3	2.8	10.922	B
E - A426	1142	285	824	1367	0.835	1130	1289	1.8	4.6	14.546	B

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	818	205	980	1349	0.606	818	989	1.5	1.5	6.775	A
B - Rugby Road	831	208	1002	1403	0.593	831	797	1.4	1.4	6.297	A
C - Gibbet Lane	126	31	1740	400	0.314	125	92	0.4	0.5	13.098	B
D - A5 (South)	944	236	1179	1259	0.750	943	687	2.8	2.9	11.386	B
E - A426	1142	285	829	1365	0.837	1141	1294	4.6	4.9	15.917	C

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	668	167	810	1438	0.464	671	816	1.5	0.9	4.707	A
B - Rugby Road	679	170	823	1502	0.452	681	658	1.4	0.8	4.396	A
C - Gibbet Lane	102	26	1428	517	0.198	103	76	0.5	0.3	8.721	A
D - A5 (South)	770	193	967	1370	0.562	777	564	2.9	1.3	6.130	A
E - A426	932	233	683	1441	0.647	944	1061	4.9	1.9	7.408	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	559	140	673	1510	0.370	561	679	0.9	0.6	3.795	A
B - Rugby Road	568	142	687	1578	0.360	569	547	0.8	0.6	3.575	A
C - Gibbet Lane	86	21	1193	605	0.142	86	63	0.3	0.2	6.951	A
D - A5 (South)	645	161	808	1454	0.444	647	471	1.3	0.8	4.475	A
E - A426	781	195	569	1501	0.520	784	887	1.9	1.1	5.041	A

2036 WD, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	B - Rugby Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J47	A5/A426/Gibbet Lane	Standard Roundabout		A, B, C, D, E	10.80	B

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	6	C - Gibbet Lane	10.80	B

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2036 WD	AM	PRTM 2.2 Demand Flows	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 - A5 (North)		ONE HOUR	✓	986	100.000
B - Rugby Road		ONE HOUR	✓	793	100.000
C - Gibbet Lane		ONE HOUR	✓	130	100.000
D - A5 (South)		ONE HOUR	✓	863	100.000
E - A426		ONE HOUR	✓	557	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	6	43	430	507
	B - Rugby Road	2	0	29	157	605
	C - Gibbet Lane	29	24	1	8	68
	D - A5 (South)	393	229	33	10	198
	E - A426	216	219	16	106	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	0	0	0	0
	B - Rugby Road	0	0	0	0	0
	C - Gibbet Lane	0	0	0	0	0
	D - A5 (South)	0	0	0	0	0
	E - A426	0	0	0	0	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)
A - A5 (North)	0.73	8.78	2.6	A	905	1357
B - Rugby Road	0.69	9.34	2.2	A	728	1092
C - Gibbet Lane	0.47	22.40	0.9	C	119	179
D - A5 (South)	0.82	16.67	4.2	C	792	1188
E - A426	0.44	4.67	0.8	A	511	767

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	742	186	478	1612	0.460	739	479	0.0	0.8	4.108	A
B - Rugby Road	597	149	859	1482	0.403	594	358	0.0	0.7	4.043	A
C - Gibbet Lane	98	24	1362	541	0.181	97	91	0.0	0.2	8.084	A
D - A5 (South)	650	162	926	1392	0.467	646	533	0.0	0.9	4.807	A
E - A426	419	105	540	1516	0.277	418	1032	0.0	0.4	3.273	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	886	222	572	1563	0.567	885	574	0.8	1.3	5.295	A
B - Rugby Road	713	178	1028	1388	0.514	711	429	0.7	1.0	5.309	A
C - Gibbet Lane	117	29	1630	441	0.265	116	109	0.2	0.4	11.055	B
D - A5 (South)	776	194	1109	1296	0.599	773	638	0.9	1.5	6.861	A
E - A426	501	125	646	1460	0.343	500	1236	0.4	0.5	3.747	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	1086	271	698	1497	0.725	1081	699	1.3	2.6	8.545	A
B - Rugby Road	873	218	1256	1261	0.692	869	523	1.0	2.2	9.066	A
C - Gibbet Lane	143	36	1991	307	0.467	141	134	0.4	0.8	21.493	C
D - A5 (South)	950	238	1353	1167	0.814	940	779	1.5	4.0	15.210	C
E - A426	613	153	785	1387	0.442	612	1508	0.5	0.8	4.636	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	1086	271	702	1495	0.726	1085	704	2.6	2.6	8.783	A
B - Rugby Road	873	218	1262	1258	0.694	873	526	2.2	2.2	9.336	A
C - Gibbet Lane	143	36	2000	303	0.472	143	134	0.8	0.9	22.404	C
D - A5 (South)	950	238	1360	1163	0.817	949	783	4.0	4.2	16.669	C
E - A426	613	153	793	1383	0.443	613	1517	0.8	0.8	4.674	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	886	222	578	1560	0.568	891	581	2.6	1.3	5.428	A
B - Rugby Road	713	178	1036	1384	0.515	717	433	2.2	1.1	5.441	A
C - Gibbet Lane	117	29	1643	437	0.268	119	111	0.9	0.4	11.397	B
D - A5 (South)	776	194	1119	1290	0.601	787	643	4.2	1.5	7.296	A
E - A426	501	125	657	1454	0.344	502	1248	0.8	0.5	3.784	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	742	186	482	1610	0.461	744	483	1.3	0.9	4.167	A
B - Rugby Road	597	149	865	1479	0.404	599	361	1.1	0.7	4.098	A
C - Gibbet Lane	98	24	1371	538	0.182	98	92	0.4	0.2	8.204	A
D - A5 (South)	650	162	933	1388	0.468	652	537	1.5	0.9	4.912	A
E - A426	419	105	545	1513	0.277	420	1041	0.5	0.4	3.293	A

2036 WD, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	B - Rugby Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J47	A5/A426/Gibbet Lane	Standard Roundabout		A, B, C, D, E	13.06	B

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	4	E - A426	13.06	B

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2036 WD	PM	PRTM 2.2 Demand Flows	ONE HOUR	16:45	18:15	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 - A5 (North)		ONE HOUR	✓	754	100.000
B - Rugby Road		ONE HOUR	✓	765	100.000
C - Gibbet Lane		ONE HOUR	✓	127	100.000
D - A5 (South)		ONE HOUR	✓	901	100.000
E - A426		ONE HOUR	✓	1062	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	7	30	304	413
	B - Rugby Road	1	0	18	229	517
	C - Gibbet Lane	24	27	0	18	58
	D - A5 (South)	572	160	26	10	133
	E - A426	346	571	18	122	5

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	0	0	0	0
	B - Rugby Road	0	0	0	0	0
	C - Gibbet Lane	0	0	0	0	0
	D - A5 (South)	0	0	0	0	0
	E - A426	0	0	0	0	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)
A - A5 (North)	0.63	7.31	1.7	A	692	1038
B - Rugby Road	0.61	6.55	1.5	A	702	1053
C - Gibbet Lane	0.36	14.26	0.5	B	117	175
D - A5 (South)	0.78	12.71	3.4	B	827	1240
E - A426	0.88	21.98	6.8	C	975	1462

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	568	142	703	1494	0.380	565	706	0.0	0.6	3.864	A
B - Rugby Road	576	144	695	1573	0.366	574	573	0.0	0.6	3.595	A
C - Gibbet Lane	96	24	1200	602	0.159	95	69	0.0	0.2	7.092	A
D - A5 (South)	678	170	783	1467	0.462	675	512	0.0	0.9	4.527	A
E - A426	800	200	614	1477	0.541	795	844	0.0	1.2	5.241	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	678	169	841	1422	0.477	677	845	0.6	0.9	4.822	A
B - Rugby Road	688	172	833	1497	0.459	687	685	0.6	0.8	4.438	A
C - Gibbet Lane	114	29	1437	514	0.222	114	83	0.2	0.3	8.997	A
D - A5 (South)	810	202	938	1386	0.585	808	613	0.9	1.4	6.209	A
E - A426	955	239	735	1414	0.675	951	1010	1.2	2.0	7.727	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	830	208	1021	1328	0.625	827	1028	0.9	1.6	7.149	A
B - Rugby Road	842	211	1016	1395	0.604	840	832	0.8	1.5	6.456	A
C - Gibbet Lane	140	35	1755	395	0.354	139	101	0.3	0.5	14.011	B
D - A5 (South)	992	248	1146	1276	0.778	984	748	1.4	3.3	12.042	B
E - A426	1169	292	896	1329	0.880	1153	1235	2.0	6.2	18.803	C

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	830	208	1032	1322	0.628	830	1037	1.6	1.7	7.315	A
B - Rugby Road	842	211	1021	1392	0.605	842	841	1.5	1.5	6.548	A
C - Gibbet Lane	140	35	1762	392	0.357	140	101	0.5	0.5	14.261	B
D - A5 (South)	992	248	1150	1274	0.779	992	752	3.3	3.4	12.709	B
E - A426	1169	292	902	1326	0.882	1167	1240	6.2	6.8	21.983	C

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	678	169	858	1413	0.480	681	859	1.7	0.9	4.938	A
B - Rugby Road	688	172	840	1493	0.461	690	699	1.5	0.9	4.501	A
C - Gibbet Lane	114	29	1447	510	0.224	115	83	0.5	0.3	9.146	A
D - A5 (South)	810	202	944	1382	0.586	818	618	3.4	1.4	6.462	A
E - A426	955	239	744	1409	0.678	973	1017	6.8	2.2	8.592	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	568	142	710	1491	0.381	569	713	0.9	0.6	3.910	A
B - Rugby Road	576	144	700	1570	0.367	577	578	0.9	0.6	3.630	A
C - Gibbet Lane	96	24	1208	599	0.160	96	69	0.3	0.2	7.167	A
D - A5 (South)	678	170	789	1464	0.463	681	516	1.4	0.9	4.609	A
E - A426	800	200	619	1474	0.542	803	850	2.2	1.2	5.397	A

Appendix 5: Existing Cross-in-Hands Roundabout J10 Output (Full Reassignment)

Junctions 10

ARCADY 10 - Roundabout Module

Version: 10.0.2.1574

For sales and distribution information, program advice and maintenance, contact TRL Software:
+44 (0)1344 379777 software@trl.co.uk trlsoftware.com

Filename: J27_240213 A5 A4303 B4027 Coal Pit Ln (Existing) Flow Amends.j10
Path: X:\NTT\NTT2814_Hinckley Rail Freight Interchange\02. Project Delivery\01. WIP\Design and Calculations\T&I Planning\04 Junction Modelling\J27_JTC 48 - A5 - A4303 - B4027 - Coal Pit Lane
Report generation date: 14/02/2024 10:44:19

Summary of junction performance

	AM						PM					
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity
	2023											
A - A5 N	D1	1.6	5.19	0.61	A	42 % [A - A5 N]	D2	0.6	3.23	0.38	A	46 % [D - B4027 S]
B - A4303 E		0.8	3.03	0.44	A			0.8	2.75	0.43	A	
C - A5 S		0.6	3.53	0.36	A			1.1	4.64	0.51	A	
D - B4027 S		0.3	4.03	0.21	A			0.7	6.38	0.41	A	
E - Coal Pit Lane W		0.5	6.16	0.32	A			0.2	6.39	0.20	A	
	WoD 2036											
A - A5 N	D3	9.0	22.85	0.91	C	3 % [A - A5 N]	D4	1.3	4.98	0.57	A	6 % [D - B4027 S]
B - A4303 E		1.9	5.35	0.66	A			1.6	4.33	0.62	A	
C - A5 S		1.2	5.44	0.55	A			3.4	11.08	0.78	B	
D - B4027 S		0.5	5.66	0.34	A			2.9	19.66	0.75	C	
E - Coal Pit Lane W		1.2	11.13	0.54	B			0.7	12.25	0.40	B	
	WoDWS 2036											
A - A5 N	D5	9.1	23.10	0.91	C	3 % [A - A5 N]	D6	1.3	5.00	0.57	A	9 % [D - B4027 S]
B - A4303 E		1.9	5.39	0.66	A			1.6	4.24	0.62	A	
C - A5 S		1.2	5.39	0.54	A			3.4	11.11	0.78	B	
D - B4027 S		0.5	5.58	0.33	A			2.1	15.81	0.69	C	
E - Coal Pit Lane W		1.1	10.74	0.53	B			0.6	11.40	0.37	B	
	WD 2036											
A - A5 N	D7	9.1	23.79	0.91	C	3 % [A - A5 N]	D8	1.6	5.62	0.62	A	5 % [D - B4027 S]
B - A4303 E		2.3	6.06	0.70	A			1.6	4.36	0.62	A	
C - A5 S		1.4	6.03	0.59	A			4.5	14.10	0.83	B	
D - B4027 S		0.6	6.14	0.36	A			2.9	20.24	0.75	C	
E - Coal Pit Lane W		2.2	17.58	0.69	C			0.6	12.59	0.39	B	

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. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

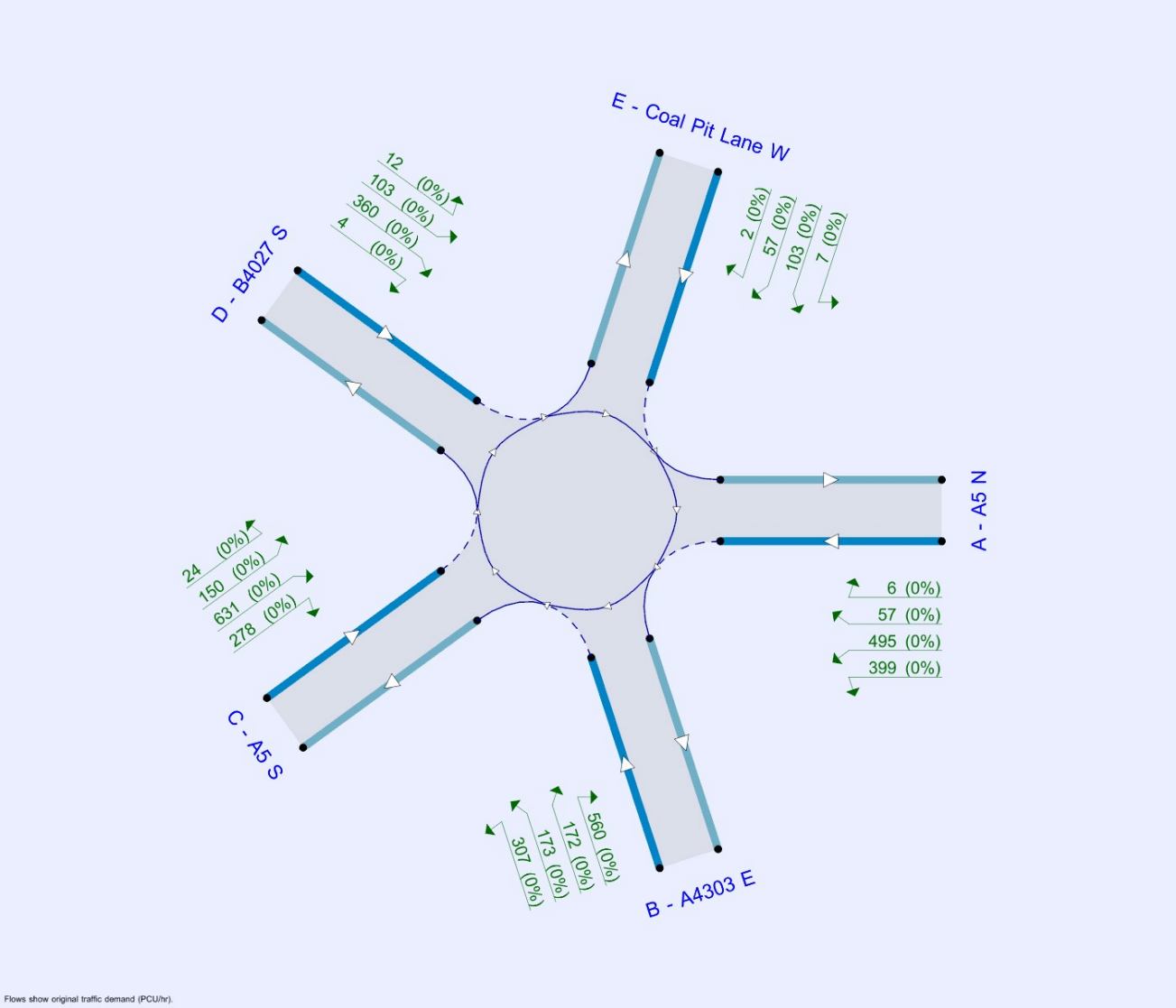
File summary

File Description

Title	J48
Location	A5 / B4027 / Coal Pit lane
Site number	J48
Date	21/12/2020
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	NTT2814
Enumerator	BWB\petr.jandik
Description	

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	2023	AM	ONE HOUR	07:15	08:45	15	✓
D2	2023	PM	ONE HOUR	16:15	17:45	15	✓
D3	WoD 2036	AM	ONE HOUR	07:15	08:45	15	✓
D4	WoD 2036	PM	ONE HOUR	16:15	17:45	15	✓
D5	WoDWS 2036	AM	ONE HOUR	07:15	08:45	15	✓
D6	WoDWS 2036	PM	ONE HOUR	16:15	17:45	15	✓
D7	WD 2036	AM	ONE HOUR	07:15	08:45	15	✓
D8	WD 2036	PM	ONE HOUR	16:15	17:45	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2023, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	A - A5 N - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J48	A5 / B4027 / Coal Pit lane	Standard Roundabout		A, B, C, D, E	4.23	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	42	A - A5 N	4.23	A

Arms

Arms

Arm	Name	Description	No give-way line
A	A5 N		
B	A4303 E		
C	A5 S		
D	B4027 S		
E	Coal Pit Lane W		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
A - A5 N	4.76	7.35	42.5	45.8	93.4	30.0		
B - A4303 E	7.17	8.52	22.3	67.0	79.5	33.0		
C - A5 S	4.79	6.96	18.1	53.0	92.3	31.0		
D - B4027 S	3.37	6.12	16.3	42.8	88.1	34.0		
E - Coal Pit Lane W	3.23	6.69	7.4	20.5	88.4	54.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - A5 N	0.524	2157
B - A4303 E	0.608	2575
C - A5 S	0.499	1978
D - B4027 S	0.444	1581
E - Coal Pit Lane W	0.381	1283

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	2023	AM	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 - A5 N		ONE HOUR	✓	992	100.000
B - A4303 E		ONE HOUR	✓	857	100.000
C - A5 S		ONE HOUR	✓	527	100.000
D - B4027 S		ONE HOUR	✓	214	100.000
E - Coal Pit Lane W		ONE HOUR	✓	255	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - A5 N	B - A4303 E	C - A5 S	D - B4027 S	E - Coal Pit Lane W
From	A - A5 N	0	437	503	48	4
	B - A4303 E	332	0	226	223	76
	C - A5 S	216	234	2	13	62
	D - B4027 S	40	154	19	0	1
	E - Coal Pit Lane W	20	149	80	6	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A5 N	B - A4303 E	C - A5 S	D - B4027 S	E - Coal Pit Lane W
From	A - A5 N	0	0	0	0	0
	B - A4303 E	0	0	0	0	0
	C - A5 S	0	0	0	0	0
	D - B4027 S	0	0	0	0	0
	E - Coal Pit Lane W	0	0	0	0	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)
A - A5 N	0.61	5.19	1.6	A	910	1365
B - A4303 E	0.44	3.03	0.8	A	786	1180
C - A5 S	0.36	3.53	0.6	A	484	725
D - B4027 S	0.21	4.03	0.3	A	196	295
E - Coal Pit Lane W	0.32	6.16	0.5	A	234	351

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	747	187	483	1904	0.392	744	456	0.0	0.6	3.098	A
B - A4303 E	645	161	497	2274	0.284	644	731	0.0	0.4	2.206	A
C - A5 S	397	99	517	1720	0.231	396	623	0.0	0.3	2.715	A
D - B4027 S	161	40	695	1273	0.127	161	218	0.0	0.1	3.235	A
E - Coal Pit Lane W	192	48	748	998	0.192	191	107	0.0	0.2	4.457	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	892	223	578	1854	0.481	891	546	0.6	0.9	3.734	A
B - A4303 E	770	193	594	2214	0.348	770	875	0.4	0.5	2.493	A
C - A5 S	474	118	619	1669	0.284	473	745	0.3	0.4	3.010	A
D - B4027 S	192	48	832	1212	0.159	192	260	0.1	0.2	3.529	A
E - Coal Pit Lane W	229	57	896	942	0.243	229	128	0.2	0.3	5.046	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	1092	273	708	1786	0.612	1090	669	0.9	1.6	5.150	A
B - A4303 E	944	236	727	2133	0.442	943	1070	0.5	0.8	3.020	A
C - A5 S	580	145	758	1600	0.363	580	912	0.4	0.6	3.526	A
D - B4027 S	236	59	1018	1129	0.209	235	319	0.2	0.3	4.026	A
E - Coal Pit Lane W	281	70	1096	866	0.324	280	157	0.3	0.5	6.143	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	1092	273	709	1786	0.612	1092	669	1.6	1.6	5.191	A
B - A4303 E	944	236	729	2132	0.442	944	1072	0.8	0.8	3.027	A
C - A5 S	580	145	759	1600	0.363	580	914	0.6	0.6	3.531	A
D - B4027 S	236	59	1020	1129	0.209	236	319	0.3	0.3	4.030	A
E - Coal Pit Lane W	281	70	1098	865	0.325	281	157	0.5	0.5	6.160	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	892	223	580	1853	0.481	894	547	1.6	0.9	3.766	A
B - A4303 E	770	193	597	2213	0.348	771	878	0.8	0.5	2.501	A
C - A5 S	474	118	620	1669	0.284	474	748	0.6	0.4	3.018	A
D - B4027 S	192	48	834	1211	0.159	193	261	0.3	0.2	3.534	A
E - Coal Pit Lane W	229	57	898	941	0.244	230	129	0.5	0.3	5.064	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	747	187	485	1903	0.393	748	458	0.9	0.6	3.120	A
B - A4303 E	645	161	499	2272	0.284	646	734	0.5	0.4	2.214	A
C - A5 S	397	99	519	1719	0.231	397	626	0.4	0.3	2.723	A
D - B4027 S	161	40	698	1272	0.127	161	219	0.2	0.1	3.242	A
E - Coal Pit Lane W	192	48	751	997	0.193	192	108	0.3	0.2	4.477	A

2023, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	A - A5 N - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J48	A5 / B4027 / Coal Pit lane	Standard Roundabout		A, B, C, D, E	4.01	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	46	D - B4027 S	4.01	A

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	2023	PM	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 - A5 N		ONE HOUR	✓	629	100.000
B - A4303 E		ONE HOUR	✓	899	100.000
C - A5 S		ONE HOUR	✓	746	100.000
D - B4027 S		ONE HOUR	✓	361	100.000
E - Coal Pit Lane W		ONE HOUR	✓	128	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - A5 N	B - A4303 E	C - A5 S	D - B4027 S	E - Coal Pit Lane W
From	A - A5 N	0	262	337	26	4
	B - A4303 E	405	0	236	128	130
	C - A5 S	418	203	0	17	108
	D - B4027 S	74	277	3	0	7
	E - Coal Pit Lane W	5	79	43	1	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A5 N	B - A4303 E	C - A5 S	D - B4027 S	E - Coal Pit Lane W
From	A - A5 N	0	0	0	0	0
	B - A4303 E	0	0	0	0	0
	C - A5 S	0	0	0	0	0
	D - B4027 S	0	0	0	0	0
	E - Coal Pit Lane W	0	0	0	0	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)
A - A5 N	0.38	3.23	0.6	A	577	866
B - A4303 E	0.43	2.75	0.8	A	825	1237
C - A5 S	0.51	4.64	1.1	A	685	1027
D - B4027 S	0.41	6.38	0.7	A	331	497
E - Coal Pit Lane W	0.20	6.39	0.2	A	117	176

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	474	118	454	1919	0.247	472	677	0.0	0.3	2.486	A
B - A4303 E	677	169	311	2386	0.284	675	616	0.0	0.4	2.102	A
C - A5 S	562	140	521	1718	0.327	560	465	0.0	0.5	3.102	A
D - B4027 S	272	68	952	1159	0.235	271	129	0.0	0.3	4.048	A
E - Coal Pit Lane W	96	24	1035	889	0.108	96	187	0.0	0.1	4.537	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	565	141	544	1872	0.302	565	810	0.3	0.4	2.754	A
B - A4303 E	808	202	372	2349	0.344	808	737	0.4	0.5	2.335	A
C - A5 S	671	168	623	1667	0.402	670	556	0.5	0.7	3.609	A
D - B4027 S	325	81	1139	1076	0.302	324	155	0.3	0.4	4.786	A
E - Coal Pit Lane W	115	29	1239	811	0.142	115	224	0.1	0.2	5.169	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	693	173	666	1808	0.383	692	992	0.4	0.6	3.223	A
B - A4303 E	990	247	455	2299	0.431	989	902	0.5	0.8	2.747	A
C - A5 S	821	205	763	1597	0.514	820	681	0.7	1.0	4.622	A
D - B4027 S	397	99	1394	962	0.413	396	189	0.4	0.7	6.349	A
E - Coal Pit Lane W	141	35	1517	705	0.200	141	274	0.2	0.2	6.368	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	693	173	667	1807	0.383	693	993	0.6	0.6	3.228	A
B - A4303 E	990	247	456	2298	0.431	990	904	0.8	0.8	2.750	A
C - A5 S	821	205	764	1597	0.514	821	682	1.0	1.1	4.642	A
D - B4027 S	397	99	1396	962	0.413	397	189	0.7	0.7	6.381	A
E - Coal Pit Lane W	141	35	1519	704	0.200	141	274	0.2	0.2	6.387	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	565	141	546	1871	0.302	566	812	0.6	0.4	2.762	A
B - A4303 E	808	202	373	2349	0.344	809	740	0.8	0.5	2.339	A
C - A5 S	671	168	625	1666	0.402	672	557	1.1	0.7	3.625	A
D - B4027 S	325	81	1142	1074	0.302	326	155	0.7	0.4	4.816	A
E - Coal Pit Lane W	115	29	1243	810	0.142	115	224	0.2	0.2	5.189	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	474	118	457	1918	0.247	474	680	0.4	0.3	2.496	A
B - A4303 E	677	169	312	2386	0.284	677	619	0.5	0.4	2.109	A
C - A5 S	562	140	523	1717	0.327	562	466	0.7	0.5	3.118	A
D - B4027 S	272	68	956	1157	0.235	272	130	0.4	0.3	4.071	A
E - Coal Pit Lane W	96	24	1040	887	0.109	97	188	0.2	0.1	4.555	A

WoD 2036, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	A - A5 N - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J48	A5 / B4027 / Coal Pit lane	Standard Roundabout		A, B, C, D, E	12.01	B

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	3	A - A5 N	12.01	B

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	WoD 2036	AM	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 - A5 N		ONE HOUR	✓	1362	100.000
B - A4303 E		ONE HOUR	✓	1177	100.000
C - A5 S		ONE HOUR	✓	724	100.000
D - B4027 S		ONE HOUR	✓	294	100.000
E - Coal Pit Lane W		ONE HOUR	✓	350	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - A5 N	B - A4303 E	C - A5 S	D - B4027 S	E - Coal Pit Lane W
From	A - A5 N	0	600	691	66	5
	B - A4303 E	456	0	311	306	104
	C - A5 S	297	321	3	18	85
	D - B4027 S	55	212	26	0	1
	E - Coal Pit Lane W	27	205	110	8	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A5 N	B - A4303 E	C - A5 S	D - B4027 S	E - Coal Pit Lane W
From	A - A5 N	0	0	0	0	0
	B - A4303 E	0	0	0	0	0
	C - A5 S	0	0	0	0	0
	D - B4027 S	0	0	0	0	0
	E - Coal Pit Lane W	0	0	0	0	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)
A - A5 N	0.91	22.85	9.0	C	1250	1875
B - A4303 E	0.66	5.35	1.9	A	1080	1620
C - A5 S	0.55	5.44	1.2	A	664	997
D - B4027 S	0.34	5.66	0.5	A	270	405
E - Coal Pit Lane W	0.54	11.13	1.2	B	321	482

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	1025	256	663	1810	0.567	1020	626	0.0	1.3	4.532	A
B - A4303 E	886	222	681	2162	0.410	883	1002	0.0	0.7	2.810	A
C - A5 S	545	136	709	1624	0.336	543	855	0.0	0.5	3.324	A
D - B4027 S	221	55	954	1158	0.191	220	299	0.0	0.2	3.835	A
E - Coal Pit Lane W	263	66	1028	892	0.296	262	146	0.0	0.4	5.700	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	1224	306	794	1741	0.703	1220	750	1.3	2.3	6.849	A
B - A4303 E	1058	265	815	2080	0.509	1057	1200	0.7	1.0	3.512	A
C - A5 S	651	163	848	1555	0.419	650	1023	0.5	0.7	3.976	A
D - B4027 S	264	66	1141	1075	0.246	264	357	0.2	0.3	4.438	A
E - Coal Pit Lane W	315	79	1230	815	0.386	314	175	0.4	0.6	7.176	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	1500	375	971	1648	0.910	1476	917	2.3	8.1	18.823	C
B - A4303 E	1296	324	987	1976	0.656	1293	1460	1.0	1.9	5.244	A
C - A5 S	797	199	1037	1461	0.546	795	1243	0.7	1.2	5.395	A
D - B4027 S	324	81	1396	962	0.337	323	436	0.3	0.5	5.631	A
E - Coal Pit Lane W	385	96	1505	710	0.543	383	214	0.6	1.2	10.945	B

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	1500	375	974	1647	0.911	1496	919	8.1	9.0	22.848	C
B - A4303 E	1296	324	999	1968	0.658	1296	1472	1.9	1.9	5.351	A
C - A5 S	797	199	1040	1459	0.546	797	1255	1.2	1.2	5.439	A
D - B4027 S	324	81	1399	960	0.337	324	438	0.5	0.5	5.656	A
E - Coal Pit Lane W	385	96	1508	709	0.544	385	215	1.2	1.2	11.126	B

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	1224	306	799	1738	0.704	1251	753	9.0	2.4	7.755	A
B - A4303 E	1058	265	833	2069	0.511	1062	1217	1.9	1.1	3.585	A
C - A5 S	651	163	853	1552	0.419	653	1041	1.2	0.7	4.012	A
D - B4027 S	264	66	1146	1072	0.246	265	360	0.5	0.3	4.463	A
E - Coal Pit Lane W	315	79	1235	813	0.387	317	176	1.2	0.6	7.289	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	1025	256	668	1807	0.567	1030	630	2.4	1.3	4.657	A
B - A4303 E	886	222	687	2158	0.411	888	1010	1.1	0.7	2.838	A
C - A5 S	545	136	713	1622	0.336	546	862	0.7	0.5	3.346	A
D - B4027 S	221	55	958	1156	0.192	222	300	0.3	0.2	3.855	A
E - Coal Pit Lane W	263	66	1033	890	0.296	264	147	0.6	0.4	5.764	A

WoD 2036, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	A - A5 N - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J48	A5 / B4027 / Coal Pit lane	Standard Roundabout		A, B, C, D, E	8.67	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	6	D - B4027 S	8.67	A

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	WoD 2036	PM	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 - A5 N		ONE HOUR	✓	866	100.000
B - A4303 E		ONE HOUR	✓	1237	100.000
C - A5 S		ONE HOUR	✓	1026	100.000
D - B4027 S		ONE HOUR	✓	497	100.000
E - Coal Pit Lane W		ONE HOUR	✓	176	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - A5 N	B - A4303 E	C - A5 S	D - B4027 S	E - Coal Pit Lane W
From	A - A5 N	0	360	464	36	6
	B - A4303 E	557	0	325	176	179
	C - A5 S	575	279	0	23	149
	D - B4027 S	102	381	4	0	10
	E - Coal Pit Lane W	7	109	59	1	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A5 N	B - A4303 E	C - A5 S	D - B4027 S	E - Coal Pit Lane W
From	A - A5 N	0	0	0	0	0
	B - A4303 E	0	0	0	0	0
	C - A5 S	0	0	0	0	0
	D - B4027 S	0	0	0	0	0
	E - Coal Pit Lane W	0	0	0	0	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)
A - A5 N	0.57	4.98	1.3	A	795	1192
B - A4303 E	0.62	4.33	1.6	A	1135	1703
C - A5 S	0.78	11.08	3.4	B	941	1412
D - B4027 S	0.75	19.66	2.9	C	456	684
E - Coal Pit Lane W	0.40	12.25	0.7	B	162	242

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	652	163	623	1830	0.356	650	931	0.0	0.6	3.044	A
B - A4303 E	931	233	428	2316	0.402	929	846	0.0	0.7	2.592	A
C - A5 S	772	193	717	1620	0.477	769	639	0.0	0.9	4.210	A
D - B4027 S	374	94	1309	1000	0.374	372	177	0.0	0.6	5.705	A
E - Coal Pit Lane W	133	33	1422	741	0.179	132	258	0.0	0.2	5.895	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	779	195	747	1766	0.441	778	1114	0.6	0.8	3.639	A
B - A4303 E	1112	278	512	2264	0.491	1111	1012	0.7	1.0	3.118	A
C - A5 S	922	231	858	1550	0.595	920	765	0.9	1.4	5.696	A
D - B4027 S	447	112	1566	886	0.504	445	212	0.6	1.0	8.136	A
E - Coal Pit Lane W	158	40	1702	635	0.249	158	309	0.2	0.3	7.541	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	953	238	909	1681	0.567	951	1360	0.8	1.3	4.920	A
B - A4303 E	1362	340	626	2195	0.620	1359	1234	1.0	1.6	4.294	A
C - A5 S	1130	282	1049	1454	0.777	1122	936	1.4	3.3	10.608	B
D - B4027 S	547	137	1912	732	0.747	540	259	1.0	2.7	18.133	C
E - Coal Pit Lane W	194	48	2076	493	0.393	193	377	0.3	0.6	11.949	B

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	953	238	917	1677	0.569	953	1366	1.3	1.3	4.975	A
B - A4303 E	1362	340	628	2194	0.621	1362	1242	1.6	1.6	4.326	A
C - A5 S	1130	282	1051	1453	0.777	1129	938	3.3	3.4	11.077	B
D - B4027 S	547	137	1921	728	0.751	547	260	2.7	2.9	19.656	C
E - Coal Pit Lane W	194	48	2089	488	0.397	194	379	0.6	0.7	12.247	B

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	779	195	758	1760	0.442	781	1123	1.3	0.8	3.682	A
B - A4303 E	1112	278	514	2263	0.491	1115	1024	1.6	1.0	3.143	A
C - A5 S	922	231	861	1549	0.596	930	768	3.4	1.5	5.887	A
D - B4027 S	447	112	1578	881	0.507	454	213	2.9	1.0	8.577	A
E - Coal Pit Lane W	158	40	1721	628	0.252	159	311	0.7	0.3	7.710	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	652	163	630	1827	0.357	653	936	0.8	0.6	3.070	A
B - A4303 E	931	233	430	2314	0.402	932	853	1.0	0.7	2.607	A
C - A5 S	772	193	720	1619	0.477	775	642	1.5	0.9	4.277	A
D - B4027 S	374	94	1317	997	0.375	376	178	1.0	0.6	5.816	A
E - Coal Pit Lane W	133	33	1433	737	0.180	133	260	0.3	0.2	5.961	A

WoDWS 2036, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	A - A5 N - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J48	A5 / B4027 / Coal Pit lane	Standard Roundabout		A, B, C, D, E	12.09	B

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	3	A - A5 N	12.09	B

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	WoDWS 2036	AM	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 - A5 N		ONE HOUR	✓	1368	100.000
B - A4303 E		ONE HOUR	✓	1186	100.000
C - A5 S		ONE HOUR	✓	717	100.000
D - B4027 S		ONE HOUR	✓	284	100.000
E - Coal Pit Lane W		ONE HOUR	✓	339	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - A5 N	B - A4303 E	C - A5 S	D - B4027 S	E - Coal Pit Lane W
From	A - A5 N	0	608	691	64	5
	B - A4303 E	466	0	315	300	105
	C - A5 S	294	325	3	17	78
	D - B4027 S	49	210	24	0	1
	E - Coal Pit Lane W	24	200	107	8	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A5 N	B - A4303 E	C - A5 S	D - B4027 S	E - Coal Pit Lane W
From	A - A5 N	0	0	0	0	0
	B - A4303 E	0	0	0	0	0
	C - A5 S	0	0	0	0	0
	D - B4027 S	0	0	0	0	0
	E - Coal Pit Lane W	0	0	0	0	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)
A - A5 N	0.91	23.10	9.1	C	1255	1883
B - A4303 E	0.66	5.39	1.9	A	1088	1632
C - A5 S	0.54	5.39	1.2	A	658	987
D - B4027 S	0.33	5.58	0.5	A	261	391
E - Coal Pit Lane W	0.53	10.74	1.1	B	311	467

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	1030	257	657	1813	0.568	1025	625	0.0	1.3	4.539	A
B - A4303 E	893	223	676	2165	0.412	890	1006	0.0	0.7	2.818	A
C - A5 S	540	135	711	1623	0.333	538	854	0.0	0.5	3.311	A
D - B4027 S	214	53	957	1156	0.185	213	292	0.0	0.2	3.812	A
E - Coal Pit Lane W	255	64	1028	891	0.286	254	142	0.0	0.4	5.631	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	1230	307	787	1745	0.705	1226	748	1.3	2.3	6.881	A
B - A4303 E	1066	267	808	2084	0.512	1065	1204	0.7	1.0	3.527	A
C - A5 S	645	161	851	1553	0.415	644	1022	0.5	0.7	3.954	A
D - B4027 S	255	64	1146	1073	0.238	255	349	0.2	0.3	4.400	A
E - Coal Pit Lane W	305	76	1231	814	0.374	304	170	0.4	0.6	7.044	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	1506	377	962	1653	0.911	1483	915	2.3	8.2	18.972	C
B - A4303 E	1306	326	979	1980	0.659	1302	1466	1.0	1.9	5.282	A
C - A5 S	789	197	1040	1459	0.541	788	1242	0.7	1.2	5.346	A
D - B4027 S	313	78	1401	959	0.326	312	426	0.3	0.5	5.557	A
E - Coal Pit Lane W	373	93	1506	710	0.526	371	207	0.6	1.1	10.579	B

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	1506	377	966	1651	0.912	1503	917	8.2	9.1	23.097	C
B - A4303 E	1306	326	991	1973	0.662	1306	1477	1.9	1.9	5.392	A
C - A5 S	789	197	1043	1457	0.542	789	1253	1.2	1.2	5.389	A
D - B4027 S	313	78	1405	958	0.327	313	428	0.5	0.5	5.581	A
E - Coal Pit Lane W	373	93	1509	708	0.527	373	208	1.1	1.1	10.739	B

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	1230	307	792	1742	0.706	1256	751	9.1	2.5	7.795	A
B - A4303 E	1066	267	826	2073	0.514	1070	1222	1.9	1.1	3.598	A
C - A5 S	645	161	856	1551	0.416	646	1040	1.2	0.7	3.988	A
D - B4027 S	255	64	1151	1070	0.239	256	352	0.5	0.3	4.424	A
E - Coal Pit Lane W	305	76	1236	812	0.375	307	171	1.1	0.6	7.146	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	1030	257	662	1810	0.569	1034	628	2.5	1.3	4.665	A
B - A4303 E	893	223	682	2161	0.413	894	1014	1.1	0.7	2.844	A
C - A5 S	540	135	715	1621	0.333	541	861	0.7	0.5	3.335	A
D - B4027 S	214	53	962	1154	0.185	214	293	0.3	0.2	3.833	A
E - Coal Pit Lane W	255	64	1034	889	0.287	256	143	0.6	0.4	5.690	A

WoDWS 2036, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	A - A5 N - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J48	A5 / B4027 / Coal Pit lane	Standard Roundabout		A, B, C, D, E	8.01	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	9	D - B4027 S	8.01	A

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	WoDWS 2036	PM	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 - A5 N		ONE HOUR	✓	884	100.000
B - A4303 E		ONE HOUR	✓	1233	100.000
C - A5 S		ONE HOUR	✓	1038	100.000
D - B4027 S		ONE HOUR	✓	450	100.000
E - Coal Pit Lane W		ONE HOUR	✓	166	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - A5 N	B - A4303 E	C - A5 S	D - B4027 S	E - Coal Pit Lane W
From	A - A5 N	0	392	459	28	5
	B - A4303 E	564	0	334	162	173
	C - A5 S	576	294	0	22	146
	D - B4027 S	87	347	4	0	12
	E - Coal Pit Lane W	7	103	55	1	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A5 N	B - A4303 E	C - A5 S	D - B4027 S	E - Coal Pit Lane W
From	A - A5 N	0	0	0	0	0
	B - A4303 E	0	0	0	0	0
	C - A5 S	0	0	0	0	0
	D - B4027 S	0	0	0	0	0
	E - Coal Pit Lane W	0	0	0	0	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)
A - A5 N	0.57	5.00	1.3	A	811	1217
B - A4303 E	0.62	4.24	1.6	A	1131	1697
C - A5 S	0.78	11.11	3.4	B	952	1429
D - B4027 S	0.69	15.81	2.1	C	413	619
E - Coal Pit Lane W	0.37	11.40	0.6	B	152	228

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	666	166	602	1842	0.361	663	925	0.0	0.6	3.050	A
B - A4303 E	928	232	414	2324	0.399	926	851	0.0	0.7	2.571	A
C - A5 S	781	195	700	1629	0.480	778	639	0.0	0.9	4.214	A
D - B4027 S	339	85	1318	996	0.340	337	160	0.0	0.5	5.444	A
E - Coal Pit Lane W	125	31	1403	749	0.167	124	252	0.0	0.2	5.757	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	795	199	721	1779	0.447	794	1107	0.6	0.8	3.649	A
B - A4303 E	1108	277	496	2274	0.487	1107	1019	0.7	0.9	3.082	A
C - A5 S	933	233	838	1560	0.598	931	765	0.9	1.5	5.702	A
D - B4027 S	405	101	1578	881	0.459	403	191	0.5	0.8	7.514	A
E - Coal Pit Lane W	149	37	1679	644	0.232	149	302	0.2	0.3	7.270	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	973	243	878	1697	0.574	971	1352	0.8	1.3	4.947	A
B - A4303 E	1358	339	606	2207	0.615	1355	1243	0.9	1.6	4.213	A
C - A5 S	1143	286	1025	1466	0.779	1135	936	1.5	3.4	10.637	B
D - B4027 S	495	124	1927	726	0.683	491	234	0.8	2.0	15.003	C
E - Coal Pit Lane W	183	46	2049	503	0.364	182	368	0.3	0.6	11.177	B

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	973	243	885	1694	0.575	973	1358	1.3	1.3	4.998	A
B - A4303 E	1358	339	608	2206	0.615	1358	1250	1.6	1.6	4.242	A
C - A5 S	1143	286	1027	1465	0.780	1142	938	3.4	3.4	11.113	B
D - B4027 S	495	124	1935	722	0.686	495	235	2.0	2.1	15.812	C
E - Coal Pit Lane W	183	46	2060	498	0.367	183	370	0.6	0.6	11.402	B

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	795	199	730	1775	0.448	797	1116	1.3	0.8	3.688	A
B - A4303 E	1108	277	498	2273	0.488	1111	1029	1.6	1.0	3.106	A
C - A5 S	933	233	841	1559	0.599	941	768	3.4	1.5	5.900	A
D - B4027 S	405	101	1589	876	0.462	410	192	2.1	0.9	7.805	A
E - Coal Pit Lane W	149	37	1695	637	0.234	150	304	0.6	0.3	7.405	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	666	166	607	1839	0.362	667	931	0.8	0.6	3.072	A
B - A4303 E	928	232	416	2322	0.400	929	858	1.0	0.7	2.586	A
C - A5 S	781	195	703	1627	0.480	784	642	1.5	0.9	4.281	A
D - B4027 S	339	85	1326	992	0.341	340	161	0.9	0.5	5.530	A
E - Coal Pit Lane W	125	31	1413	745	0.168	125	253	0.3	0.2	5.816	A

WD 2036, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	A - A5 N - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J48	A5 / B4027 / Coal Pit lane	Standard Roundabout		A, B, C, D, E	13.06	B

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	3	A - A5 N	13.06	B

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	WD 2036	AM	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 - A5 N		ONE HOUR	✓	1325	100.000
B - A4303 E		ONE HOUR	✓	1231	100.000
C - A5 S		ONE HOUR	✓	771	100.000
D - B4027 S		ONE HOUR	✓	303	100.000
E - Coal Pit Lane W		ONE HOUR	✓	419	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - A5 N	B - A4303 E	C - A5 S	D - B4027 S	E - Coal Pit Lane W
From	A - A5 N	0	549	714	55	7
	B - A4303 E	495	0	333	305	98
	C - A5 S	345	329	3	17	77
	D - B4027 S	53	221	28	0	1
	E - Coal Pit Lane W	32	255	123	9	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A5 N	B - A4303 E	C - A5 S	D - B4027 S	E - Coal Pit Lane W
From	A - A5 N	0	0	0	0	0
	B - A4303 E	0	0	0	0	0
	C - A5 S	0	0	0	0	0
	D - B4027 S	0	0	0	0	0
	E - Coal Pit Lane W	0	0	0	0	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)
A - A5 N	0.91	23.79	9.1	C	1216	1824
B - A4303 E	0.70	6.06	2.3	A	1130	1694
C - A5 S	0.59	6.03	1.4	A	707	1061
D - B4027 S	0.36	6.14	0.6	A	278	417
E - Coal Pit Lane W	0.69	17.58	2.2	C	384	577

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	998	249	725	1777	0.561	992	694	0.0	1.3	4.558	A
B - A4303 E	927	232	703	2148	0.431	924	1014	0.0	0.8	2.933	A
C - A5 S	580	145	727	1615	0.359	578	900	0.0	0.6	3.464	A
D - B4027 S	228	57	1016	1130	0.202	227	290	0.0	0.3	3.981	A
E - Coal Pit Lane W	315	79	1106	862	0.366	313	137	0.0	0.6	6.533	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	1191	298	868	1702	0.700	1187	830	1.3	2.3	6.945	A
B - A4303 E	1107	277	841	2064	0.536	1105	1214	0.8	1.1	3.747	A
C - A5 S	693	173	870	1544	0.449	692	1077	0.6	0.8	4.220	A
D - B4027 S	272	68	1215	1042	0.261	272	346	0.3	0.4	4.675	A
E - Coal Pit Lane W	377	94	1323	779	0.483	375	164	0.6	0.9	8.883	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	1459	365	1060	1602	0.911	1435	1015	2.3	8.2	19.368	C
B - A4303 E	1355	339	1018	1956	0.693	1351	1476	1.1	2.2	5.906	A
C - A5 S	849	212	1063	1448	0.586	847	1307	0.8	1.4	5.963	A
D - B4027 S	334	83	1486	921	0.362	333	423	0.4	0.6	6.106	A
E - Coal Pit Lane W	461	115	1618	667	0.692	457	201	0.9	2.1	16.752	C

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	1459	365	1065	1599	0.912	1455	1018	8.2	9.1	23.788	C
B - A4303 E	1355	339	1032	1948	0.696	1355	1489	2.2	2.3	6.064	A
C - A5 S	849	212	1067	1446	0.587	849	1320	1.4	1.4	6.030	A
D - B4027 S	334	83	1491	920	0.363	334	425	0.6	0.6	6.143	A
E - Coal Pit Lane W	461	115	1623	665	0.694	461	201	2.1	2.2	17.582	C

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	1191	298	876	1698	0.702	1218	835	9.1	2.4	7.896	A
B - A4303 E	1107	277	861	2052	0.539	1111	1233	2.3	1.2	3.844	A
C - A5 S	693	173	876	1541	0.450	695	1097	1.4	0.8	4.270	A
D - B4027 S	272	68	1222	1039	0.262	273	349	0.6	0.4	4.708	A
E - Coal Pit Lane W	377	94	1330	777	0.485	382	165	2.2	1.0	9.221	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	998	249	731	1774	0.562	1002	698	2.4	1.3	4.690	A
B - A4303 E	927	232	710	2144	0.432	928	1023	1.2	0.8	2.965	A
C - A5 S	580	145	731	1613	0.360	581	908	0.8	0.6	3.494	A
D - B4027 S	228	57	1021	1128	0.202	229	291	0.4	0.3	4.005	A
E - Coal Pit Lane W	315	79	1112	860	0.367	317	138	1.0	0.6	6.652	A

WD 2036, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	A - A5 N - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J48	A5 / B4027 / Coal Pit lane	Standard Roundabout		A, B, C, D, E	9.68	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	5	D - B4027 S	9.68	A

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	WD 2036	PM	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 - A5 N		ONE HOUR	✓	957	100.000
B - A4303 E		ONE HOUR	✓	1212	100.000
C - A5 S		ONE HOUR	✓	1083	100.000
D - B4027 S		ONE HOUR	✓	479	100.000
E - Coal Pit Lane W		ONE HOUR	✓	169	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - A5 N	B - A4303 E	C - A5 S	D - B4027 S	E - Coal Pit Lane W
From	A - A5 N	0	399	495	57	6
	B - A4303 E	560	0	307	173	172
	C - A5 S	631	278	0	24	150
	D - B4027 S	103	360	4	0	12
	E - Coal Pit Lane W	7	103	57	2	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A5 N	B - A4303 E	C - A5 S	D - B4027 S	E - Coal Pit Lane W
From	A - A5 N	0	0	0	0	0
	B - A4303 E	0	0	0	0	0
	C - A5 S	0	0	0	0	0
	D - B4027 S	0	0	0	0	0
	E - Coal Pit Lane W	0	0	0	0	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)
A - A5 N	0.62	5.62	1.6	A	878	1317
B - A4303 E	0.62	4.36	1.6	A	1112	1668
C - A5 S	0.83	14.10	4.5	B	994	1491
D - B4027 S	0.75	20.24	2.9	C	440	659
E - Coal Pit Lane W	0.39	12.59	0.6	B	155	233

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	720	180	602	1842	0.391	718	975	0.0	0.6	3.197	A
B - A4303 E	912	228	466	2292	0.398	910	854	0.0	0.7	2.600	A
C - A5 S	815	204	728	1615	0.505	811	647	0.0	1.0	4.459	A
D - B4027 S	361	90	1347	983	0.367	358	192	0.0	0.6	5.741	A
E - Coal Pit Lane W	127	32	1451	731	0.174	126	255	0.0	0.2	5.949	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	860	215	720	1780	0.483	859	1167	0.6	0.9	3.906	A
B - A4303 E	1090	272	557	2237	0.487	1088	1022	0.7	0.9	3.132	A
C - A5 S	974	243	871	1543	0.631	971	775	1.0	1.7	6.269	A
D - B4027 S	431	108	1612	866	0.498	429	230	0.6	1.0	8.216	A
E - Coal Pit Lane W	152	38	1736	622	0.244	151	305	0.2	0.3	7.647	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	1054	263	876	1698	0.621	1051	1423	0.9	1.6	5.540	A
B - A4303 E	1334	334	682	2161	0.617	1332	1245	0.9	1.6	4.327	A
C - A5 S	1192	298	1066	1446	0.825	1182	948	1.7	4.3	13.117	B
D - B4027 S	527	132	1967	708	0.745	520	281	1.0	2.7	18.538	C
E - Coal Pit Lane W	186	47	2115	478	0.390	185	372	0.3	0.6	12.242	B

17:00 - 17:15

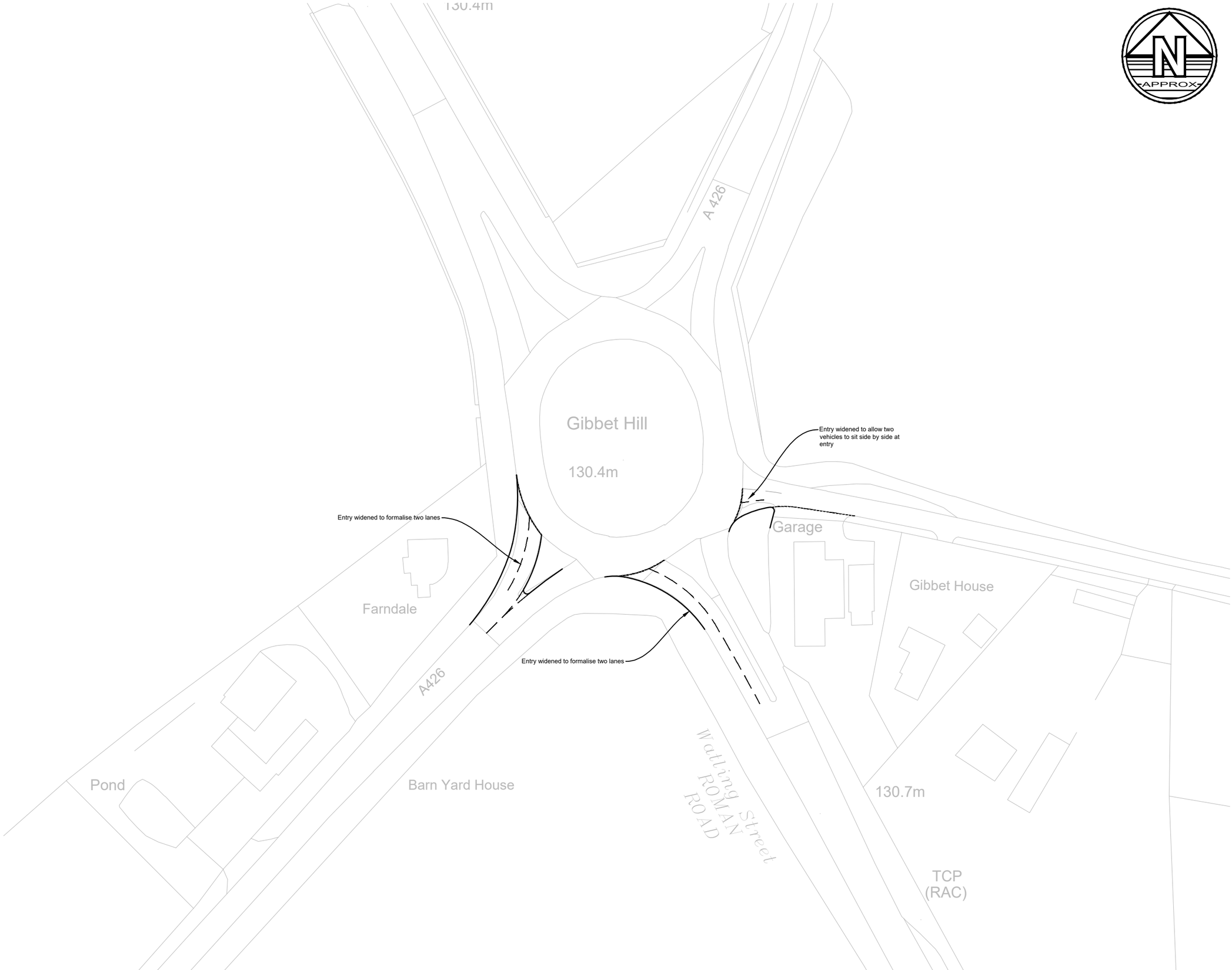
Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	1054	263	884	1694	0.622	1054	1432	1.6	1.6	5.622	A
B - A4303 E	1334	334	684	2160	0.618	1334	1254	1.6	1.6	4.360	A
C - A5 S	1192	298	1068	1445	0.825	1192	950	4.3	4.5	14.103	B
D - B4027 S	527	132	1978	703	0.750	527	282	2.7	2.9	20.243	C
E - Coal Pit Lane W	186	47	2130	472	0.394	186	374	0.6	0.6	12.593	B

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	860	215	732	1773	0.485	863	1179	1.6	1.0	3.966	A
B - A4303 E	1090	272	560	2235	0.488	1092	1035	1.6	1.0	3.159	A
C - A5 S	974	243	874	1542	0.631	985	778	4.5	1.7	6.587	A
D - B4027 S	431	108	1628	859	0.502	438	231	2.9	1.0	8.703	A
E - Coal Pit Lane W	152	38	1758	614	0.248	153	308	0.6	0.3	7.841	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	720	180	608	1839	0.392	722	982	1.0	0.6	3.228	A
B - A4303 E	912	228	468	2291	0.398	914	861	1.0	0.7	2.615	A
C - A5 S	815	204	731	1613	0.505	818	651	1.7	1.0	4.544	A
D - B4027 S	361	90	1356	979	0.368	362	193	1.0	0.6	5.854	A
E - Coal Pit Lane W	127	32	1462	726	0.175	128	257	0.3	0.2	6.021	A

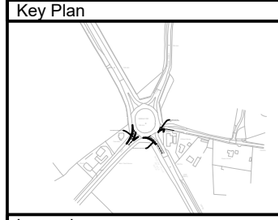


APPROX

Notes

1. Do not scale this drawing. All dimensions must be checked/ verified on site. If in doubt ask.
2. This drawing is to be read in conjunction with all relevant architects, engineers and specialists drawings and specifications.
3. All dimensions in millimetres unless noted otherwise. All levels in metres unless noted otherwise.
4. Any discrepancies noted on site are to be reported to the engineer immediately.

Key Plan



Legend

Rev	Date	Details of issue / revision	Drw	Rev
P1	09.10.23	PRELIMINARY ISSUE	AJ	MA

Issues & Revisions

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Client

TRITAX SYMMETRY (HINCKLEY) LIMITED

Project Title

HINCKLEY RAIL FREIGHT INTERCHANGE

Drawing Title

JUNCTION 26 - GIBBET HILL PROPOSED MITIGATION (HNRFI ONLY)

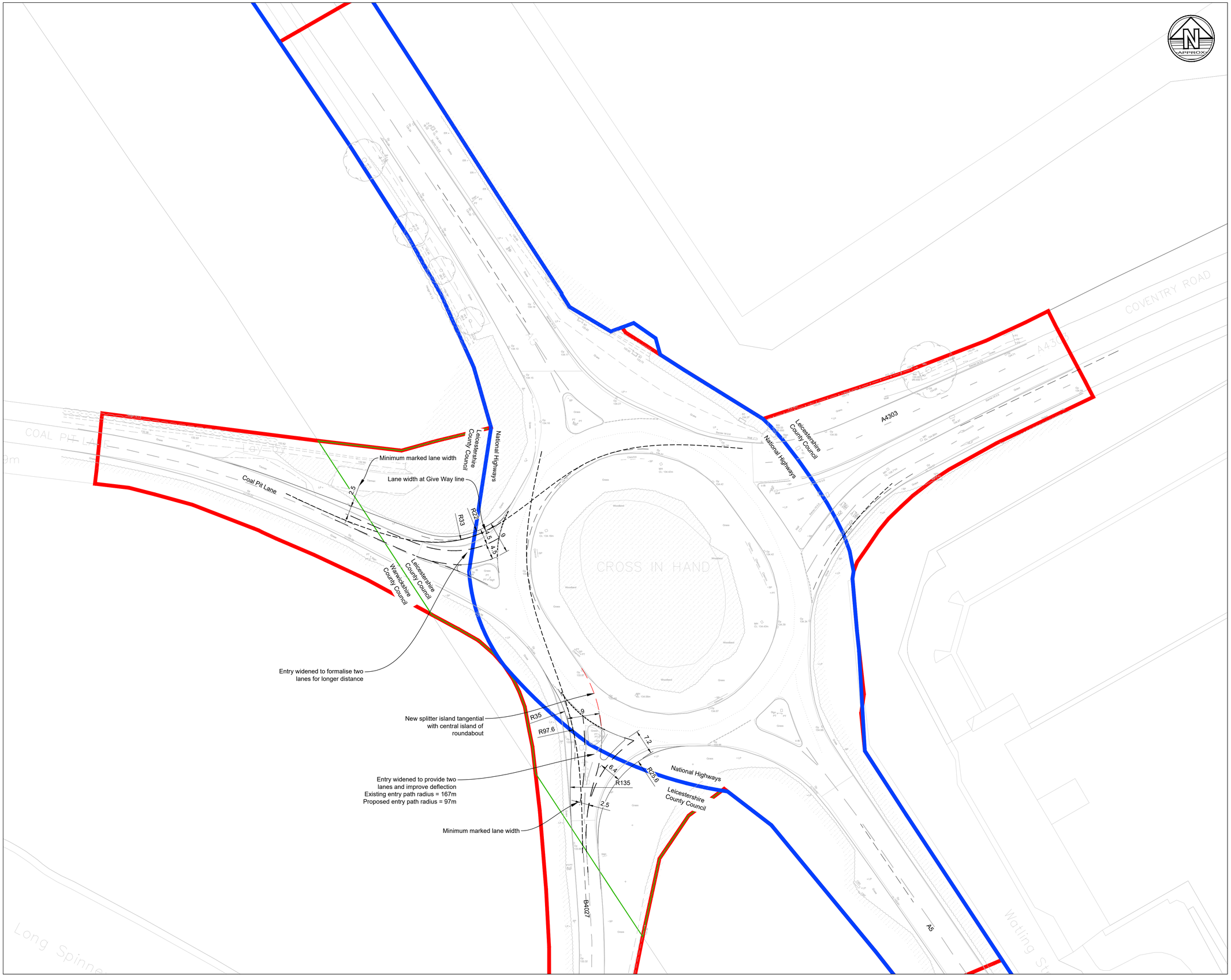
Drawn:	AJ Oakes		Reviewed:	Malclom Ash
BWB Ref:	NTT 2814	Date:	09.10.23	Scale@A3: 1:1000

Drawing Status

PRELIMINARY

Project - Originator - Zone - Level - Type - Role - Number	Status	Rev
HRF-BWB-GEN-XX-DR-TR-114	S2	P1

X:\NTT\NTT2814_Hinckley Rail Freight Interchange\02. Project Delivery\01. WIP\Drawings\Other drawings\HRF-BWB-GEN-XX-DR-TR-114_Gibbet Hill HNRFI Mitigation.dwg



Notes

1. Do not scale from this drawing. All dimensions must be checked/verified on site. If in doubt, ask.
2. This drawing is to be read in conjunction with all relevant architects, engineers and specialists drawings and specifications
3. All dimensions in metres unless noted otherwise. All levels in metres unless noted otherwise
4. Any discrepancies noted on site are to be reported to the engineer immediately
5. For further details on specific areas of works, see the relevant SHW series drawings and appedices
6. All works must be carried out to the requirements of the overseeing organisation.

Legend

- Development Consent Order Limits
- LCC Highway Boundary
- NH Highway Boundary
- Primary Signal Head
- Secondary Signal head
- Noise fence
- Earthwork extents
- Footway Type - Tactile paving in Red (R)
- Footway Type - Tactile paving in Buff (B)

Rev	Date	Details of issue / revision	Drw	Rev
P03	09.02.24	Extents of mitigation amended.	JM	SC
P02	07.12.23	Updated following LCC meeting	JM	SC
P01	10.11.23	Preliminary Issue	JM	SC

Issues & Revisions

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Client

TRITAX SYMMETRY
A TRITAX BIG BOX COMPANY

Project Title

HINCKLEY NATIONAL RAIL FREIGHT INTERCHANGE

Drawing Title

GENERAL ARRANGEMENT SHEET 22

Drawn:	J.Manifold	Reviewed:	S.Carter		
BWB Ref:	NTT2814	Date:	06.11.23	Scale@A1:	1:500

Drawing Status

PRELIMINARY

Project - Originator - Zone - Level - Type - Role - Number	Status	Rev
HRF-BWB-HGN-HW22-DR-CH-0100	S2	P03

Spreadsheets

AM PEAK

Junction Arm	
A	Watling Street N
B	Rugby Road
C	Gibbet Lane
D	Wattling Street S
E	Rugby Road W

GIBBET ROUNDABOUT

2023 Observed Flows

	A	B	C	D	E	TOTAL
A	0	5	32	353	452	842
B	2	0	25	139	547	713
C	20	23	1	5	57	106
D	328	219	32	5	193	777
E	189	215	19	100	0	523
TOTAL	539	462	109	602	1249	2961

WoD 2036 FINAL MATIX

	A	B	C	D	E	TOTAL
A	0	1	32	245	382	660
B	1	0	30	101	506	638
C	46	36	6	10	267	365
D	463	118	87	6	433	**1107**
E	191	138	33	126	0	488
TOTAL	701	293	188	488	1588	3258

WD 2036 FINAL MATIX

	A	B	C	D	E	TOTAL
A	0	1	40	287	392	720
B	1	0	31	105	509	646
C	53	35	6	12	272	378
D	495	106	85	10	419	**1115**
E	199	120	28	122	0	469
TOTAL	748	262	190	536	1592	3328

GIBBET ROUNDABOUT

		A	B	C	D	E	TOTAL
A	Watling Street N	0	5	32	353	452	842
B	Rugby Road	2	0	25	139	547	713
C	Gibbet Lane	20	23	1	5	57	106
D	Wattling Street S	328	219	32	5	193	777
E	Rugby Road W	189	215	19	100	0	523
TOTAL		539	462	109	602	1249	2961

		A	B	C	D	E	TOTAL
A	Watling Street N	0	1	32	245	382	660
B	Rugby Road	1	0	30	101	506	638
C	Gibbet Lane	46	36	6	10	267	365
D	Wattling Street S	467	312	46	7	275	**1107**
E	Rugby Road W	191	138	33	126	0	488
TOTAL		701	293	188	488	1588	3258

		A	B	C	D	E	TOTAL
A	Watling Street N	0	1	40	287	392	720
B	Rugby Road	1	0	31	105	509	646
C	Gibbet Lane	53	35	6	12	272	378
D	Wattling Street S	499	300	44	11	261	**1115**
E	Rugby Road W	199	120	28	122	0	469
TOTAL		748	262	190	536	1592	3328

42.471% Increase

PM PEAK

Junction Arm	
A	Watling Street N
B	Rugby Road
C	Gibbet Lane
D	Wattling Street S
E	Rugby Road W

GIBBET ROUNDABOUT

2023 Observed Flows

	A	B	C	D	E	TOTAL
A	0	5	25	230	362	622
B	1	0	16	163	450	630
C	20	19	0	13	46	98
D	432	125	23	7	134	721
E	290	468	14	111	4	887
TOTAL	743	617	78	524	996	2958

WoD 2036 FINAL MATIX

	A	B	C	D	E	TOTAL
A	0	3	15	246	359	623
B	1	0	17	220	549	787
C	22	20	0	33	93	168
D	469	220	49	15	335	**1088**
E	207	485	13	166	4	875
TOTAL	699	728	94	680	1340	3541

WD 2036 FINAL MATIX

	A	B	C	D	E	TOTAL
A	0	4	15	275	339	633
B	1	0	16	254	527	798
C	22	24	0	35	96	177
D	524	230	47	17	308	**1126**
E	206	496	14	155	4	875
TOTAL	753	754	92	736	1274	3609

GIBBET ROUNDABOUT

		A	B	C	D	E	TOTAL
A	Watling Street N	0	5	25	230	362	622
B	Rugby Road	1	0	16	163	450	630
C	Gibbet Lane	20	19	0	13	46	98
D	Wattling Street S	432	125	23	7	134	721
E	Rugby Road W	290	468	14	111	4	887
TOTAL		743	617	78	524	996	2958

		A	B	C	D	E	TOTAL
A	Watling Street N	0	3	15	246	359	623
B	Rugby Road	1	0	17	220	549	787
C	Gibbet Lane	22	20	0	33	93	168
D	Wattling Street S	651	189	35	11	202	**1088**
E	Rugby Road W	207	485	13	166	4	875
TOTAL		699	728	94	680	1340	3541

		A	B	C	D	E	TOTAL
A	Watling Street N	0	4	15	275	339	633
B	Rugby Road	1	0	16	254	527	798
C	Gibbet Lane	22	24	0	35	96	177
D	Wattling Street S	706	199	33	13	175	**1126**
E	Rugby Road W	206	496	14	155	4	875
TOTAL		753	754	92	736	1274	3609

50.9% Increase

SPREADSHEET 1 - REASSIGNMENT OF TRAFFIC AT GIBBET ROUNDABOUT ON THE A5 (SOUTH) ARM FOR NATIONAL HIGHWAYS

GIBBET ROUNDABOUT

AM Peak

	Junction Arm
A	Watling Street N
B	Rugby Road
C	Gibbet Lane
D	Wattling Street S
E	Rugby Road W

FURNESSED FLOWS

2023 Observed Flows

	A	B	C	D	E	TOTAL
A	0	5	32	353	452	842
B	2	0	25	139	547	713
C	20	23	1	5	57	106
D	328	219	32	5	193	777
E	189	215	19	100	0	523
TOTAL	539	462	109	602	1249	**2961**

WoD 2036 FINAL MATIX

	A	B	C	D	E	TOTAL
A	0	1	32	245	382	660
B	1	0	30	101	506	638
C	46	36	6	10	267	365
D	463	118	87	6	433	1107
E	191	138	33	126	0	488
TOTAL	701	293	188	488	1588	**3258**

WoDWS 2036 FINAL MATIX

	A	B	C	D	E	TOTAL
A	0	1	34	250	377	662
B	1	0	30	103	505	639
C	46	36	5	10	266	363
D	462	117	87	6	436	1108
E	186	133	29	124	0	472
TOTAL	695	287	185	493	1584	**3244**

WD 2036 FINAL MATIX

	A	B	C	D	E	TOTAL
A	0	1	40	287	392	720
B	1	0	31	105	509	646
C	53	35	6	12	272	378
D	495	106	85	10	419	1115
E	199	120	28	122	0	469
TOTAL	748	262	190	536	1592	**3328**

DEVELOPMENT FLOWS FINAL MATIX

	A	B	C	D	E	TOTAL
A	0	0	8	42	10	60
B	0	0	1	4	3	8
C	7	-1	0	2	5	13
D	32	-12	-2	4	-14	8
E	8	-18	-5	-4	0	-19
TOTAL	47	-31	2	48	4	**70**

RE-FURNESSED FLOWS

		A	B	C	D	E	TOTAL
A	Watling Street N	A	0	5	32	353	452	842
B	Rugby Road	B	2	0	25	139	547	713
C	Gibbet Lane	C	20	23	1	5	57	106
D	Wattling Street S	D	328	219	32	5	193	777
E	Rugby Road W	E	189	215	19	100	0	523
		TOTAL	539	462	109	602	1249	**2961**

10.03% Increase (Growth)

	A	B	C	D	E	TOTAL
A	0	6	35	388	497	926
B	2	0	28	153	602	785
C	22	25	1	6	63	117
D	361	241	35	6	212	855
E	208	237	21	110	0	575
TOTAL	593	508	120	662	1374	**3258**

	A	B	C	D	E	TOTAL
A	0	6	37	393	492	928
B	2	0	28	155	601	786
C	22	25	0	6	62	115
D	360	240	35	6	215	856
E	203	232	17	108	0	559
TOTAL	587	502	117	667	1370	**3244**

	A	B	C	D	E	TOTAL
A	0	6	43	430	507	986
B	2	0	29	157	605	793
C	29	24	1	8	68	130
D	393	229	33	10	198	863
E	216	219	16	106	0	556
TOTAL	640	477	122	710	1378	**3328**

	A	B	C	D	E	TOTAL
A	0	0	8	42	10	60
B	0	0	1	4	3	8
C	7	-1	0	2	5	13
D	32	-12	-2	4	-14	8
E	8	-18	-5	-4	0	-19
TOTAL	47	-31	2	48	4	**70**

FLOW DIFFERENCE

		A	B	C	D	E	TOTAL
A	A5 N	A	0	5	3	143	115	266
B	A4303 E	B	1	0	-2	52	96	147
C	A5 S	C	-24	-11	-5	-4	-204	-248
D	B4027 S	D	-102	123	-52	0	-221	-252
E	Coal Pit Lane W	E	17	99	-12	-16	0	87
		TOTAL	-108	215	-68	174	-214	**0**

	A	B	C	D	E	TOTAL
A	0	5	3	143	115	266
B	1	0	-2	52	96	147
C	-24	-11	-5	-4	-204	-248
D	-102	123	-52	0	-221	-252
E	17	99	-12	-16	0	87
TOTAL	-108	215	-68	174	-214	**0**

	A	B	C	D	E	TOTAL
A	0	5	3	143	115	266
B	1	0	-2	52	96	147
C	-24	-11	-5	-4	-204	-248
D	-102	123	-52	0	-221	-252
E	17	99	-12	-16	0	87
TOTAL	-108	215	-68	174	-214	**0**

GIBBET ROUNDABOUT

PM Peak

	Junction Arm
A	Watling Street N
B	Rugby Road
C	Gibbet Lane
D	Wattling Street S
E	Rugby Road W

FURNESSED FLOWS

2023 Observed Flows

	A	B	C	D	E	TOTAL
A	0	5	25	230	362	622
B	1	0	16	163	450	630
C	20	19	0	13	46	98
D	432	125	23	7	134	721
E	290	468	14	111	4	887
TOTAL	743	617	78	524	996	**2958**

WoD 2036 FINAL MATIX

	A	B	C	D	E	TOTAL
A	0	3	15	246	359	623
B	1	0	17	220	549	787
C	22	20	0	33	93	168
D	469	220	49	15	335	1088
E	207	485	13	166	4	875
TOTAL	699	728	94	680	1340	**3541**

WoDWS 2036 FINAL MATIX

	A	B	C	D	E	TOTAL
A	0	4	15	250	353	622
B	1	0	14	225	548	788
C	21	21	0	31	91	164
D	481	217	42	15	327	1082
E	206	471	13	156	4	850
TOTAL	709	713	84	677	1323	**3506**

WD 2036 FINAL MATIX

	A	B	C	D	E	TOTAL
A	0	4	15	275	339	633
B	1	0	16	254	527	798
C	22	24	0	35	96	177
D	524	230	47	17	308	1126
E	206	496	14	155	4	875
TOTAL	753	754	92	736	1274	**3609**

DEVELOPMENT FLOWS FINAL MATIX

	A	B	C	D	E	TOTAL
A	0	1	0	29	-20	10
B	0	0	-1	34	-22	11
C	0	4	0	2	3	9
D	55	10	-2	2	-27	38
E	-1	11	1	-11	0	0
TOTAL	54	26	-2	56	-66	**68**

RE-FURNESSED FLOWS

		A	B	C	D	E	TOTAL
A	Watling Street N	A	0	5	25	230	362	622
B	Rugby Road	B	1	0	16	163	450	630
C	Gibbet Lane	C	20	19	0	13	46	98
D	Wattling Street S	D	432	125	23	7	134	721
E	Rugby Road W	E	290	468	14	111	4	887
		TOTAL	743	617	78	524	996	**2958**

19.70% Increase (Growth)

	A	B	C	D	E	TOTAL
A	0	6	30	275	433	745
B	1	0	19	195	539	754
C	24	23	0	16	55	117
D	517	150	28	8	160	863
E	347	560	17	133	5	1062
TOTAL	889	739	93	627	1192	**3541**

	A	B	C	D	E	TOTAL
A	0	7	30	279	427	744
B	1	0	16	200	538	755
C	23	24	0	14	53	113
D	529	147	21	8	152	857
E	346	546	17	123	5	1037
TOTAL	899	724	83	624	1175	**3506**

	A	B	C	D	E	TOTAL
A	0	7	30	304	413	755
B	1	0	18	229	517	765
C	24	27	0	18	58	126
D	572	160	26	10	133	901
E	346	571	18	122	5	1062
TOTAL	943	765	91	683	1126	**3609**

	A	B	C	D	E	TOTAL
A	0	1	0	29	-20	10
B	0	0	-1	34	-22	11
C	0	4	0	2	3	9
D	55	10	-2	2	-27	38
E	-1	11	1	-11	0	0
TOTAL	54	26	-2	56	-66	**68**

FLOW DIFFERENCE

		A	B	C	D	E	TOTAL
A	A5 N	A	0	3	15	29	74	122
B	A4303 E	B	0	0	2	-25	-10	-33
C	A5 S	C	2	3	0	-17	-38	-51
D	B4027 S	D	48	-70	-21	-7	-175	-225
E	Coal Pit Lane W	E	140	75	4	-33	1	187
		TOTAL	190	11	-1	-53	-148	**0**

	A	B	C	D	E	TOTAL
A	0	3	15	29	74	122
B	0	0	2	-25	-10	-33
C	2	3	0	-17	-38	-51
D	48	-70	-21	-7	-175	-225
E	140	75	4	-33	1	187
TOTAL	190	11	-1	-53	-148	**0**

	A	B	C	D	E	TOTAL
A	0	3	15	29	74	122
B	0	0	2	-25	-10	-33
C	2	3	0	-17	-38	-51
D	48	-70	-21	-7	-175	-225
E	140	75	4	-33	1	187
TOTAL	190	11	-1	-53	-148	**0**

SPREADSHEET 2 - REASSIGNMENT OF TRAFFIC AT GIBBET ROUNDABOUT (FULL JUNCTION REASSIGNMENT)

CROSS-IN-HANDS ROUNDABOUT

AM Peak

	Junction Arm
A	A5 N
B	A4303 E
C	A5 S
D	B4027 S
E	Coal Pit Lane W

FURNESSED FLOWS

2023 Observed Flows

	A	B	C	D	E	TOTAL
A	0	437	503	48	4	992
B	332	0	226	223	76	857
C	216	234	2	13	62	527
D	40	154	19	0	1	214
E	20	149	80	6	0	255
TOTAL	608	974	830	290	143	**2845**

WoD 2036 FINAL MATIX

	A	B	C	D	E	TOTAL
A	0	573	330	43	4	950
B	622	0	217	311	112	1262
C	288	316	2	13	70	689
D	122	455	29	0	2	608
E	37	272	72	19	0	400
TOTAL	1069	1616	650	386	188	**3909**

WoDWS 2036 FINAL MATIX

	A	B	C	D	E	TOTAL
A	0	581	330	41	4	956
B	632	0	221	305	113	1271
C	285	320	2	12	63	682
D	116	453	27	0	2	598
E	34	267	69	19	0	389
TOTAL	1067	1621	649	377	182	**3896**

WD 2036 FINAL MATIX

	A	B	C	D	E	TOTAL
A	0	522	353	32	6	913
B	661	0	239	310	106	1316
C	336	324	2	12	62	736
D	120	464	31	0	2	617
E	42	322	85	20	0	469
TOTAL	1159	1632	710	374	176	**4051**

DEVELOPMENT FLOWS FINAL MATIX

	A	B	C	D	E	TOTAL
A	0	-51	23	-11	2	-37
B	39	0	22	-1	-6	54
C	48	8	0	-1	-8	47
D	-2	9	2	0	0	9
E	5	50	13	1	0	69
TOTAL	90	16	60	-12	-12	**142**

RE-FURNESSED FLOWS

		A	B	C	D	E	TOTAL
A	A5 N	A	0	437	503	48	4	992
B	A4303 E	B	332	0	226	223	76	857
C	A5 S	C	216	234	2	13	62	527
D	B4027 S	D	40	154	19	0	1	214
E	Coal Pit Lane W	E	20	149	80	6	0	255
		TOTAL	608	974	830	290	143	**2845**

37.39% Increase (Growth)

	A	B	C	D	E	TOTAL
A	0	600	691	66	5	1363
B	456	0	311	306	104	1177
C	297	321	3	18	85	724
D	55	212	26	0	1	294
E	27	205	110	8	0	350
TOTAL	835	1338	1140	398	196	**3909**

	A	B	C	D	E	TOTAL
A	0	608	691	64	5	1369
B	466	0	315	300	105	1186
C	294	325	3	17	78	717
D	49	210	24	0	1	284
E	24	200	107	8	0	339
TOTAL	833	1343	1139	389	190	**3896**

	A	B	C	D	E	TOTAL
A	0	549	714	55	7	1326
B	495	0	333	305	98	1231
C	345	329	3	17	77	771
D	53	221	28	0	1	303
E	32	255	123	9	0	419
TOTAL	925	1354	1200	386	184	**4051**

	A	B	C	D	E	TOTAL
A	0	-51	23	-11	2	-37
B	39	0	22	-1	-6	54
C	48	8	0	-1	-8	47
D	-2	9	2	0	0	9
E	5	50	13	1	0	69
TOTAL	90	16	60	-12	-12	**142**

FLOW DIFFERENCE

		A	B	C	D	E	TOTAL
A	A5 N	A	0	27	361	23	1	413
B	A4303 E	B	-166	0	94	-5	-8	-85
C	A5 S	C	9	5	1	5	15	35
D	B4027 S	D	-67	-243	-3	0	-1	-314
E	Coal Pit Lane W	E	-10	-67	38	-11	0	-50
		TOTAL	-234	-278	490	12	8	**0**

	A	B	C	D	E	TOTAL
A	0	27	361	23	1	413
B	-166	0	94	-5	-8	-85
C	9	5	1	5	15	35
D	-67	-243	-3	0	-1	-314
E	-10	-67	38	-11	0	-50
TOTAL	-234	-278	490	12	8	**0**

	A	B	C	D	E	TOTAL
A	0	27	361	23	1	413
B	-166	0	94	-5	-8	-85
C	9	5	1	5	15	35
D	-67	-243	-3	0	-1	-314
E	-10	-67	38	-11	0	-50
TOTAL	-234	-278	490	12	8	**0**

PM Peak

	Junction Arm
A	A5 N
B	A4303 E
C	A5 S
D	B4027 S
E	Coal Pit Lane W

FURNESSED FLOWS

2023 Observed Flows

	A	B	C	D	E	TOTAL
A	0	262	337	26	4	629
B	405	0	236	128	130	899
C	418	203	0	17	108	746
D	74	277	3	0	7	361
E	5	79	43	1	0	128
TOTAL	902	821	619	172	249	**2763**

WoD 2036 FINAL MATIX

	A	B	C	D	E	TOTAL
A	0	539	372	102	7	1020
B	623	0	209	382	247	1461
C	353	214	0	24	109	700
D	87	370	2	0	10	469
E	6	107	36	2	0	151
TOTAL	1069	1230	619	510	373	**3801**

WoDWS 2036 FINAL MATIX

	A	B	C	D	E	TOTAL
A	0	571	367	94	6	1038
B	630	0	218	368	241	1457
C	354	229	0	23	106	712
D	72	336	2	0	12	422
E	6	101	32	2	0	141
TOTAL	1062	1237	619	487	365	**3770**

WD 2036 FINAL MATIX

	A	B	C	D	E	TOTAL
A	0	578	403	123	7	1111
B	626	0	191	379	240	1436
C	409	213	0	25	110	757
D	88	349	2	0	12	451
E	6	101	34	3	0	144
TOTAL	1129	1241	630	530	369	**3899**

DEVELOPMENT FLOWS FINAL MATIX

	A	B	C	D	E	TOTAL
A	0	39	31	21	0	91
B	3	0	-18	-3	-7	-25
C	56	-1	0	1	1	57
D	1	-21	0	0	2	-18
E	0	-6	-2	1	0	-7
TOTAL	60	11	11	20	-4	**98**

RE-FURNESSED FLOWS

		A	B	C	D	E	TOTAL
A	A5 N	A	0	262	337	26	4	629
B	A4303 E	B	405	0	236	128	130	899
C	A5 S	C	418	203	0	17	108	746
D	B4027 S	D	74	277	3	0	7	361
E	Coal Pit Lane W	E	5	79	43	1	0	128
		TOTAL	902	821	619	172	249	**2763**

	A	B	C	D	E	TOTAL
A	0	360	464	36	6	865
B	557	0	325	176	179	1237
C	575	279	0	23	149	1026
D	102	381	4	0	10	497
E	7	109	59	1	0	176
TOTAL	1241	1129	851	237	343	**3801**

	A	B	C	D	E	TOTAL
A	0	392	459	28	5	883
B	564	0	334	162	173	1233
C	576	294	0	22	146	1038
D	87	347	4	0	12	450
E	7	103	55	1	0	166
TOTAL	1234	1136	851	214	335	**3770**

	A	B	C	D	E	TOTAL
A	0	399	495	57	6	956
B	560	0	307	173	172	1212
C	631	278	0	24	150	1083
D	103	360	4	0	12	479
E	7	103	57	2	0	169
TOTAL	1301	1140	862	257	339	**3899**

	A	B	C	D	E	TOTAL
A	0	39	31	21	0	91
B	3	0	-18	-3	-7	-25
C	56	-1	0	1	1	57
D	1	-21	0	0	2	-18
E	0	-6	-2	1	0	-7
TOTAL	60	11	11	20	-4	**98**

37.56% Increase (Growth)

FLOW DIFFERENCE

		A	B	C	D	E	TOTAL
A	A5 N	A	0	-179	92	-66	-1	-155
B	A4303 E	B	-66	0	116	-206	-68	-224
C	A5 S	C	222	65	0	-1	40	326
D	B4027 S	D	15	11	2	0	0	28
E	Coal Pit Lane W	E	1	2	23	-1	0	25
		TOTAL	172	-101	232	-273	-30	**0**

	A	B	C	D	E	TOTAL
A	0	-179	92	-66	-1	-155
B	-66	0	116	-206	-68	-224
C	222	65	0	-1	40	326
D	15	11	2	0	0	28
E	1	2	23	-1	0	25
TOTAL	172	-101	232	-273	-30	**0**

	A	B	C	D	E	TOTAL
A	0	-179	92	-66	-1	-155
B	-66	0	116	-206	-68	-224
C	222	65	0	-1	40	326
D	15	11	2	0	0	28
E	1	2	23	-1	0	25
TOTAL	172	-101	232	-273	-30	**0**

SPREADSHEET 3 - REASSIGNMENT OF TRAFFIC AT CROSS-IN-HANDS ROUNDABOUT (FULL JUNCTION REASSIGNMENT)

Appendices

Appendix 1: Existing Gibbet Roundabout J10 Output (A5S Reassignment)

Junctions 10

ARCADY 10 - Roundabout Module

Version: 10.0.2.1574

For sales and distribution information, program advice and maintenance, contact TRL Software:
+44 (0)1344 379777 software@trl.co.uk trlsoftware.com

Filename: J26 231214 - A5_A426_Gibbet Lane (existing) NH Sens.j10
Path: X:\NTT\NTT2814_Hinckley Rail Freight Interchange\02. Project Delivery\01. WIP\Design and Calculations\T&I Planning\04 Junction Modelling\J26_JTC 47 - A5 - A426 - Gibbet Lane
Report generation date: 06/02/2024 19:21:21

Summary of junction performance

	AM						PM					
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity
	2023											
A - A5 (North)	D1	1.6	6.19	0.61	A	12 % [C - Gibbet Lane]	D2	0.9	4.91	0.48	A	24 % [E - A426]
B - Rugby Road		1.4	6.36	0.58	A			0.9	4.55	0.47	A	
C - Gibbet Lane		0.6	18.54	0.38	C			0.3	11.67	0.26	B	
D - A5 (South)		2.7	11.82	0.74	B			1.6	7.53	0.62	A	
E - A426		0.7	4.43	0.41	A			2.3	8.71	0.70	A	
	2036 WoD											
A - A5 (North)	D3	1.0	4.77	0.49	A	-12 % [D - A5 (South)]	D4	1.0	5.55	0.51	A	-6 % [D - A5 (South)]
B - Rugby Road		1.0	4.97	0.49	A			1.5	6.26	0.60	A	
C - Gibbet Lane		14.0	126.76	1.00	F			1.3	25.17	0.57	D	
D - A5 (South)		72.9	193.13	1.12	F			26.2	77.59	1.01	F	
E - A426		0.7	4.87	0.42	A			3.4	13.30	0.78	B	
	2036 WoDWS											
A - A5 (North)	D5	1.0	4.74	0.49	A	-12 % [D - A5 (South)]	D6	1.0	5.39	0.51	A	-5 % [D - A5 (South)]
B - Rugby Road		1.0	4.96	0.49	A			1.5	6.16	0.60	A	
C - Gibbet Lane		13.3	122.06	1.00	F			1.2	23.93	0.55	C	
D - A5 (South)		71.6	189.53	1.12	F			23.2	70.24	1.00	F	
E - A426		0.7	4.75	0.41	A			3.1	12.23	0.76	B	
	2036 WD											
A - A5 (North)	D7	1.1	5.06	0.53	A	-14 % [C - Gibbet Lane]	D8	1.1	5.71	0.53	A	-7 % [D - A5 (South)]
B - Rugby Road		1.0	5.27	0.51	A			1.5	6.39	0.61	A	
C - Gibbet Lane		26.4	215.94	1.10	F			1.5	27.97	0.60	D	
D - A5 (South)		77.8	206.26	1.13	F			33.2	92.00	1.03	F	
E - A426		0.7	4.79	0.41	A			3.9	15.07	0.80	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. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

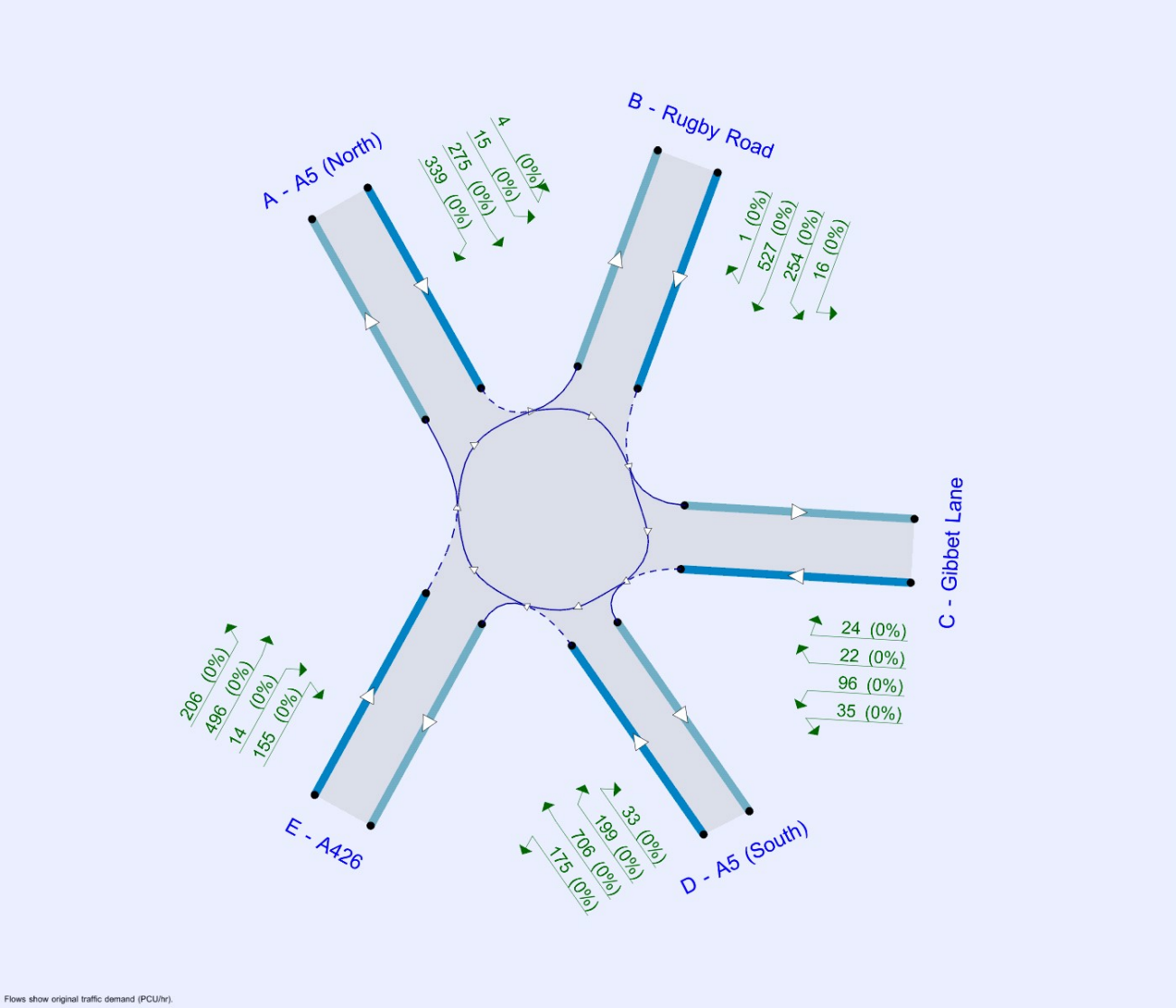
File summary

File Description

Title	J47 - A5/A426/Gibbet Lane
Location	
Site number	J47
Date	18/12/2020
Version	V0.1
Status	Existing
Identifier	
Client	
Jobnumber	NTT2814
Enumerator	BWB
Description	

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	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2023	AM	Observed Flows	ONE HOUR	07:45	09:15	15	✓
D2	2023	PM	Observed Flows	ONE HOUR	16:45	18:15	15	✓
D3	2036 WoD	AM	PRTM 2.2 Demand Flows	ONE HOUR	07:45	09:15	15	✓
D4	2036 WoD	PM	PRTM 2.2 Demand Flows	ONE HOUR	16:45	18:15	15	✓
D5	2036 WoDWS	AM	PRTM 2.2 Demand Flows	ONE HOUR	07:45	09:15	15	✓
D6	2036 WoDWS	PM	PRTM 2.2 Demand Flows	ONE HOUR	16:45	18:15	15	✓
D7	2036 WD	AM	PRTM 2.2 Demand Flows	ONE HOUR	07:45	09:15	15	✓
D8	2036 WD	PM	PRTM 2.2 Demand Flows	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2023, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	B - Rugby Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J47	A5/A426/Gibbet Lane	Standard Roundabout		A, B, C, D, E	7.84	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	12	C - Gibbet Lane	7.84	A

Arms

Arms

Arm	Name	Description	No give-way line
A	A5 (North)		
B	Rugby Road		
C	Gibbet Lane		
D	A5 (South)		
E	A426		

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
A - A5 (North)	3.86	8.86	15.8	28.0	70.0	43.0		
B - Rugby Road	3.20	6.69	54.0	45.0	71.0	20.0		
C - Gibbet Lane	2.65	5.50	3.2	7.7	73.0	33.0		
D - A5 (South)	3.95	7.46	17.0	30.0	70.0	44.0		
E - A426	3.42	6.38	25.8	35.0	71.0	27.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - A5 (North)	0.524	1862
B - Rugby Road	0.556	1960
C - Gibbet Lane	0.356	936
D - A5 (South)	0.510	1778
E - A426	0.516	1745

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2023	AM	Observed Flows	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 - A5 (North)		ONE HOUR	✓	842	100.000
B - Rugby Road		ONE HOUR	✓	713	100.000
C - Gibbet Lane		ONE HOUR	✓	106	100.000
D - A5 (South)		ONE HOUR	✓	777	100.000
E - A426		ONE HOUR	✓	523	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	5	32	353	452
	B - Rugby Road	2	0	25	139	547
	C - Gibbet Lane	20	23	1	5	57
	D - A5 (South)	328	219	32	5	193
	E - A426	189	215	19	100	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	0	0	0	0
	B - Rugby Road	0	0	0	0	0
	C - Gibbet Lane	0	0	0	0	0
	D - A5 (South)	0	0	0	0	0
	E - A426	0	0	0	0	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)
A - A5 (North)	0.61	6.19	1.6	A	773	1159
B - Rugby Road	0.58	6.36	1.4	A	654	981
C - Gibbet Lane	0.38	18.54	0.6	C	97	146
D - A5 (South)	0.74	11.82	2.7	B	713	1069
E - A426	0.41	4.43	0.7	A	480	720

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	634	158	460	1621	0.391	631	404	0.0	0.6	3.627	A
B - Rugby Road	537	134	745	1545	0.347	535	346	0.0	0.5	3.554	A
C - Gibbet Lane	80	20	1198	510	0.156	79	82	0.0	0.2	8.335	A
D - A5 (South)	585	146	826	1357	0.431	582	451	0.0	0.8	4.630	A
E - A426	394	98	472	1502	0.262	392	936	0.0	0.4	3.239	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	757	189	551	1574	0.481	756	484	0.6	0.9	4.394	A
B - Rugby Road	641	160	892	1464	0.438	640	415	0.5	0.8	4.365	A
C - Gibbet Lane	95	24	1434	426	0.224	95	98	0.2	0.3	10.851	B
D - A5 (South)	699	175	989	1273	0.549	697	540	0.8	1.2	6.224	A
E - A426	470	118	565	1454	0.323	470	1121	0.4	0.5	3.655	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	927	232	673	1510	0.614	924	590	0.9	1.6	6.123	A
B - Rugby Road	785	196	1091	1353	0.580	783	506	0.8	1.4	6.288	A
C - Gibbet Lane	117	29	1754	312	0.374	116	120	0.3	0.6	18.175	C
D - A5 (South)	855	214	1209	1161	0.737	850	661	1.2	2.7	11.343	B
E - A426	576	144	689	1390	0.414	575	1370	0.5	0.7	4.411	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	927	232	676	1508	0.615	927	593	1.6	1.6	6.188	A
B - Rugby Road	785	196	1094	1351	0.581	785	509	1.4	1.4	6.358	A
C - Gibbet Lane	117	29	1759	311	0.376	117	120	0.6	0.6	18.538	C
D - A5 (South)	855	214	1213	1159	0.738	855	663	2.7	2.7	11.819	B
E - A426	576	144	693	1388	0.415	576	1375	0.7	0.7	4.433	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	757	189	555	1572	0.482	760	488	1.6	0.9	4.444	A
B - Rugby Road	641	160	897	1461	0.439	643	418	1.4	0.8	4.414	A
C - Gibbet Lane	95	24	1441	424	0.225	96	98	0.6	0.3	11.040	B
D - A5 (South)	699	175	995	1270	0.550	705	543	2.7	1.2	6.427	A
E - A426	470	118	571	1451	0.324	471	1128	0.7	0.5	3.680	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	634	158	463	1620	0.391	635	407	0.9	0.6	3.659	A
B - Rugby Road	537	134	750	1543	0.348	538	349	0.8	0.5	3.587	A
C - Gibbet Lane	80	20	1205	508	0.157	80	82	0.3	0.2	8.428	A
D - A5 (South)	585	146	831	1354	0.432	587	454	1.2	0.8	4.705	A
E - A426	394	98	476	1500	0.263	394	942	0.5	0.4	3.259	A

2023, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	B - Rugby Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J47	A5/A426/Gibbet Lane	Standard Roundabout		A, B, C, D, E	6.84	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	24	E - A426	6.84	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2023	PM	Observed Flows	ONE HOUR	16:45	18:15	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 - A5 (North)		ONE HOUR	✓	622	100.000
B - Rugby Road		ONE HOUR	✓	630	100.000
C - Gibbet Lane		ONE HOUR	✓	98	100.000
D - A5 (South)		ONE HOUR	✓	721	100.000
E - A426		ONE HOUR	✓	887	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	5	25	230	362
	B - Rugby Road	1	0	16	163	450
	C - Gibbet Lane	20	19	0	13	46
	D - A5 (South)	432	125	23	7	134
	E - A426	290	468	14	111	4

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	0	0	0	0
	B - Rugby Road	0	0	0	0	0
	C - Gibbet Lane	0	0	0	0	0
	D - A5 (South)	0	0	0	0	0
	E - A426	0	0	0	0	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)
A - A5 (North)	0.48	4.91	0.9	A	571	856
B - Rugby Road	0.47	4.55	0.9	A	578	867
C - Gibbet Lane	0.26	11.67	0.3	B	90	135
D - A5 (South)	0.62	7.53	1.6	A	662	992
E - A426	0.70	8.71	2.3	A	814	1221

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	468	117	578	1560	0.300	467	557	0.0	0.4	3.289	A
B - Rugby Road	474	119	582	1636	0.290	473	462	0.0	0.4	3.090	A
C - Gibbet Lane	74	18	996	582	0.127	73	58	0.0	0.1	7.067	A
D - A5 (South)	543	136	676	1433	0.379	540	393	0.0	0.6	4.023	A
E - A426	668	167	470	1503	0.444	665	747	0.0	0.8	4.277	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	559	140	692	1500	0.373	559	667	0.4	0.6	3.821	A
B - Rugby Road	566	142	697	1572	0.360	566	554	0.4	0.6	3.574	A
C - Gibbet Lane	88	22	1192	512	0.172	88	70	0.1	0.2	8.475	A
D - A5 (South)	648	162	810	1365	0.475	647	470	0.6	0.9	5.007	A
E - A426	797	199	563	1455	0.548	796	894	0.8	1.2	5.446	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	685	171	845	1420	0.482	684	815	0.6	0.9	4.880	A
B - Rugby Road	694	173	852	1486	0.467	692	676	0.6	0.9	4.538	A
C - Gibbet Lane	108	27	1459	417	0.258	107	86	0.2	0.3	11.587	B
D - A5 (South)	794	198	991	1272	0.624	791	575	0.9	1.6	7.433	A
E - A426	977	244	688	1391	0.702	972	1094	1.2	2.3	8.516	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	685	171	849	1418	0.483	685	818	0.9	0.9	4.910	A
B - Rugby Road	694	173	854	1485	0.467	694	679	0.9	0.9	4.550	A
C - Gibbet Lane	108	27	1462	416	0.259	108	86	0.3	0.3	11.668	B
D - A5 (South)	794	198	993	1271	0.624	794	577	1.6	1.6	7.535	A
E - A426	977	244	690	1389	0.703	976	1097	2.3	2.3	8.709	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	559	140	697	1498	0.373	560	671	0.9	0.6	3.846	A
B - Rugby Road	566	142	700	1571	0.361	568	558	0.9	0.6	3.595	A
C - Gibbet Lane	88	22	1197	511	0.173	89	70	0.3	0.2	8.541	A
D - A5 (South)	648	162	813	1363	0.475	651	473	1.6	0.9	5.077	A
E - A426	797	199	566	1453	0.549	802	898	2.3	1.2	5.563	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	468	117	582	1558	0.301	469	561	0.6	0.4	3.310	A
B - Rugby Road	474	119	585	1634	0.290	475	466	0.6	0.4	3.108	A
C - Gibbet Lane	74	18	1001	580	0.127	74	59	0.2	0.1	7.116	A
D - A5 (South)	543	136	680	1431	0.379	544	395	0.9	0.6	4.063	A
E - A426	668	167	473	1501	0.445	669	751	1.2	0.8	4.336	A

2036 WoD, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	B - Rugby Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J47	A5/A426/Gibbet Lane	Standard Roundabout		A, B, C, D, E	82.49	F

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	-12	D - A5 (South)	82.49	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2036 WoD	AM	PRTM 2.2 Demand Flows	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 - A5 (North)		ONE HOUR	✓	660	100.000
B - Rugby Road		ONE HOUR	✓	638	100.000
C - Gibbet Lane		ONE HOUR	✓	365	100.000
D - A5 (South)		ONE HOUR	✓	1107	100.000
E - A426		ONE HOUR	✓	488	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	1	32	245	382
	B - Rugby Road	1	0	30	101	506
	C - Gibbet Lane	46	36	6	10	267
	D - A5 (South)	467	312	46	7	275
	E - A426	191	138	33	126	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	0	0	0	0
	B - Rugby Road	0	0	0	0	0
	C - Gibbet Lane	0	0	0	0	0
	D - A5 (South)	0	0	0	0	0
	E - A426	0	0	0	0	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)
A - A5 (North)	0.49	4.77	1.0	A	606	908
B - Rugby Road	0.49	4.97	1.0	A	585	878
C - Gibbet Lane	1.00	126.76	14.0	F	335	502
D - A5 (South)	1.12	193.13	72.9	F	1016	1524
E - A426	0.42	4.87	0.7	A	448	672

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	497	124	526	1587	0.313	495	527	0.0	0.5	3.292	A
B - Rugby Road	480	120	658	1594	0.301	479	364	0.0	0.4	3.223	A
C - Gibbet Lane	275	69	1026	571	0.481	271	110	0.0	0.9	11.855	B
D - A5 (South)	833	208	931	1303	0.640	826	367	0.0	1.7	7.449	A
E - A426	367	92	687	1391	0.264	366	1070	0.0	0.4	3.508	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	593	148	629	1533	0.387	593	629	0.5	0.6	3.826	A
B - Rugby Road	574	143	787	1522	0.377	573	434	0.4	0.6	3.791	A
C - Gibbet Lane	328	82	1228	500	0.657	325	132	0.9	1.8	20.159	C
D - A5 (South)	995	249	1114	1210	0.823	985	439	1.7	4.2	15.383	C
E - A426	439	110	820	1323	0.332	438	1279	0.4	0.5	4.067	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	727	182	725	1483	0.490	725	713	0.6	1.0	4.744	A
B - Rugby Road	702	176	957	1428	0.492	701	493	0.6	1.0	4.944	A
C - Gibbet Lane	402	100	1502	402	1.000	370	155	1.8	9.8	77.141	F
D - A5 (South)	1219	305	1337	1096	1.112	1078	536	4.2	39.4	85.094	F
E - A426	537	134	901	1281	0.419	536	1514	0.5	0.7	4.829	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	727	182	729	1481	0.491	727	718	1.0	1.0	4.774	A
B - Rugby Road	702	176	959	1426	0.492	702	497	1.0	1.0	4.971	A
C - Gibbet Lane	402	100	1505	401	1.002	385	156	9.8	14.0	126.762	F
D - A5 (South)	1219	305	1353	1088	1.121	1085	537	39.4	72.9	193.127	F
E - A426	537	134	909	1276	0.421	537	1529	0.7	0.7	4.870	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	593	148	695	1498	0.396	595	713	1.0	0.7	3.988	A
B - Rugby Road	574	143	799	1516	0.378	575	491	1.0	0.6	3.832	A
C - Gibbet Lane	328	82	1234	498	0.659	376	140	14.0	2.1	38.839	E
D - A5 (South)	995	249	1166	1183	0.841	1167	443	72.9	29.9	161.254	F
E - A426	439	110	969	1246	0.352	439	1365	0.7	0.5	4.469	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	497	124	568	1565	0.317	498	579	0.7	0.5	3.377	A
B - Rugby Road	480	120	667	1589	0.302	481	399	0.6	0.4	3.250	A
C - Gibbet Lane	275	69	1032	569	0.483	279	116	2.1	1.0	12.605	B
D - A5 (South)	833	208	942	1297	0.642	946	370	29.9	1.9	14.005	B
E - A426	367	92	779	1344	0.273	368	1109	0.5	0.4	3.691	A

2036 WoD, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	B - Rugby Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J47	A5/A426/Gibbet Lane	Standard Roundabout		A, B, C, D, E	30.69	D

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	-6	D - A5 (South)	30.69	D

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2036 WoD	PM	PRTM 2.2 Demand Flows	ONE HOUR	16:45	18:15	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 - A5 (North)		ONE HOUR	✓	623	100.000
B - Rugby Road		ONE HOUR	✓	787	100.000
C - Gibbet Lane		ONE HOUR	✓	168	100.000
D - A5 (South)		ONE HOUR	✓	1088	100.000
E - A426		ONE HOUR	✓	875	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	3	15	246	359
	B - Rugby Road	1	0	17	220	549
	C - Gibbet Lane	22	20	0	33	93
	D - A5 (South)	651	189	35	11	202
	E - A426	207	485	13	166	4

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	0	0	0	0
	B - Rugby Road	0	0	0	0	0
	C - Gibbet Lane	0	0	0	0	0
	D - A5 (South)	0	0	0	0	0
	E - A426	0	0	0	0	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)
A - A5 (North)	0.51	5.55	1.0	A	572	858
B - Rugby Road	0.60	6.26	1.5	A	722	1083
C - Gibbet Lane	0.57	25.17	1.3	D	154	231
D - A5 (South)	1.01	77.59	26.2	F	998	1498
E - A426	0.78	13.30	3.4	B	803	1204

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	469	117	691	1501	0.313	467	659	0.0	0.5	3.477	A
B - Rugby Road	592	148	636	1606	0.369	590	522	0.0	0.6	3.537	A
C - Gibbet Lane	126	32	1167	521	0.243	125	60	0.0	0.3	9.056	A
D - A5 (South)	819	205	785	1377	0.595	813	507	0.0	1.4	6.322	A
E - A426	659	165	694	1387	0.475	655	904	0.0	0.9	4.895	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	560	140	827	1430	0.392	559	788	0.5	0.6	4.133	A
B - Rugby Road	707	177	762	1536	0.461	706	624	0.6	0.8	4.333	A
C - Gibbet Lane	151	38	1397	440	0.343	150	72	0.3	0.5	12.397	B
D - A5 (South)	978	245	940	1298	0.753	972	606	1.4	2.9	10.845	B
E - A426	787	197	830	1317	0.597	784	1082	0.9	1.5	6.728	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	686	171	997	1340	0.512	684	932	0.6	1.0	5.477	A
B - Rugby Road	867	217	929	1443	0.600	864	753	0.8	1.5	6.190	A
C - Gibbet Lane	185	46	1707	329	0.562	182	86	0.5	1.2	24.035	C
D - A5 (South)	1198	299	1149	1192	1.005	1138	740	2.9	17.9	44.600	E
E - A426	963	241	973	1243	0.775	956	1314	1.5	3.2	12.239	B

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	686	171	1008	1334	0.514	686	950	1.0	1.0	5.551	A
B - Rugby Road	867	217	933	1441	0.601	866	761	1.5	1.5	6.265	A
C - Gibbet Lane	185	46	1713	327	0.565	185	87	1.2	1.3	25.175	D
D - A5 (South)	1198	299	1154	1189	1.007	1165	744	17.9	26.2	77.593	F
E - A426	963	241	996	1232	0.782	963	1323	3.2	3.4	13.298	B

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	560	140	855	1414	0.396	562	849	1.0	0.7	4.230	A
B - Rugby Road	707	177	770	1531	0.462	710	647	1.5	0.9	4.397	A
C - Gibbet Lane	151	38	1405	437	0.346	154	75	1.3	0.5	12.855	B
D - A5 (South)	978	245	947	1295	0.755	1070	612	26.2	3.3	22.104	C
E - A426	787	197	910	1276	0.617	794	1106	3.4	1.6	7.579	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	469	117	699	1497	0.313	470	668	0.7	0.5	3.511	A
B - Rugby Road	592	148	641	1603	0.370	594	528	0.9	0.6	3.567	A
C - Gibbet Lane	126	32	1174	519	0.244	127	61	0.5	0.3	9.213	A
D - A5 (South)	819	205	791	1374	0.596	826	510	3.3	1.5	6.651	A
E - A426	659	165	705	1382	0.477	662	912	1.6	0.9	5.022	A

2036 WoDWS, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	B - Rugby Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J47	A5/A426/Gibbet Lane	Standard Roundabout		A, B, C, D, E	81.03	F

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	-12	D - A5 (South)	81.03	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2036 WoDWS	AM	PRTM 2.2 Demand Flows	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 - A5 (North)		ONE HOUR	✓	662	100.000
B - Rugby Road		ONE HOUR	✓	639	100.000
C - Gibbet Lane		ONE HOUR	✓	363	100.000
D - A5 (South)		ONE HOUR	✓	1108	100.000
E - A426		ONE HOUR	✓	472	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	1	34	250	377
	B - Rugby Road	1	0	30	103	505
	C - Gibbet Lane	46	36	5	10	266
	D - A5 (South)	466	311	46	7	278
	E - A426	186	133	29	124	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	0	0	0	0
	B - Rugby Road	0	0	0	0	0
	C - Gibbet Lane	0	0	0	0	0
	D - A5 (South)	0	0	0	0	0
	E - A426	0	0	0	0	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)
A - A5 (North)	0.49	4.74	1.0	A	607	911
B - Rugby Road	0.49	4.96	1.0	A	586	880
C - Gibbet Lane	1.00	122.06	13.3	F	333	500
D - A5 (South)	1.12	189.53	71.6	F	1017	1525
E - A426	0.41	4.75	0.7	A	433	650

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	498	125	517	1592	0.313	497	522	0.0	0.5	3.281	A
B - Rugby Road	481	120	654	1596	0.301	479	359	0.0	0.4	3.219	A
C - Gibbet Lane	273	68	1025	572	0.478	270	108	0.0	0.9	11.790	B
D - A5 (South)	834	209	925	1306	0.639	827	370	0.0	1.7	7.413	A
E - A426	355	89	685	1392	0.255	354	1067	0.0	0.3	3.463	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	595	149	617	1539	0.387	594	624	0.5	0.6	3.809	A
B - Rugby Road	574	144	783	1525	0.377	574	429	0.4	0.6	3.784	A
C - Gibbet Lane	326	82	1227	500	0.653	323	129	0.9	1.8	19.940	C
D - A5 (South)	996	249	1107	1213	0.821	986	443	1.7	4.2	15.222	C
E - A426	424	106	817	1324	0.320	424	1276	0.3	0.5	3.998	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	729	182	711	1490	0.489	728	707	0.6	0.9	4.715	A
B - Rugby Road	704	176	951	1431	0.492	702	487	0.6	1.0	4.931	A
C - Gibbet Lane	400	100	1501	402	0.993	369	152	1.8	9.4	75.239	F
D - A5 (South)	1220	305	1329	1100	1.109	1082	541	4.2	38.8	83.798	F
E - A426	520	130	900	1281	0.406	519	1511	0.5	0.7	4.717	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	729	182	716	1488	0.490	729	712	0.9	1.0	4.744	A
B - Rugby Road	704	176	954	1429	0.492	704	491	1.0	1.0	4.959	A
C - Gibbet Lane	400	100	1504	401	0.996	384	153	9.4	13.3	122.062	F
D - A5 (South)	1220	305	1346	1091	1.118	1089	543	38.8	71.6	189.527	F
E - A426	520	130	909	1277	0.407	520	1526	0.7	0.7	4.755	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	595	149	684	1504	0.396	596	708	1.0	0.7	3.970	A
B - Rugby Road	574	144	794	1518	0.378	576	486	1.0	0.6	3.828	A
C - Gibbet Lane	326	82	1233	498	0.655	371	138	13.3	2.1	36.772	E
D - A5 (South)	996	249	1157	1188	0.839	1172	447	71.6	27.7	155.621	F
E - A426	424	106	967	1246	0.340	425	1361	0.7	0.5	4.387	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	498	125	555	1572	0.317	499	571	0.7	0.5	3.360	A
B - Rugby Road	481	120	662	1591	0.302	482	392	0.6	0.4	3.245	A
C - Gibbet Lane	273	68	1031	570	0.480	278	113	2.1	0.9	12.513	B
D - A5 (South)	834	209	936	1301	0.641	938	373	27.7	1.8	13.119	B
E - A426	355	89	770	1348	0.264	356	1104	0.5	0.4	3.631	A

2036 WoDWS, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	B - Rugby Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J47	A5/A426/Gibbet Lane	Standard Roundabout		A, B, C, D, E	28.10	D

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	-5	D - A5 (South)	28.10	D

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2036 WoDWS	PM	PRTM 2.2 Demand Flows	ONE HOUR	16:45	18:15	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 - A5 (North)		ONE HOUR	✓	622	100.000
B - Rugby Road		ONE HOUR	✓	788	100.000
C - Gibbet Lane		ONE HOUR	✓	164	100.000
D - A5 (South)		ONE HOUR	✓	1082	100.000
E - A426		ONE HOUR	✓	850	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	4	15	250	353
	B - Rugby Road	1	0	14	225	548
	C - Gibbet Lane	21	21	0	31	91
	D - A5 (South)	663	186	28	11	194
	E - A426	206	471	13	156	4

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	0	0	0	0
	B - Rugby Road	0	0	0	0	0
	C - Gibbet Lane	0	0	0	0	0
	D - A5 (South)	0	0	0	0	0
	E - A426	0	0	0	0	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)
A - A5 (North)	0.51	5.39	1.0	A	571	856
B - Rugby Road	0.60	6.16	1.5	A	723	1085
C - Gibbet Lane	0.55	23.93	1.2	C	150	226
D - A5 (South)	1.00	70.24	23.2	F	993	1489
E - A426	0.76	12.23	3.1	B	780	1170

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	468	117	666	1514	0.309	466	666	0.0	0.4	3.432	A
B - Rugby Road	593	148	622	1614	0.368	591	510	0.0	0.6	3.512	A
C - Gibbet Lane	123	31	1161	524	0.236	122	52	0.0	0.3	8.944	A
D - A5 (South)	815	204	779	1381	0.590	809	504	0.0	1.4	6.236	A
E - A426	640	160	696	1386	0.462	637	892	0.0	0.8	4.780	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	559	140	797	1445	0.387	558	797	0.4	0.6	4.057	A
B - Rugby Road	708	177	745	1546	0.458	707	611	0.6	0.8	4.289	A
C - Gibbet Lane	147	37	1389	442	0.333	147	63	0.3	0.5	12.152	B
D - A5 (South)	973	243	932	1302	0.747	967	604	1.4	2.8	10.561	B
E - A426	764	191	832	1316	0.581	762	1067	0.8	1.4	6.472	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	685	171	964	1358	0.504	683	946	0.6	1.0	5.325	A
B - Rugby Road	868	217	909	1454	0.597	865	738	0.8	1.5	6.086	A
C - Gibbet Lane	181	45	1699	332	0.543	178	75	0.5	1.1	22.970	C
D - A5 (South)	1191	298	1139	1197	0.995	1137	737	2.8	16.4	41.822	E
E - A426	936	234	980	1240	0.755	930	1296	1.4	2.9	11.371	B

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	685	171	974	1352	0.506	685	964	1.0	1.0	5.391	A
B - Rugby Road	868	217	913	1452	0.597	868	746	1.5	1.5	6.157	A
C - Gibbet Lane	181	45	1704	330	0.546	180	76	1.1	1.2	23.934	C
D - A5 (South)	1191	298	1144	1194	0.997	1164	741	16.4	23.2	70.237	F
E - A426	936	234	1003	1228	0.762	935	1305	2.9	3.1	12.235	B

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	559	140	822	1432	0.390	561	852	1.0	0.6	4.139	A
B - Rugby Road	708	177	752	1542	0.459	711	631	1.5	0.9	4.345	A
C - Gibbet Lane	147	37	1397	439	0.336	150	65	1.2	0.5	12.551	B
D - A5 (South)	973	243	939	1299	0.749	1053	609	23.2	3.2	19.123	C
E - A426	764	191	903	1279	0.597	770	1088	3.1	1.5	7.156	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	468	117	673	1510	0.310	469	676	0.6	0.5	3.460	A
B - Rugby Road	593	148	626	1611	0.368	594	516	0.9	0.6	3.544	A
C - Gibbet Lane	123	31	1168	521	0.237	124	53	0.5	0.3	9.090	A
D - A5 (South)	815	204	784	1378	0.591	821	508	3.2	1.5	6.545	A
E - A426	640	160	707	1381	0.463	642	899	1.5	0.9	4.891	A

2036 WD, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	B - Rugby Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J47	A5/A426/Gibbet Lane	Standard Roundabout		A, B, C, D, E	96.42	F

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	-14	C - Gibbet Lane	96.42	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2036 WD	AM	PRTM 2.2 Demand Flows	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 - A5 (North)		ONE HOUR	✓	720	100.000
B - Rugby Road		ONE HOUR	✓	646	100.000
C - Gibbet Lane		ONE HOUR	✓	378	100.000
D - A5 (South)		ONE HOUR	✓	1115	100.000
E - A426		ONE HOUR	✓	469	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	1	40	287	392
	B - Rugby Road	1	0	31	105	509
	C - Gibbet Lane	53	35	6	12	272
	D - A5 (South)	499	300	44	11	261
	E - A426	199	120	28	122	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	0	0	0	0
	B - Rugby Road	0	0	0	0	0
	C - Gibbet Lane	0	0	0	0	0
	D - A5 (South)	0	0	0	0	0
	E - A426	0	0	0	0	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)
A - A5 (North)	0.53	5.06	1.1	A	661	991
B - Rugby Road	0.51	5.27	1.0	A	593	889
C - Gibbet Lane	1.10	215.94	26.4	F	347	520
D - A5 (South)	1.13	206.26	77.8	F	1023	1535
E - A426	0.41	4.79	0.7	A	430	646

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	542	136	498	1602	0.338	540	562	0.0	0.5	3.385	A
B - Rugby Road	486	122	697	1572	0.309	485	341	0.0	0.4	3.304	A
C - Gibbet Lane	285	71	1070	556	0.512	281	112	0.0	1.0	12.899	B
D - A5 (South)	839	210	948	1294	0.649	832	403	0.0	1.8	7.678	A
E - A426	353	88	708	1380	0.256	352	1072	0.0	0.3	3.495	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	647	162	594	1551	0.417	646	670	0.5	0.7	3.976	A
B - Rugby Road	581	145	834	1496	0.388	580	406	0.4	0.6	3.928	A
C - Gibbet Lane	340	85	1281	481	0.707	335	133	1.0	2.2	23.942	C
D - A5 (South)	1002	251	1134	1199	0.836	991	482	1.8	4.6	16.477	C
E - A426	422	105	843	1310	0.322	421	1282	0.3	0.5	4.045	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	793	198	679	1507	0.526	791	753	0.7	1.1	5.019	A
B - Rugby Road	711	178	1014	1396	0.510	710	456	0.6	1.0	5.235	A
C - Gibbet Lane	416	104	1566	379	1.097	362	157	2.2	15.7	112.376	F
D - A5 (South)	1228	307	1342	1094	1.123	1078	587	4.6	42.1	90.089	F
E - A426	516	129	917	1273	0.406	516	1503	0.5	0.7	4.750	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	793	198	683	1505	0.527	793	758	1.1	1.1	5.055	A
B - Rugby Road	711	178	1016	1395	0.510	711	460	1.0	1.0	5.267	A
C - Gibbet Lane	416	104	1570	378	1.101	373	158	15.7	26.4	215.940	F
D - A5 (South)	1228	307	1355	1087	1.130	1085	588	42.1	77.8	206.258	F
E - A426	516	129	925	1268	0.407	516	1515	0.7	0.7	4.786	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	647	162	651	1521	0.425	649	749	1.1	0.7	4.131	A
B - Rugby Road	581	145	846	1489	0.390	582	454	1.0	0.6	3.976	A
C - Gibbet Lane	340	85	1287	479	0.710	433	141	26.4	3.0	107.268	F
D - A5 (South)	1002	251	1233	1149	0.872	1135	488	77.8	44.8	195.260	F
E - A426	422	105	978	1241	0.340	422	1390	0.7	0.5	4.399	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	542	136	557	1571	0.345	543	644	0.7	0.5	3.507	A
B - Rugby Road	486	122	710	1565	0.311	487	390	0.6	0.5	3.341	A
C - Gibbet Lane	285	71	1078	553	0.515	292	119	3.0	1.1	14.176	B
D - A5 (South)	839	210	963	1287	0.652	1011	407	44.8	2.0	24.043	C
E - A426	353	88	848	1308	0.270	354	1126	0.5	0.4	3.775	A

2036 WD, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	B - Rugby Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J47	A5/A426/Gibbet Lane	Standard Roundabout		A, B, C, D, E	36.14	E

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	-7	D - A5 (South)	36.14	E

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2036 WD	PM	PRTM 2.2 Demand Flows	ONE HOUR	16:45	18:15	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 - A5 (North)		ONE HOUR	✓	633	100.000
B - Rugby Road		ONE HOUR	✓	798	100.000
C - Gibbet Lane		ONE HOUR	✓	177	100.000
D - A5 (South)		ONE HOUR	✓	1126	100.000
E - A426		ONE HOUR	✓	875	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	4	15	275	339
	B - Rugby Road	1	0	16	254	527
	C - Gibbet Lane	22	24	0	35	96
	D - A5 (South)	706	199	33	13	175
	E - A426	206	496	14	155	4

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	0	0	0	0
	B - Rugby Road	0	0	0	0	0
	C - Gibbet Lane	0	0	0	0	0
	D - A5 (South)	0	0	0	0	0
	E - A426	0	0	0	0	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)
A - A5 (North)	0.53	5.71	1.1	A	581	871
B - Rugby Road	0.61	6.39	1.5	A	732	1098
C - Gibbet Lane	0.60	27.97	1.5	D	162	244
D - A5 (South)	1.03	92.00	33.2	F	1033	1550
E - A426	0.80	15.07	3.9	C	803	1204

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	477	119	702	1495	0.319	475	699	0.0	0.5	3.523	A
B - Rugby Road	601	150	636	1606	0.374	598	541	0.0	0.6	3.565	A
C - Gibbet Lane	133	33	1176	518	0.257	132	58	0.0	0.3	9.285	A
D - A5 (South)	848	212	759	1391	0.610	842	549	0.0	1.5	6.485	A
E - A426	659	165	746	1361	0.484	655	855	0.0	0.9	5.075	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	569	142	840	1423	0.400	568	836	0.5	0.7	4.210	A
B - Rugby Road	717	179	761	1537	0.467	716	647	0.6	0.9	4.383	A
C - Gibbet Lane	159	40	1407	436	0.365	158	70	0.3	0.6	12.924	B
D - A5 (South)	1012	253	909	1314	0.770	1006	657	1.5	3.2	11.423	B
E - A426	787	197	891	1286	0.612	784	1023	0.9	1.5	7.142	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	697	174	1010	1333	0.523	695	981	0.7	1.1	5.626	A
B - Rugby Road	879	220	927	1444	0.608	876	778	0.9	1.5	6.309	A
C - Gibbet Lane	195	49	1720	325	0.600	192	84	0.6	1.4	26.388	D
D - A5 (South)	1240	310	1110	1212	1.023	1167	801	3.2	21.4	49.725	E
E - A426	963	241	1036	1211	0.796	955	1240	1.5	3.6	13.650	B

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	697	174	1022	1327	0.525	697	1000	1.1	1.1	5.709	A
B - Rugby Road	879	220	931	1442	0.609	879	787	1.5	1.5	6.389	A
C - Gibbet Lane	195	49	1726	323	0.604	195	84	1.4	1.5	27.970	D
D - A5 (South)	1240	310	1115	1209	1.025	1193	805	21.4	33.2	91.999	F
E - A426	963	241	1059	1199	0.803	962	1249	3.6	3.9	15.068	C

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	569	142	876	1404	0.405	571	917	1.1	0.7	4.330	A
B - Rugby Road	717	179	770	1531	0.468	720	676	1.5	0.9	4.450	A
C - Gibbet Lane	159	40	1417	433	0.368	163	74	1.5	0.6	13.496	B
D - A5 (South)	1012	253	916	1311	0.772	1130	663	33.2	3.7	31.122	D
E - A426	787	197	998	1231	0.639	795	1049	3.9	1.8	8.409	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	477	119	711	1490	0.320	477	710	0.7	0.5	3.556	A
B - Rugby Road	601	150	640	1604	0.375	602	548	0.9	0.6	3.596	A
C - Gibbet Lane	133	33	1183	516	0.258	134	59	0.6	0.4	9.462	A
D - A5 (South)	848	212	765	1388	0.611	856	553	3.7	1.6	6.870	A
E - A426	659	165	759	1354	0.486	662	862	1.8	1.0	5.229	A

Appendix 2: Mitigated Gibbet Roundabout J10 Output (A5S Reassignment)

Junctions 10

ARCADY 10 - Roundabout Module

Version: 10.0.2.1574

For sales and distribution information, program advice and maintenance, contact TRL Software:
+44 (0)1344 379777 software@trl.co.uk trlsoftware.com

Filename: J26 231214 - A5_A426_Gibbet Lane (HNRFI Mitigation) NH Sens.j10
Path: X:\NTT\NTT2814_Hinckley Rail Freight Interchange\02. Project Delivery\01. WIP\Design and Calculations\T&I Planning\04 Junction Modelling\J26_JTC 47 - A5 - A426 - Gibbet Lane
Report generation date: 06/02/2024 19:26:31

Summary of junction performance

	AM						PM					
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity
	2023											
A - A5 (North)	D1	1.6	6.19	0.61	A	20 % [D - A5 (South)]	D2	0.9	4.91	0.48	A	28 % [E - A426]
B - Rugby Road		1.4	6.36	0.58	A			0.9	4.55	0.47	A	
C - Gibbet Lane		0.4	13.01	0.30	B			0.3	9.09	0.21	A	
D - A5 (South)		2.2	9.33	0.69	A			1.4	6.40	0.59	A	
E - A426		0.7	4.19	0.40	A			2.1	7.81	0.68	A	
	2036 WoD											
A - A5 (North)	D3	1.0	4.85	0.49	A	-8 % [D - A5 (South)]	D4	1.1	5.58	0.52	A	-1 % [D - A5 (South)]
B - Rugby Road		1.0	4.98	0.49	A			1.5	6.27	0.60	A	
C - Gibbet Lane		4.2	39.74	0.82	E			0.8	15.94	0.45	C	
D - A5 (South)		42.8	116.25	1.05	F			12.0	38.34	0.94	E	
E - A426		0.7	4.75	0.41	A			3.1	11.82	0.76	B	
	2036 WoDWS											
A - A5 (North)	D5	1.0	4.82	0.49	A	-8 % [D - A5 (South)]	D6	1.0	5.41	0.51	A	0 % [D - A5 (South)]
B - Rugby Road		1.0	4.97	0.49	A			1.5	6.16	0.60	A	
C - Gibbet Lane		4.0	38.73	0.82	E			0.8	15.42	0.44	C	
D - A5 (South)		41.5	113.07	1.05	F			10.9	35.04	0.93	E	
E - A426		0.7	4.64	0.40	A			2.8	10.91	0.74	B	
	2036 WD											
A - A5 (North)	D7	1.1	5.14	0.53	A	-9 % [D - A5 (South)]	D8	1.1	5.75	0.53	A	-2 % [D - A5 (South)]
B - Rugby Road		1.0	5.28	0.51	A			1.5	6.40	0.61	A	
C - Gibbet Lane		6.6	61.72	0.90	F			0.9	17.05	0.48	C	
D - A5 (South)		51.0	135.20	1.07	F			14.7	45.27	0.96	E	
E - A426		0.7	4.67	0.40	A			3.5	13.47	0.78	B	

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. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

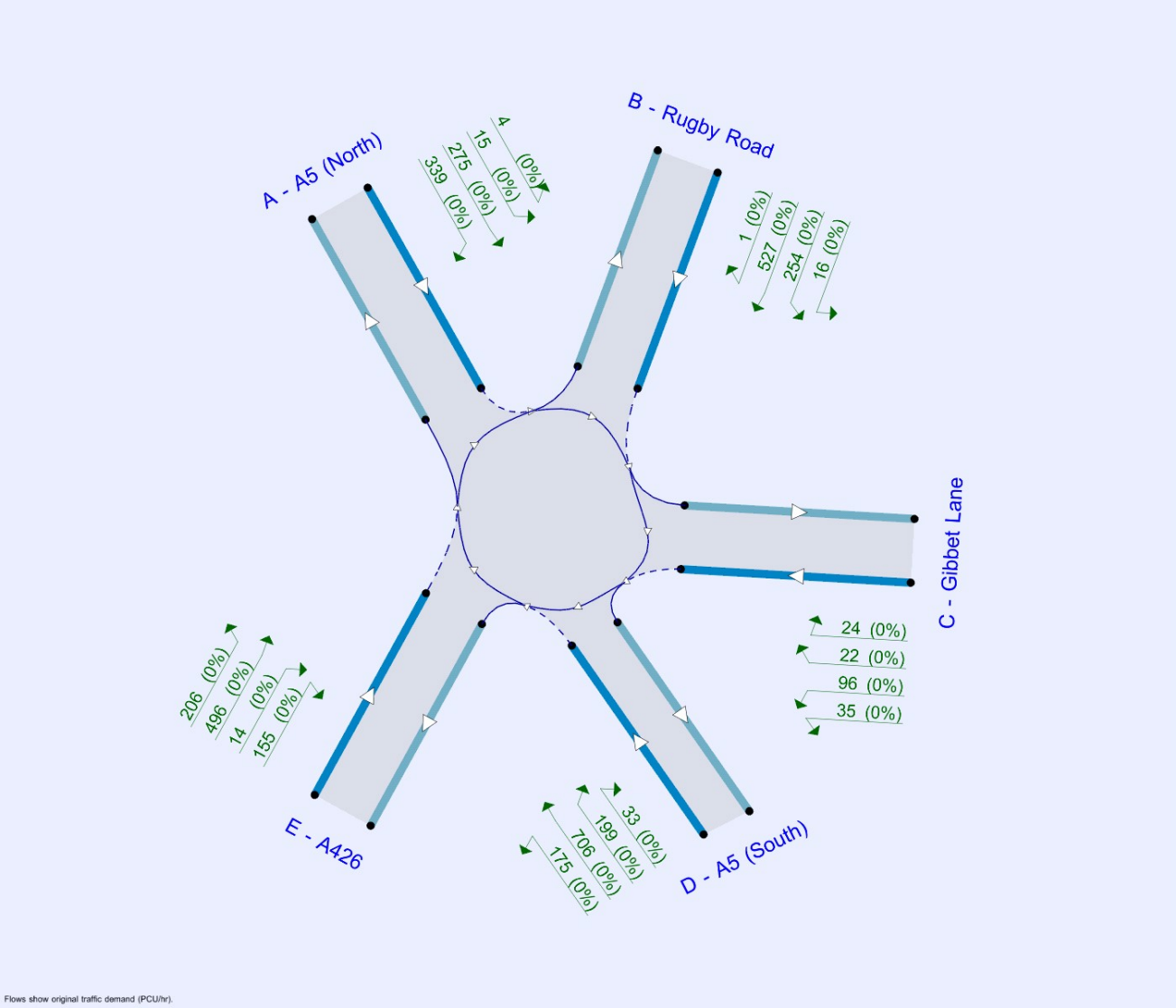
File summary

File Description

Title	J47 - A5/A426/Gibbet Lane
Location	
Site number	J47
Date	18/12/2020
Version	V0.1
Status	Existing
Identifier	
Client	
Jobnumber	NTT2814
Enumerator	BWB
Description	

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	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2023	AM	Observed Flows	ONE HOUR	07:45	09:15	15	✓
D2	2023	PM	Observed Flows	ONE HOUR	16:45	18:15	15	✓
D3	2036 WoD	AM	PRTM 2.2 Demand Flows	ONE HOUR	07:45	09:15	15	✓
D4	2036 WoD	PM	PRTM 2.2 Demand Flows	ONE HOUR	16:45	18:15	15	✓
D5	2036 WoDWS	AM	PRTM 2.2 Demand Flows	ONE HOUR	07:45	09:15	15	✓
D6	2036 WoDWS	PM	PRTM 2.2 Demand Flows	ONE HOUR	16:45	18:15	15	✓
D7	2036 WD	AM	PRTM 2.2 Demand Flows	ONE HOUR	07:45	09:15	15	✓
D8	2036 WD	PM	PRTM 2.2 Demand Flows	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2023, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	B - Rugby Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J47	A5/A426/Gibbet Lane	Standard Roundabout		A, B, C, D, E	6.95	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	20	D - A5 (South)	6.95	A

Arms

Arms

Arm	Name	Description	No give-way line
A	A5 (North)		
B	Rugby Road		
C	Gibbet Lane		
D	A5 (South)		
E	A426		

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
A - A5 (North)	3.86	8.86	15.8	28.0	70.0	43.0		
B - Rugby Road	3.20	6.69	54.0	45.0	71.0	20.0		
C - Gibbet Lane	2.65	7.00	5.0	7.7	73.0	33.0		
D - A5 (South)	3.95	8.00	20.0	30.0	70.0	44.0		
E - A426	3.42	7.50	17.5	35.0	71.0	27.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - A5 (North)	0.524	1862
B - Rugby Road	0.556	1960
C - Gibbet Lane	0.373	1049
D - A5 (South)	0.526	1879
E - A426	0.524	1799

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2023	AM	Observed Flows	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 - A5 (North)		ONE HOUR	✓	842	100.000
B - Rugby Road		ONE HOUR	✓	713	100.000
C - Gibbet Lane		ONE HOUR	✓	106	100.000
D - A5 (South)		ONE HOUR	✓	777	100.000
E - A426		ONE HOUR	✓	523	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	5	32	353	452
	B - Rugby Road	2	0	25	139	547
	C - Gibbet Lane	20	23	1	5	57
	D - A5 (South)	328	219	32	5	193
	E - A426	189	215	19	100	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	0	0	0	0
	B - Rugby Road	0	0	0	0	0
	C - Gibbet Lane	0	0	0	0	0
	D - A5 (South)	0	0	0	0	0
	E - A426	0	0	0	0	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)
A - A5 (North)	0.61	6.19	1.6	A	773	1159
B - Rugby Road	0.58	6.36	1.4	A	654	981
C - Gibbet Lane	0.30	13.01	0.4	B	97	146
D - A5 (South)	0.69	9.33	2.2	A	713	1069
E - A426	0.40	4.19	0.7	A	480	720

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	634	158	460	1621	0.391	631	404	0.0	0.6	3.627	A
B - Rugby Road	537	134	745	1545	0.347	535	346	0.0	0.5	3.554	A
C - Gibbet Lane	80	20	1198	602	0.132	79	82	0.0	0.2	6.873	A
D - A5 (South)	585	146	826	1444	0.405	582	451	0.0	0.7	4.164	A
E - A426	394	98	472	1552	0.254	392	936	0.0	0.3	3.103	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	757	189	551	1574	0.481	756	484	0.6	0.9	4.394	A
B - Rugby Road	641	160	892	1464	0.438	640	415	0.5	0.8	4.365	A
C - Gibbet Lane	95	24	1434	514	0.185	95	98	0.2	0.2	8.577	A
D - A5 (South)	699	175	989	1359	0.514	697	540	0.7	1.0	5.430	A
E - A426	470	118	565	1503	0.313	470	1121	0.3	0.5	3.482	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	927	232	674	1510	0.614	924	591	0.9	1.6	6.126	A
B - Rugby Road	785	196	1091	1353	0.580	783	507	0.8	1.4	6.288	A
C - Gibbet Lane	117	29	1755	395	0.295	116	120	0.2	0.4	12.865	B
D - A5 (South)	855	214	1209	1243	0.688	851	661	1.0	2.1	9.092	A
E - A426	576	144	690	1437	0.401	575	1370	0.5	0.7	4.170	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	927	232	676	1508	0.615	927	593	1.6	1.6	6.188	A
B - Rugby Road	785	196	1094	1351	0.581	785	509	1.4	1.4	6.358	A
C - Gibbet Lane	117	29	1759	393	0.297	117	120	0.4	0.4	13.015	B
D - A5 (South)	855	214	1213	1241	0.690	855	663	2.1	2.2	9.333	A
E - A426	576	144	694	1435	0.401	576	1375	0.7	0.7	4.187	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	757	189	554	1572	0.481	760	487	1.6	0.9	4.442	A
B - Rugby Road	641	160	897	1461	0.439	643	417	1.4	0.8	4.415	A
C - Gibbet Lane	95	24	1441	512	0.186	96	98	0.4	0.2	8.674	A
D - A5 (South)	699	175	995	1356	0.515	703	543	2.2	1.1	5.553	A
E - A426	470	118	570	1500	0.313	471	1128	0.7	0.5	3.499	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	634	158	463	1620	0.391	635	407	0.9	0.6	3.661	A
B - Rugby Road	537	134	750	1543	0.348	538	349	0.8	0.5	3.584	A
C - Gibbet Lane	80	20	1205	600	0.133	80	82	0.2	0.2	6.932	A
D - A5 (South)	585	146	831	1442	0.406	587	454	1.1	0.7	4.217	A
E - A426	394	98	476	1550	0.254	394	942	0.5	0.3	3.116	A

2023, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	B - Rugby Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J47	A5/A426/Gibbet Lane	Standard Roundabout		A, B, C, D, E	6.20	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	28	E - A426	6.20	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2023	PM	Observed Flows	ONE HOUR	16:45	18:15	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 - A5 (North)		ONE HOUR	✓	622	100.000
B - Rugby Road		ONE HOUR	✓	630	100.000
C - Gibbet Lane		ONE HOUR	✓	98	100.000
D - A5 (South)		ONE HOUR	✓	721	100.000
E - A426		ONE HOUR	✓	887	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	5	25	230	362
	B - Rugby Road	1	0	16	163	450
	C - Gibbet Lane	20	19	0	13	46
	D - A5 (South)	432	125	23	7	134
	E - A426	290	468	14	111	4

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	0	0	0	0
	B - Rugby Road	0	0	0	0	0
	C - Gibbet Lane	0	0	0	0	0
	D - A5 (South)	0	0	0	0	0
	E - A426	0	0	0	0	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)
A - A5 (North)	0.48	4.91	0.9	A	571	856
B - Rugby Road	0.47	4.55	0.9	A	578	867
C - Gibbet Lane	0.21	9.09	0.3	A	90	135
D - A5 (South)	0.59	6.40	1.4	A	662	992
E - A426	0.68	7.81	2.1	A	814	1221

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	468	117	578	1560	0.300	467	557	0.0	0.4	3.289	A
B - Rugby Road	474	119	582	1636	0.290	473	462	0.0	0.4	3.090	A
C - Gibbet Lane	74	18	996	678	0.109	73	58	0.0	0.1	5.949	A
D - A5 (South)	543	136	676	1523	0.356	541	393	0.0	0.6	3.657	A
E - A426	668	167	470	1553	0.430	665	747	0.0	0.7	4.041	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	559	140	692	1500	0.373	559	667	0.4	0.6	3.821	A
B - Rugby Road	566	142	697	1572	0.360	566	554	0.4	0.6	3.574	A
C - Gibbet Lane	88	22	1192	605	0.146	88	70	0.1	0.2	6.965	A
D - A5 (South)	648	162	810	1453	0.446	647	470	0.6	0.8	4.463	A
E - A426	797	199	563	1504	0.530	796	894	0.7	1.1	5.074	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	685	171	846	1420	0.482	684	815	0.6	0.9	4.882	A
B - Rugby Road	694	173	852	1486	0.467	692	677	0.6	0.9	4.538	A
C - Gibbet Lane	108	27	1459	505	0.214	108	86	0.2	0.3	9.043	A
D - A5 (South)	794	198	991	1357	0.585	791	576	0.8	1.4	6.333	A
E - A426	977	244	688	1438	0.679	973	1094	1.1	2.1	7.673	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	685	171	849	1418	0.483	685	818	0.9	0.9	4.910	A
B - Rugby Road	694	173	854	1485	0.467	694	679	0.9	0.9	4.550	A
C - Gibbet Lane	108	27	1462	504	0.214	108	86	0.3	0.3	9.086	A
D - A5 (South)	794	198	993	1356	0.585	794	577	1.4	1.4	6.397	A
E - A426	977	244	690	1437	0.680	976	1097	2.1	2.1	7.809	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	559	140	696	1498	0.373	560	671	0.9	0.6	3.847	A
B - Rugby Road	566	142	700	1571	0.361	568	557	0.9	0.6	3.591	A
C - Gibbet Lane	88	22	1197	603	0.146	88	70	0.3	0.2	7.003	A
D - A5 (South)	648	162	813	1451	0.447	651	472	1.4	0.8	4.508	A
E - A426	797	199	566	1502	0.531	801	898	2.1	1.1	5.162	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	468	117	582	1558	0.301	469	561	0.6	0.4	3.310	A
B - Rugby Road	474	119	585	1634	0.290	475	466	0.6	0.4	3.108	A
C - Gibbet Lane	74	18	1001	676	0.109	74	59	0.2	0.1	5.983	A
D - A5 (South)	543	136	680	1521	0.357	544	395	0.8	0.6	3.689	A
E - A426	668	167	473	1551	0.431	669	751	1.1	0.8	4.091	A

2036 WoD, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	B - Rugby Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J47	A5/A426/Gibbet Lane	Standard Roundabout		A, B, C, D, E	46.62	E

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	-8	D - A5 (South)	46.62	E

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2036 WoD	AM	PRTM 2.2 Demand Flows	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 - A5 (North)		ONE HOUR	✓	660	100.000
B - Rugby Road		ONE HOUR	✓	638	100.000
C - Gibbet Lane		ONE HOUR	✓	365	100.000
D - A5 (South)		ONE HOUR	✓	1107	100.000
E - A426		ONE HOUR	✓	488	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	1	32	245	382
	B - Rugby Road	1	0	30	101	506
	C - Gibbet Lane	46	36	6	10	267
	D - A5 (South)	467	312	46	7	275
	E - A426	191	138	33	126	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	0	0	0	0
	B - Rugby Road	0	0	0	0	0
	C - Gibbet Lane	0	0	0	0	0
	D - A5 (South)	0	0	0	0	0
	E - A426	0	0	0	0	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)
A - A5 (North)	0.49	4.85	1.0	A	606	908
B - Rugby Road	0.49	4.98	1.0	A	585	878
C - Gibbet Lane	0.82	39.74	4.2	E	335	502
D - A5 (South)	1.05	116.25	42.8	F	1016	1524
E - A426	0.41	4.75	0.7	A	448	672

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	497	124	527	1587	0.313	495	527	0.0	0.5	3.292	A
B - Rugby Road	480	120	658	1594	0.301	479	364	0.0	0.4	3.223	A
C - Gibbet Lane	275	69	1026	667	0.412	272	110	0.0	0.7	9.062	A
D - A5 (South)	833	208	931	1389	0.600	828	367	0.0	1.5	6.348	A
E - A426	367	92	688	1438	0.255	366	1071	0.0	0.3	3.353	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	593	148	630	1532	0.387	593	630	0.5	0.6	3.829	A
B - Rugby Road	574	143	787	1522	0.377	573	436	0.4	0.6	3.791	A
C - Gibbet Lane	328	82	1228	591	0.555	326	132	0.7	1.2	13.466	B
D - A5 (South)	995	249	1115	1292	0.770	988	439	1.5	3.2	11.596	B
E - A426	439	110	822	1368	0.321	438	1281	0.3	0.5	3.870	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	727	182	744	1473	0.493	725	737	0.6	1.0	4.807	A
B - Rugby Road	702	176	960	1426	0.493	701	510	0.6	1.0	4.954	A
C - Gibbet Lane	402	100	1503	489	0.822	391	158	1.2	3.8	33.893	D
D - A5 (South)	1219	305	1358	1165	1.046	1130	537	3.2	25.5	57.884	F
E - A426	537	134	945	1304	0.412	536	1543	0.5	0.7	4.684	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	727	182	752	1469	0.495	727	747	1.0	1.0	4.851	A
B - Rugby Road	702	176	962	1425	0.493	702	517	1.0	1.0	4.984	A
C - Gibbet Lane	402	100	1506	488	0.824	400	159	3.8	4.2	39.739	E
D - A5 (South)	1219	305	1368	1159	1.052	1150	538	25.5	42.8	116.250	F
E - A426	537	134	962	1295	0.415	537	1556	0.7	0.7	4.751	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	593	148	686	1503	0.395	595	701	1.0	0.7	3.968	A
B - Rugby Road	574	143	798	1516	0.378	575	483	1.0	0.6	3.829	A
C - Gibbet Lane	328	82	1234	589	0.557	340	139	4.2	1.3	15.028	C
D - A5 (South)	995	249	1131	1284	0.775	1151	442	42.8	3.8	47.912	E
E - A426	439	110	948	1302	0.337	439	1334	0.7	0.5	4.176	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	497	124	534	1583	0.314	498	535	0.7	0.5	3.318	A
B - Rugby Road	480	120	662	1592	0.302	481	370	0.6	0.4	3.242	A
C - Gibbet Lane	275	69	1032	665	0.413	277	111	1.3	0.7	9.343	A
D - A5 (South)	833	208	940	1384	0.602	843	369	3.8	1.5	6.751	A
E - A426	367	92	701	1432	0.257	368	1082	0.5	0.3	3.386	A

2036 WoD, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	B - Rugby Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J47	A5/A426/Gibbet Lane	Standard Roundabout		A, B, C, D, E	17.83	C

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	-1	D - A5 (South)	17.83	C

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2036 WoD	PM	PRTM 2.2 Demand Flows	ONE HOUR	16:45	18:15	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 - A5 (North)		ONE HOUR	✓	623	100.000
B - Rugby Road		ONE HOUR	✓	787	100.000
C - Gibbet Lane		ONE HOUR	✓	168	100.000
D - A5 (South)		ONE HOUR	✓	1088	100.000
E - A426		ONE HOUR	✓	875	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	3	15	246	359
	B - Rugby Road	1	0	17	220	549
	C - Gibbet Lane	22	20	0	33	93
	D - A5 (South)	651	189	35	11	202
	E - A426	207	485	13	166	4

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	0	0	0	0
	B - Rugby Road	0	0	0	0	0
	C - Gibbet Lane	0	0	0	0	0
	D - A5 (South)	0	0	0	0	0
	E - A426	0	0	0	0	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)
A - A5 (North)	0.52	5.58	1.1	A	572	858
B - Rugby Road	0.60	6.27	1.5	A	722	1083
C - Gibbet Lane	0.45	15.94	0.8	C	154	231
D - A5 (South)	0.94	38.34	12.0	E	998	1498
E - A426	0.76	11.82	3.1	B	803	1204

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	469	117	691	1501	0.313	467	659	0.0	0.5	3.478	A
B - Rugby Road	592	148	636	1606	0.369	590	522	0.0	0.6	3.537	A
C - Gibbet Lane	126	32	1167	614	0.206	125	60	0.0	0.3	7.350	A
D - A5 (South)	819	205	785	1466	0.559	814	507	0.0	1.2	5.484	A
E - A426	659	165	695	1435	0.459	655	905	0.0	0.8	4.601	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	560	140	827	1429	0.392	559	789	0.5	0.6	4.135	A
B - Rugby Road	707	177	762	1536	0.461	706	625	0.6	0.8	4.334	A
C - Gibbet Lane	151	38	1397	529	0.286	150	72	0.3	0.4	9.508	A
D - A5 (South)	978	245	941	1384	0.707	974	607	1.2	2.3	8.681	A
E - A426	787	197	831	1363	0.577	785	1083	0.8	1.3	6.201	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	686	171	1005	1336	0.513	684	950	0.6	1.0	5.508	A
B - Rugby Road	867	217	931	1442	0.601	864	758	0.8	1.5	6.198	A
C - Gibbet Lane	185	46	1708	413	0.448	183	87	0.4	0.8	15.605	C
D - A5 (South)	1198	299	1150	1274	0.940	1167	741	2.3	10.1	27.987	D
E - A426	963	241	997	1276	0.755	957	1320	1.3	2.9	11.060	B

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	686	171	1014	1331	0.515	686	965	1.0	1.1	5.577	A
B - Rugby Road	867	217	934	1440	0.602	866	766	1.5	1.5	6.272	A
C - Gibbet Lane	185	46	1713	411	0.451	185	88	0.8	0.8	15.942	C
D - A5 (South)	1198	299	1154	1272	0.942	1190	744	10.1	12.0	38.344	E
E - A426	963	241	1017	1266	0.761	963	1327	2.9	3.1	11.820	B

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	560	140	843	1421	0.394	562	816	1.1	0.7	4.198	A
B - Rugby Road	707	177	768	1533	0.462	710	637	1.5	0.9	4.390	A
C - Gibbet Lane	151	38	1404	526	0.287	153	73	0.8	0.4	9.692	A
D - A5 (South)	978	245	946	1381	0.708	1016	611	12.0	2.5	10.823	B
E - A426	787	197	866	1345	0.585	793	1096	3.1	1.4	6.602	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	469	117	698	1497	0.313	470	667	0.7	0.5	3.509	A
B - Rugby Road	592	148	641	1604	0.369	594	527	0.9	0.6	3.570	A
C - Gibbet Lane	126	32	1174	612	0.207	127	60	0.4	0.3	7.440	A
D - A5 (South)	819	205	791	1463	0.560	824	510	2.5	1.3	5.678	A
E - A426	659	165	704	1430	0.461	661	911	1.4	0.9	4.695	A

2036 WoDWS, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	B - Rugby Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J47	A5/A426/Gibbet Lane	Standard Roundabout		A, B, C, D, E	45.59	E

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	-8	D - A5 (South)	45.59	E

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2036 WoDWS	AM	PRTM 2.2 Demand Flows	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 - A5 (North)		ONE HOUR	✓	662	100.000
B - Rugby Road		ONE HOUR	✓	639	100.000
C - Gibbet Lane		ONE HOUR	✓	363	100.000
D - A5 (South)		ONE HOUR	✓	1108	100.000
E - A426		ONE HOUR	✓	472	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	1	34	250	377
	B - Rugby Road	1	0	30	103	505
	C - Gibbet Lane	46	36	5	10	266
	D - A5 (South)	466	311	46	7	278
	E - A426	186	133	29	124	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	0	0	0	0
	B - Rugby Road	0	0	0	0	0
	C - Gibbet Lane	0	0	0	0	0
	D - A5 (South)	0	0	0	0	0
	E - A426	0	0	0	0	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)
A - A5 (North)	0.49	4.82	1.0	A	607	911
B - Rugby Road	0.49	4.97	1.0	A	586	880
C - Gibbet Lane	0.82	38.73	4.0	E	333	500
D - A5 (South)	1.05	113.07	41.5	F	1017	1525
E - A426	0.40	4.64	0.7	A	433	650

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	498	125	517	1592	0.313	497	523	0.0	0.5	3.281	A
B - Rugby Road	481	120	654	1596	0.301	479	360	0.0	0.4	3.220	A
C - Gibbet Lane	273	68	1025	667	0.410	271	108	0.0	0.7	9.023	A
D - A5 (South)	834	209	925	1392	0.599	828	370	0.0	1.5	6.324	A
E - A426	355	89	686	1439	0.247	354	1068	0.0	0.3	3.312	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	595	149	618	1539	0.387	594	625	0.5	0.6	3.811	A
B - Rugby Road	574	144	783	1525	0.377	574	430	0.4	0.6	3.785	A
C - Gibbet Lane	326	82	1227	592	0.552	324	129	0.7	1.2	13.363	B
D - A5 (South)	996	249	1108	1296	0.769	989	443	1.5	3.2	11.495	B
E - A426	424	106	820	1369	0.310	424	1278	0.3	0.4	3.805	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	729	182	731	1480	0.493	728	731	0.6	1.0	4.776	A
B - Rugby Road	704	176	954	1429	0.492	702	504	0.6	1.0	4.941	A
C - Gibbet Lane	400	100	1502	489	0.817	390	155	1.2	3.7	33.251	D
D - A5 (South)	1220	305	1349	1169	1.043	1133	542	3.2	24.9	56.769	F
E - A426	520	130	943	1305	0.398	519	1539	0.4	0.7	4.576	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	729	182	739	1476	0.494	729	742	1.0	1.0	4.821	A
B - Rugby Road	704	176	957	1428	0.493	704	511	1.0	1.0	4.971	A
C - Gibbet Lane	400	100	1505	488	0.819	398	156	3.7	4.0	38.733	E
D - A5 (South)	1220	305	1359	1164	1.048	1154	543	24.9	41.5	113.065	F
E - A426	520	130	961	1295	0.401	520	1552	0.7	0.7	4.640	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	595	149	672	1510	0.394	596	694	1.0	0.7	3.944	A
B - Rugby Road	574	144	793	1519	0.378	576	476	1.0	0.6	3.822	A
C - Gibbet Lane	326	82	1233	590	0.553	337	136	4.0	1.3	14.848	B
D - A5 (South)	996	249	1124	1288	0.774	1147	446	41.5	3.8	44.873	E
E - A426	424	106	941	1306	0.325	425	1330	0.7	0.5	4.090	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	498	125	524	1588	0.314	499	531	0.7	0.5	3.307	A
B - Rugby Road	481	120	658	1594	0.302	482	365	0.6	0.4	3.240	A
C - Gibbet Lane	273	68	1031	665	0.411	276	109	1.3	0.7	9.298	A
D - A5 (South)	834	209	934	1388	0.601	843	373	3.8	1.5	6.715	A
E - A426	355	89	698	1433	0.248	356	1078	0.5	0.3	3.346	A

2036 WoDWS, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	B - Rugby Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J47	A5/A426/Gibbet Lane	Standard Roundabout		A, B, C, D, E	16.52	C

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	0	D - A5 (South)	16.52	C

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2036 WoDWS	PM	PRTM 2.2 Demand Flows	ONE HOUR	16:45	18:15	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 - A5 (North)		ONE HOUR	✓	622	100.000
B - Rugby Road		ONE HOUR	✓	788	100.000
C - Gibbet Lane		ONE HOUR	✓	164	100.000
D - A5 (South)		ONE HOUR	✓	1082	100.000
E - A426		ONE HOUR	✓	850	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	4	15	250	353
	B - Rugby Road	1	0	14	225	548
	C - Gibbet Lane	21	21	0	31	91
	D - A5 (South)	663	186	28	11	194
	E - A426	206	471	13	156	4

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	0	0	0	0
	B - Rugby Road	0	0	0	0	0
	C - Gibbet Lane	0	0	0	0	0
	D - A5 (South)	0	0	0	0	0
	E - A426	0	0	0	0	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)
A - A5 (North)	0.51	5.41	1.0	A	571	856
B - Rugby Road	0.60	6.16	1.5	A	723	1085
C - Gibbet Lane	0.44	15.42	0.8	C	150	226
D - A5 (South)	0.93	35.04	10.9	E	993	1489
E - A426	0.74	10.91	2.8	B	780	1170

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	468	117	666	1513	0.309	466	667	0.0	0.4	3.432	A
B - Rugby Road	593	148	622	1614	0.368	591	511	0.0	0.6	3.512	A
C - Gibbet Lane	123	31	1161	616	0.200	122	52	0.0	0.2	7.272	A
D - A5 (South)	815	204	779	1469	0.554	810	504	0.0	1.2	5.419	A
E - A426	640	160	697	1434	0.446	637	892	0.0	0.8	4.498	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	559	140	798	1445	0.387	558	798	0.4	0.6	4.058	A
B - Rugby Road	708	177	745	1546	0.458	707	611	0.6	0.8	4.289	A
C - Gibbet Lane	147	37	1390	531	0.278	147	63	0.2	0.4	9.355	A
D - A5 (South)	973	243	932	1388	0.701	969	604	1.2	2.3	8.490	A
E - A426	764	191	833	1362	0.561	762	1068	0.8	1.3	5.983	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	685	171	970	1355	0.506	683	962	0.6	1.0	5.350	A
B - Rugby Road	868	217	910	1454	0.597	865	743	0.8	1.5	6.092	A
C - Gibbet Lane	181	45	1699	416	0.434	179	76	0.4	0.7	15.122	C
D - A5 (South)	1191	298	1140	1279	0.931	1163	738	2.3	9.3	26.363	D
E - A426	936	234	1002	1274	0.735	930	1302	1.3	2.7	10.307	B

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	685	171	978	1350	0.507	685	977	1.0	1.0	5.410	A
B - Rugby Road	868	217	913	1452	0.598	868	750	1.5	1.5	6.162	A
C - Gibbet Lane	181	45	1704	414	0.436	181	77	0.7	0.8	15.420	C
D - A5 (South)	1191	298	1144	1277	0.933	1185	741	9.3	10.9	35.039	E
E - A426	936	234	1020	1264	0.740	935	1309	2.7	2.8	10.910	B

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	559	140	812	1437	0.389	561	823	1.0	0.6	4.114	A
B - Rugby Road	708	177	750	1543	0.459	711	622	1.5	0.9	4.340	A
C - Gibbet Lane	147	37	1397	528	0.279	149	64	0.8	0.4	9.522	A
D - A5 (South)	973	243	938	1386	0.702	1006	608	10.9	2.4	10.296	B
E - A426	764	191	865	1346	0.568	770	1079	2.8	1.3	6.315	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	468	117	673	1510	0.310	469	674	0.6	0.5	3.459	A
B - Rugby Road	593	148	626	1612	0.368	594	515	0.9	0.6	3.541	A
C - Gibbet Lane	123	31	1168	614	0.201	124	53	0.4	0.3	7.359	A
D - A5 (South)	815	204	784	1467	0.555	819	508	2.4	1.3	5.603	A
E - A426	640	160	705	1430	0.448	642	898	1.3	0.8	4.584	A

2036 WD, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	B - Rugby Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J47	A5/A426/Gibbet Lane	Standard Roundabout		A, B, C, D, E	55.10	F

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	-9	D - A5 (South)	55.10	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2036 WD	AM	PRTM 2.2 Demand Flows	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 - A5 (North)		ONE HOUR	✓	720	100.000
B - Rugby Road		ONE HOUR	✓	646	100.000
C - Gibbet Lane		ONE HOUR	✓	378	100.000
D - A5 (South)		ONE HOUR	✓	1115	100.000
E - A426		ONE HOUR	✓	469	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	1	40	287	392
	B - Rugby Road	1	0	31	105	509
	C - Gibbet Lane	53	35	6	12	272
	D - A5 (South)	499	300	44	11	261
	E - A426	199	120	28	122	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	0	0	0	0
	B - Rugby Road	0	0	0	0	0
	C - Gibbet Lane	0	0	0	0	0
	D - A5 (South)	0	0	0	0	0
	E - A426	0	0	0	0	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)
A - A5 (North)	0.53	5.14	1.1	A	661	991
B - Rugby Road	0.51	5.28	1.0	A	593	889
C - Gibbet Lane	0.90	61.72	6.6	F	347	520
D - A5 (South)	1.07	135.20	51.0	F	1023	1535
E - A426	0.40	4.67	0.7	A	430	646

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	542	136	498	1601	0.338	540	562	0.0	0.5	3.386	A
B - Rugby Road	486	122	697	1572	0.309	485	341	0.0	0.4	3.304	A
C - Gibbet Lane	285	71	1070	650	0.438	282	112	0.0	0.8	9.688	A
D - A5 (South)	839	210	949	1380	0.608	833	403	0.0	1.5	6.521	A
E - A426	353	88	709	1427	0.247	352	1073	0.0	0.3	3.342	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	647	162	596	1550	0.417	646	672	0.5	0.7	3.979	A
B - Rugby Road	581	145	835	1496	0.388	580	408	0.4	0.6	3.928	A
C - Gibbet Lane	340	85	1281	572	0.595	337	134	0.8	1.4	15.194	C
D - A5 (South)	1002	251	1136	1281	0.782	995	482	1.5	3.4	12.270	B
E - A426	422	105	847	1355	0.311	421	1285	0.3	0.4	3.853	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	793	198	698	1497	0.530	791	779	0.7	1.1	5.090	A
B - Rugby Road	711	178	1017	1394	0.510	710	473	0.6	1.0	5.250	A
C - Gibbet Lane	416	104	1567	465	0.895	399	160	1.4	5.6	46.436	E
D - A5 (South)	1228	307	1378	1154	1.064	1125	589	3.4	29.1	64.241	F
E - A426	516	129	962	1295	0.399	516	1541	0.4	0.7	4.615	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	793	198	705	1493	0.531	793	788	1.1	1.1	5.138	A
B - Rugby Road	711	178	1020	1393	0.511	711	478	1.0	1.0	5.282	A
C - Gibbet Lane	416	104	1570	464	0.897	412	161	5.6	6.6	61.715	F
D - A5 (South)	1228	307	1392	1147	1.071	1140	590	29.1	51.0	135.199	F
E - A426	516	129	977	1287	0.401	516	1555	0.7	0.7	4.671	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	647	162	661	1517	0.427	649	762	1.1	0.8	4.156	A
B - Rugby Road	581	145	847	1489	0.390	582	462	1.0	0.6	3.980	A
C - Gibbet Lane	340	85	1288	569	0.597	360	142	6.6	1.5	18.746	C
D - A5 (South)	1002	251	1162	1268	0.791	1188	486	51.0	4.5	71.266	F
E - A426	422	105	1001	1275	0.331	422	1349	0.7	0.5	4.229	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	542	136	506	1598	0.339	543	572	0.8	0.5	3.418	A
B - Rugby Road	486	122	702	1569	0.310	487	347	0.6	0.5	3.327	A
C - Gibbet Lane	285	71	1076	648	0.439	288	113	1.5	0.8	10.068	B
D - A5 (South)	839	210	959	1375	0.611	851	405	4.5	1.6	7.020	A
E - A426	353	88	724	1420	0.249	354	1086	0.5	0.3	3.379	A

2036 WD, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	B - Rugby Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J47	A5/A426/Gibbet Lane	Standard Roundabout		A, B, C, D, E	20.65	C

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	-2	D - A5 (South)	20.65	C

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2036 WD	PM	PRTM 2.2 Demand Flows	ONE HOUR	16:45	18:15	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 - A5 (North)		ONE HOUR	✓	633	100.000
B - Rugby Road		ONE HOUR	✓	798	100.000
C - Gibbet Lane		ONE HOUR	✓	177	100.000
D - A5 (South)		ONE HOUR	✓	1126	100.000
E - A426		ONE HOUR	✓	875	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	4	15	275	339
	B - Rugby Road	1	0	16	254	527
	C - Gibbet Lane	22	24	0	35	96
	D - A5 (South)	706	199	33	13	175
	E - A426	206	496	14	155	4

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	0	0	0	0
	B - Rugby Road	0	0	0	0	0
	C - Gibbet Lane	0	0	0	0	0
	D - A5 (South)	0	0	0	0	0
	E - A426	0	0	0	0	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)
A - A5 (North)	0.53	5.75	1.1	A	581	871
B - Rugby Road	0.61	6.40	1.5	A	732	1098
C - Gibbet Lane	0.48	17.05	0.9	C	162	244
D - A5 (South)	0.96	45.27	14.7	E	1033	1550
E - A426	0.78	13.47	3.5	B	803	1204

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	477	119	702	1495	0.319	475	700	0.0	0.5	3.523	A
B - Rugby Road	601	150	636	1606	0.374	598	541	0.0	0.6	3.565	A
C - Gibbet Lane	133	33	1176	611	0.218	132	58	0.0	0.3	7.503	A
D - A5 (South)	848	212	759	1479	0.573	842	549	0.0	1.3	5.606	A
E - A426	659	165	747	1408	0.468	655	855	0.0	0.9	4.763	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	569	142	840	1422	0.400	568	837	0.5	0.7	4.212	A
B - Rugby Road	717	179	761	1537	0.467	716	648	0.6	0.9	4.383	A
C - Gibbet Lane	159	40	1407	525	0.303	159	70	0.3	0.4	9.819	A
D - A5 (South)	1012	253	909	1401	0.723	1007	657	1.3	2.5	9.045	A
E - A426	787	197	893	1331	0.591	784	1024	0.9	1.4	6.561	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	697	174	1019	1329	0.524	695	1004	0.7	1.1	5.666	A
B - Rugby Road	879	220	929	1443	0.609	876	785	0.9	1.5	6.319	A
C - Gibbet Lane	195	49	1720	408	0.478	193	85	0.4	0.9	16.630	C
D - A5 (South)	1240	310	1111	1294	0.958	1202	802	2.5	11.9	31.078	D
E - A426	963	241	1067	1240	0.777	956	1247	1.4	3.3	12.364	B

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	697	174	1030	1323	0.527	697	1022	1.1	1.1	5.747	A
B - Rugby Road	879	220	933	1441	0.610	879	794	1.5	1.5	6.399	A
C - Gibbet Lane	195	49	1726	406	0.480	195	86	0.9	0.9	17.055	C
D - A5 (South)	1240	310	1115	1292	0.959	1228	806	11.9	14.7	45.270	E
E - A426	963	241	1089	1228	0.784	963	1254	3.3	3.5	13.471	B

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	569	142	860	1412	0.403	571	873	1.1	0.7	4.288	A
B - Rugby Road	717	179	768	1533	0.468	720	663	1.5	0.9	4.444	A
C - Gibbet Lane	159	40	1416	521	0.305	161	72	0.9	0.4	10.038	B
D - A5 (South)	1012	253	915	1398	0.724	1060	662	14.7	2.7	12.119	B
E - A426	787	197	938	1307	0.602	794	1037	3.5	1.5	7.122	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	477	119	709	1491	0.320	477	708	0.7	0.5	3.556	A
B - Rugby Road	601	150	640	1604	0.375	602	547	0.9	0.6	3.595	A
C - Gibbet Lane	133	33	1183	608	0.219	134	59	0.4	0.3	7.599	A
D - A5 (South)	848	212	764	1477	0.574	853	552	2.7	1.4	5.824	A
E - A426	659	165	756	1403	0.470	661	861	1.5	0.9	4.872	A

Appendix 3: Existing Gibbet Roundabout J10 Output (Full Reassignment)

Junctions 10

ARCADY 10 - Roundabout Module

Filename: J26 240214 - A5_A426_Gibbet Lane (existing) Flow Amends.j10
Path: X:\NTT\NTT2814_Hinckley Rail Freight Interchange\02. Project Delivery\01. WIP\Design and Calculations\T&I Planning\04 Junction Modelling\J26_JTC 47 - A5 - A426 - Gibbet Lane
Report generation date: 14/02/2024 10:41:34

Summary of junction performance

	AM						PM					
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity
	2023											
A - A5 (North)	D1	1.6	6.19	0.61	A	12 % [C - Gibbet Lane]	D2	0.9	4.91	0.48	A	24 % [E - A426]
B - Rugby Road		1.4	6.36	0.58	A			0.9	4.55	0.47	A	
C - Gibbet Lane		0.6	18.54	0.38	C			0.3	11.67	0.26	B	
D - A5 (South)		2.7	11.82	0.74	B			1.6	7.53	0.62	A	
E - A426		0.7	4.43	0.41	A			2.3	8.71	0.70	A	
	2036 WoD											
A - A5 (North)	D3	2.2	7.93	0.69	A	2 % [C - Gibbet Lane]	D4	1.6	7.03	0.62	A	4 % [E - A426]
B - Rugby Road		2.0	8.44	0.67	A			1.5	6.41	0.60	A	
C - Gibbet Lane		1.0	30.02	0.52	D			0.7	19.49	0.41	C	
D - A5 (South)		5.5	22.31	0.86	C			4.1	16.09	0.81	C	
E - A426		0.9	5.01	0.47	A			7.0	22.83	0.89	C	
	2036 WoDWS											
A - A5 (North)	D5	2.2	7.84	0.69	A	2 % [C - Gibbet Lane]	D6	1.5	6.77	0.61	A	6 % [E - A426]
B - Rugby Road		2.0	8.40	0.67	A			1.4	6.30	0.59	A	
C - Gibbet Lane		1.0	29.41	0.51	D			0.6	18.73	0.40	C	
D - A5 (South)		5.4	21.88	0.86	C			3.9	15.31	0.80	C	
E - A426		0.8	4.88	0.46	A			6.0	19.80	0.87	C	
	2036 WD											
A - A5 (North)	D7	2.6	8.78	0.73	A	-2 % [C - Gibbet Lane]	D8	1.7	7.30	0.63	A	1 % [E - A426]
B - Rugby Road		2.2	9.33	0.69	A			1.5	6.55	0.61	A	
C - Gibbet Lane		1.6	43.13	0.64	E			0.8	21.14	0.45	C	
D - A5 (South)		6.4	25.49	0.88	D			4.7	17.77	0.83	C	
E - A426		0.8	4.97	0.46	A			8.9	29.17	0.91	D	

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. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

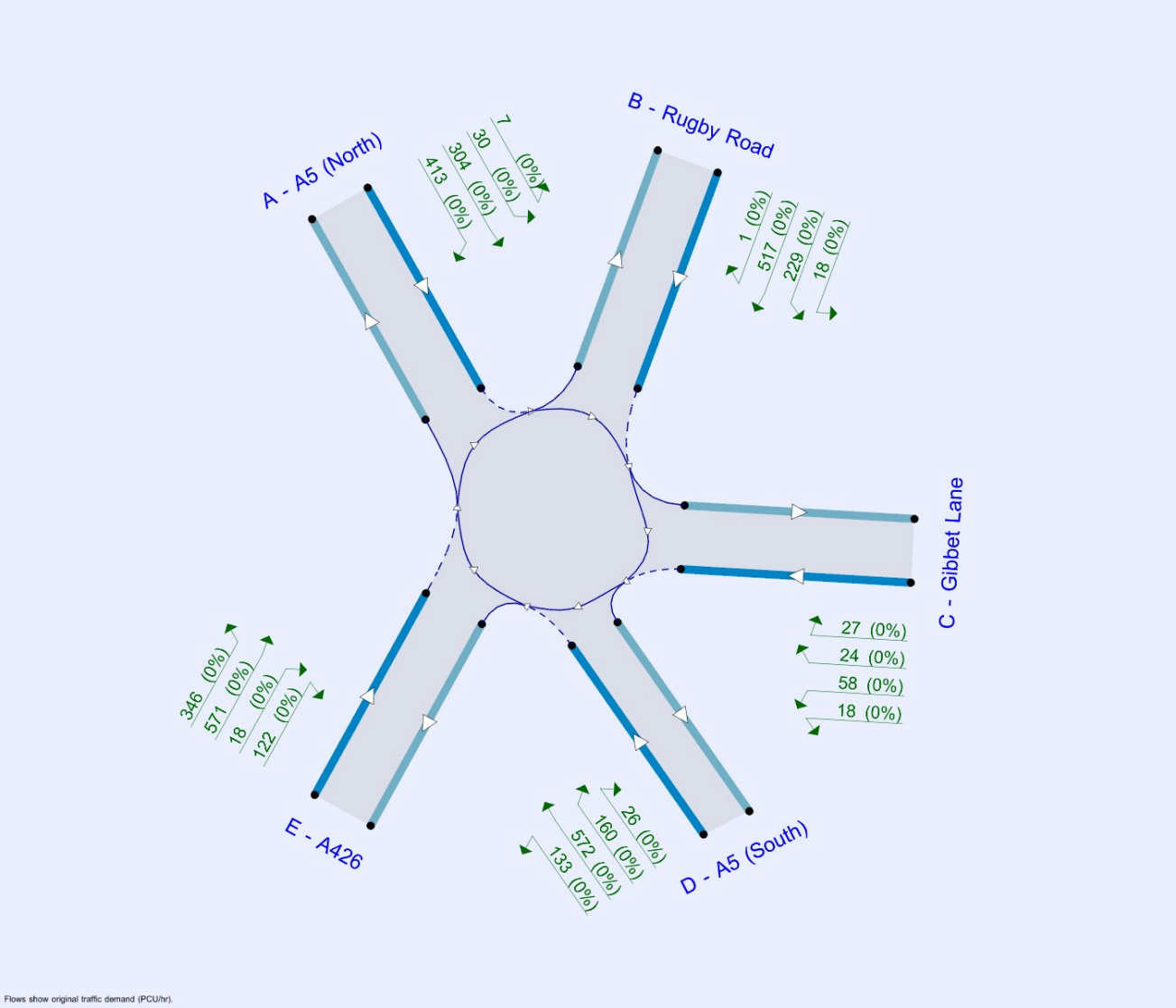
File summary

File Description

Title	J47 - A5/A426/Gibbet Lane
Location	
Site number	J47
Date	18/12/2020
Version	V0.1
Status	Existing
Identifier	
Client	
Jobnumber	NTT2814
Enumerator	BWB
Description	

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	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2023	AM	Observed Flows	ONE HOUR	07:45	09:15	15	✓
D2	2023	PM	Observed Flows	ONE HOUR	16:45	18:15	15	✓
D3	2036 WoD	AM	PRTM 2.2 Demand Flows	ONE HOUR	07:45	09:15	15	✓
D4	2036 WoD	PM	PRTM 2.2 Demand Flows	ONE HOUR	16:45	18:15	15	✓
D5	2036 WoDWS	AM	PRTM 2.2 Demand Flows	ONE HOUR	07:45	09:15	15	✓
D6	2036 WoDWS	PM	PRTM 2.2 Demand Flows	ONE HOUR	16:45	18:15	15	✓
D7	2036 WD	AM	PRTM 2.2 Demand Flows	ONE HOUR	07:45	09:15	15	✓
D8	2036 WD	PM	PRTM 2.2 Demand Flows	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2023, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	B - Rugby Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J47	A5/A426/Gibbet Lane	Standard Roundabout		A, B, C, D, E	7.84	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	12	C - Gibbet Lane	7.84	A

Arms

Arms

Arm	Name	Description	No give-way line
A	A5 (North)		
B	Rugby Road		
C	Gibbet Lane		
D	A5 (South)		
E	A426		

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
A - A5 (North)	3.86	8.86	15.8	28.0	70.0	43.0		
B - Rugby Road	3.20	6.69	54.0	45.0	71.0	20.0		
C - Gibbet Lane	2.65	5.50	3.2	7.7	73.0	33.0		
D - A5 (South)	3.95	7.46	17.0	30.0	70.0	44.0		
E - A426	3.42	6.38	25.8	35.0	71.0	27.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - A5 (North)	0.524	1862
B - Rugby Road	0.556	1960
C - Gibbet Lane	0.356	936
D - A5 (South)	0.510	1778
E - A426	0.516	1745

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2023	AM	Observed Flows	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 - A5 (North)		ONE HOUR	✓	842	100.000
B - Rugby Road		ONE HOUR	✓	713	100.000
C - Gibbet Lane		ONE HOUR	✓	106	100.000
D - A5 (South)		ONE HOUR	✓	777	100.000
E - A426		ONE HOUR	✓	523	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	5	32	353	452
	B - Rugby Road	2	0	25	139	547
	C - Gibbet Lane	20	23	1	5	57
	D - A5 (South)	328	219	32	5	193
	E - A426	189	215	19	100	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	0	0	0	0
	B - Rugby Road	0	0	0	0	0
	C - Gibbet Lane	0	0	0	0	0
	D - A5 (South)	0	0	0	0	0
	E - A426	0	0	0	0	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)
A - A5 (North)	0.61	6.19	1.6	A	773	1159
B - Rugby Road	0.58	6.36	1.4	A	654	981
C - Gibbet Lane	0.38	18.54	0.6	C	97	146
D - A5 (South)	0.74	11.82	2.7	B	713	1069
E - A426	0.41	4.43	0.7	A	480	720

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	634	158	460	1621	0.391	631	404	0.0	0.6	3.627	A
B - Rugby Road	537	134	745	1545	0.347	535	346	0.0	0.5	3.554	A
C - Gibbet Lane	80	20	1198	510	0.156	79	82	0.0	0.2	8.335	A
D - A5 (South)	585	146	826	1357	0.431	582	451	0.0	0.8	4.630	A
E - A426	394	98	472	1502	0.262	392	936	0.0	0.4	3.239	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	757	189	551	1574	0.481	756	484	0.6	0.9	4.394	A
B - Rugby Road	641	160	892	1464	0.438	640	415	0.5	0.8	4.365	A
C - Gibbet Lane	95	24	1434	426	0.224	95	98	0.2	0.3	10.851	B
D - A5 (South)	699	175	989	1273	0.549	697	540	0.8	1.2	6.224	A
E - A426	470	118	565	1454	0.323	470	1121	0.4	0.5	3.655	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	927	232	673	1510	0.614	924	590	0.9	1.6	6.123	A
B - Rugby Road	785	196	1091	1353	0.580	783	506	0.8	1.4	6.288	A
C - Gibbet Lane	117	29	1754	312	0.374	116	120	0.3	0.6	18.175	C
D - A5 (South)	855	214	1209	1161	0.737	850	661	1.2	2.7	11.343	B
E - A426	576	144	689	1390	0.414	575	1370	0.5	0.7	4.411	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	927	232	676	1508	0.615	927	593	1.6	1.6	6.188	A
B - Rugby Road	785	196	1094	1351	0.581	785	509	1.4	1.4	6.358	A
C - Gibbet Lane	117	29	1759	311	0.376	117	120	0.6	0.6	18.538	C
D - A5 (South)	855	214	1213	1159	0.738	855	663	2.7	2.7	11.819	B
E - A426	576	144	693	1388	0.415	576	1375	0.7	0.7	4.433	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	757	189	555	1572	0.482	760	488	1.6	0.9	4.444	A
B - Rugby Road	641	160	897	1461	0.439	643	418	1.4	0.8	4.414	A
C - Gibbet Lane	95	24	1441	424	0.225	96	98	0.6	0.3	11.040	B
D - A5 (South)	699	175	995	1270	0.550	705	543	2.7	1.2	6.427	A
E - A426	470	118	571	1451	0.324	471	1128	0.7	0.5	3.680	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	634	158	463	1620	0.391	635	407	0.9	0.6	3.659	A
B - Rugby Road	537	134	750	1543	0.348	538	349	0.8	0.5	3.587	A
C - Gibbet Lane	80	20	1205	508	0.157	80	82	0.3	0.2	8.428	A
D - A5 (South)	585	146	831	1354	0.432	587	454	1.2	0.8	4.705	A
E - A426	394	98	476	1500	0.263	394	942	0.5	0.4	3.259	A

2023, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	B - Rugby Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J47	A5/A426/Gibbet Lane	Standard Roundabout		A, B, C, D, E	6.84	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	24	E - A426	6.84	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2023	PM	Observed Flows	ONE HOUR	16:45	18:15	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 - A5 (North)		ONE HOUR	✓	622	100.000
B - Rugby Road		ONE HOUR	✓	630	100.000
C - Gibbet Lane		ONE HOUR	✓	98	100.000
D - A5 (South)		ONE HOUR	✓	721	100.000
E - A426		ONE HOUR	✓	887	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	5	25	230	362
	B - Rugby Road	1	0	16	163	450
	C - Gibbet Lane	20	19	0	13	46
	D - A5 (South)	432	125	23	7	134
	E - A426	290	468	14	111	4

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	0	0	0	0
	B - Rugby Road	0	0	0	0	0
	C - Gibbet Lane	0	0	0	0	0
	D - A5 (South)	0	0	0	0	0
	E - A426	0	0	0	0	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)
A - A5 (North)	0.48	4.91	0.9	A	571	856
B - Rugby Road	0.47	4.55	0.9	A	578	867
C - Gibbet Lane	0.26	11.67	0.3	B	90	135
D - A5 (South)	0.62	7.53	1.6	A	662	992
E - A426	0.70	8.71	2.3	A	814	1221

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	468	117	578	1560	0.300	467	557	0.0	0.4	3.289	A
B - Rugby Road	474	119	582	1636	0.290	473	462	0.0	0.4	3.090	A
C - Gibbet Lane	74	18	996	582	0.127	73	58	0.0	0.1	7.067	A
D - A5 (South)	543	136	676	1433	0.379	540	393	0.0	0.6	4.023	A
E - A426	668	167	470	1503	0.444	665	747	0.0	0.8	4.277	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	559	140	692	1500	0.373	559	667	0.4	0.6	3.821	A
B - Rugby Road	566	142	697	1572	0.360	566	554	0.4	0.6	3.574	A
C - Gibbet Lane	88	22	1192	512	0.172	88	70	0.1	0.2	8.475	A
D - A5 (South)	648	162	810	1365	0.475	647	470	0.6	0.9	5.007	A
E - A426	797	199	563	1455	0.548	796	894	0.8	1.2	5.446	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	685	171	845	1420	0.482	684	815	0.6	0.9	4.880	A
B - Rugby Road	694	173	852	1486	0.467	692	676	0.6	0.9	4.538	A
C - Gibbet Lane	108	27	1459	417	0.258	107	86	0.2	0.3	11.587	B
D - A5 (South)	794	198	991	1272	0.624	791	575	0.9	1.6	7.433	A
E - A426	977	244	688	1391	0.702	972	1094	1.2	2.3	8.516	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	685	171	849	1418	0.483	685	818	0.9	0.9	4.910	A
B - Rugby Road	694	173	854	1485	0.467	694	679	0.9	0.9	4.550	A
C - Gibbet Lane	108	27	1462	416	0.259	108	86	0.3	0.3	11.668	B
D - A5 (South)	794	198	993	1271	0.624	794	577	1.6	1.6	7.535	A
E - A426	977	244	690	1389	0.703	976	1097	2.3	2.3	8.709	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	559	140	697	1498	0.373	560	671	0.9	0.6	3.846	A
B - Rugby Road	566	142	700	1571	0.361	568	558	0.9	0.6	3.595	A
C - Gibbet Lane	88	22	1197	511	0.173	89	70	0.3	0.2	8.541	A
D - A5 (South)	648	162	813	1363	0.475	651	473	1.6	0.9	5.077	A
E - A426	797	199	566	1453	0.549	802	898	2.3	1.2	5.563	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	468	117	582	1558	0.301	469	561	0.6	0.4	3.310	A
B - Rugby Road	474	119	585	1634	0.290	475	466	0.6	0.4	3.108	A
C - Gibbet Lane	74	18	1001	580	0.127	74	59	0.2	0.1	7.116	A
D - A5 (South)	543	136	680	1431	0.379	544	395	0.9	0.6	4.063	A
E - A426	668	167	473	1501	0.445	669	751	1.2	0.8	4.336	A

2036 WoD, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	B - Rugby Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J47	A5/A426/Gibbet Lane	Standard Roundabout		A, B, C, D, E	12.10	B

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	2	C - Gibbet Lane	12.10	B

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2036 WoD	AM	PRTM 2.2 Demand Flows	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 - A5 (North)		ONE HOUR	✓	926	100.000
B - Rugby Road		ONE HOUR	✓	785	100.000
C - Gibbet Lane		ONE HOUR	✓	117	100.000
D - A5 (South)		ONE HOUR	✓	855	100.000
E - A426		ONE HOUR	✓	576	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	6	35	388	497
	B - Rugby Road	2	0	28	153	602
	C - Gibbet Lane	22	25	1	6	63
	D - A5 (South)	361	241	35	6	212
	E - A426	208	237	21	110	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	0	0	0	0
	B - Rugby Road	0	0	0	0	0
	C - Gibbet Lane	0	0	0	0	0
	D - A5 (South)	0	0	0	0	0
	E - A426	0	0	0	0	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)
A - A5 (North)	0.69	7.93	2.2	A	850	1275
B - Rugby Road	0.67	8.44	2.0	A	720	1080
C - Gibbet Lane	0.52	30.02	1.0	D	107	161
D - A5 (South)	0.86	22.31	5.5	C	785	1177
E - A426	0.47	5.01	0.9	A	529	793

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	697	174	506	1597	0.436	694	444	0.0	0.8	3.972	A
B - Rugby Road	591	148	819	1504	0.393	588	381	0.0	0.6	3.920	A
C - Gibbet Lane	88	22	1318	468	0.188	87	90	0.0	0.2	9.437	A
D - A5 (South)	644	161	908	1315	0.490	640	497	0.0	0.9	5.305	A
E - A426	434	108	518	1478	0.293	432	1029	0.0	0.4	3.431	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	832	208	606	1545	0.539	831	532	0.8	1.2	5.030	A
B - Rugby Road	706	176	981	1414	0.499	704	456	0.6	1.0	5.062	A
C - Gibbet Lane	105	26	1577	375	0.280	105	108	0.2	0.4	13.262	B
D - A5 (South)	769	192	1087	1223	0.628	766	595	0.9	1.7	7.818	A
E - A426	518	129	621	1425	0.363	517	1232	0.4	0.6	3.962	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	1020	255	738	1476	0.691	1015	646	1.2	2.2	7.752	A
B - Rugby Road	864	216	1198	1293	0.668	860	555	1.0	2.0	8.244	A
C - Gibbet Lane	129	32	1928	251	0.513	126	131	0.4	1.0	28.383	D
D - A5 (South)	941	235	1327	1101	0.855	927	727	1.7	5.1	19.371	C
E - A426	634	159	752	1358	0.467	633	1503	0.6	0.9	4.959	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	1020	255	744	1473	0.692	1019	652	2.2	2.2	7.929	A
B - Rugby Road	864	216	1203	1291	0.670	864	560	2.0	2.0	8.438	A
C - Gibbet Lane	129	32	1935	248	0.519	129	132	1.0	1.0	30.015	D
D - A5 (South)	941	235	1334	1097	0.858	940	730	5.1	5.5	22.307	C
E - A426	634	159	762	1353	0.469	634	1512	0.9	0.9	5.011	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	832	208	614	1541	0.540	837	540	2.2	1.2	5.140	A
B - Rugby Road	706	176	988	1410	0.500	710	463	2.0	1.0	5.166	A
C - Gibbet Lane	105	26	1588	371	0.283	108	109	1.0	0.4	13.776	B
D - A5 (South)	769	192	1097	1218	0.631	784	599	5.5	1.8	8.562	A
E - A426	518	129	635	1418	0.365	519	1246	0.9	0.6	4.011	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	697	174	511	1595	0.437	699	448	1.2	0.8	4.024	A
B - Rugby Road	591	148	825	1501	0.394	592	384	1.0	0.7	3.967	A
C - Gibbet Lane	88	22	1327	465	0.190	89	91	0.4	0.2	9.594	A
D - A5 (South)	644	161	915	1311	0.491	647	500	1.8	1.0	5.445	A
E - A426	434	108	524	1475	0.294	434	1038	0.6	0.4	3.463	A

2036 WoD, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	B - Rugby Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J47	A5/A426/Gibbet Lane	Standard Roundabout		A, B, C, D, E	14.26	B

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	4	E - A426	14.26	B

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2036 WoD	PM	PRTM 2.2 Demand Flows	ONE HOUR	16:45	18:15	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 - A5 (North)		ONE HOUR	✓	744	100.000
B - Rugby Road		ONE HOUR	✓	754	100.000
C - Gibbet Lane		ONE HOUR	✓	118	100.000
D - A5 (South)		ONE HOUR	✓	863	100.000
E - A426		ONE HOUR	✓	1062	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	6	30	275	433
	B - Rugby Road	1	0	19	195	539
	C - Gibbet Lane	24	23	0	16	55
	D - A5 (South)	517	150	28	8	160
	E - A426	347	560	17	133	5

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	0	0	0	0
	B - Rugby Road	0	0	0	0	0
	C - Gibbet Lane	0	0	0	0	0
	D - A5 (South)	0	0	0	0	0
	E - A426	0	0	0	0	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)
A - A5 (North)	0.62	7.03	1.6	A	683	1024
B - Rugby Road	0.60	6.41	1.5	A	692	1038
C - Gibbet Lane	0.41	19.49	0.7	C	108	162
D - A5 (South)	0.81	16.09	4.1	C	792	1188
E - A426	0.89	22.83	7.0	C	975	1462

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	560	140	691	1500	0.373	558	665	0.0	0.6	3.809	A
B - Rugby Road	568	142	696	1573	0.361	565	553	0.0	0.6	3.567	A
C - Gibbet Lane	89	22	1191	513	0.173	88	70	0.0	0.2	8.460	A
D - A5 (South)	650	162	809	1365	0.476	646	470	0.0	0.9	4.982	A
E - A426	800	200	562	1455	0.549	795	893	0.0	1.2	5.410	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	669	167	828	1429	0.468	668	796	0.6	0.9	4.722	A
B - Rugby Road	678	169	833	1496	0.453	677	662	0.6	0.8	4.387	A
C - Gibbet Lane	106	27	1426	429	0.247	106	84	0.2	0.3	11.107	B
D - A5 (South)	776	194	969	1284	0.604	773	562	0.9	1.5	7.022	A
E - A426	955	239	673	1398	0.683	951	1070	1.2	2.1	7.987	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	819	205	1003	1337	0.613	816	967	0.9	1.6	6.880	A
B - Rugby Road	830	208	1017	1394	0.596	828	803	0.8	1.4	6.329	A
C - Gibbet Lane	130	32	1742	317	0.410	129	103	0.3	0.7	18.982	C
D - A5 (South)	950	238	1184	1174	0.810	941	686	1.5	3.9	14.858	B
E - A426	1169	292	818	1323	0.884	1152	1307	2.1	6.4	19.347	C

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	819	205	1016	1331	0.616	819	978	1.6	1.6	7.034	A
B - Rugby Road	830	208	1022	1391	0.597	830	812	1.4	1.5	6.413	A
C - Gibbet Lane	130	32	1749	314	0.413	130	103	0.7	0.7	19.491	C
D - A5 (South)	950	238	1189	1171	0.811	949	690	3.9	4.1	16.085	C
E - A426	1169	292	826	1319	0.886	1167	1312	6.4	7.0	22.833	C

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	669	167	846	1419	0.471	672	812	1.6	0.9	4.830	A
B - Rugby Road	678	169	841	1492	0.454	680	676	1.5	0.8	4.450	A
C - Gibbet Lane	106	27	1436	426	0.249	107	85	0.7	0.3	11.365	B
D - A5 (South)	776	194	976	1280	0.606	786	568	4.1	1.6	7.427	A
E - A426	955	239	684	1393	0.686	974	1078	7.0	2.2	8.966	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	560	140	699	1496	0.374	561	672	0.9	0.6	3.856	A
B - Rugby Road	568	142	701	1570	0.362	569	559	0.8	0.6	3.601	A
C - Gibbet Lane	89	22	1199	510	0.174	89	71	0.3	0.2	8.570	A
D - A5 (South)	650	162	815	1362	0.477	652	473	1.6	0.9	5.091	A
E - A426	800	200	568	1453	0.550	804	900	2.2	1.2	5.582	A

2036 WoDWS, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	B - Rugby Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J47	A5/A426/Gibbet Lane	Standard Roundabout		A, B, C, D, E	11.93	B

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	2	C - Gibbet Lane	11.93	B

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2036 WoDWS	AM	PRTM 2.2 Demand Flows	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 - A5 (North)		ONE HOUR	✓	928	100.000
B - Rugby Road		ONE HOUR	✓	786	100.000
C - Gibbet Lane		ONE HOUR	✓	115	100.000
D - A5 (South)		ONE HOUR	✓	856	100.000
E - A426		ONE HOUR	✓	560	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	6	37	393	492
	B - Rugby Road	2	0	28	155	601
	C - Gibbet Lane	22	25	0	6	62
	D - A5 (South)	360	240	35	6	215
	E - A426	203	232	17	108	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	0	0	0	0
	B - Rugby Road	0	0	0	0	0
	C - Gibbet Lane	0	0	0	0	0
	D - A5 (South)	0	0	0	0	0
	E - A426	0	0	0	0	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)
A - A5 (North)	0.69	7.84	2.2	A	852	1277
B - Rugby Road	0.67	8.40	2.0	A	721	1082
C - Gibbet Lane	0.51	29.41	1.0	D	106	158
D - A5 (South)	0.86	21.88	5.4	C	785	1178
E - A426	0.46	4.88	0.8	A	514	771

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	699	175	497	1602	0.436	696	440	0.0	0.8	3.956	A
B - Rugby Road	592	148	816	1506	0.393	589	377	0.0	0.6	3.914	A
C - Gibbet Lane	87	22	1317	468	0.185	86	88	0.0	0.2	9.395	A
D - A5 (South)	644	161	902	1318	0.489	641	501	0.0	0.9	5.287	A
E - A426	422	105	516	1479	0.285	420	1026	0.0	0.4	3.395	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	834	209	595	1551	0.538	833	526	0.8	1.2	5.000	A
B - Rugby Road	707	177	976	1417	0.499	705	451	0.6	1.0	5.050	A
C - Gibbet Lane	103	26	1577	376	0.275	103	105	0.2	0.4	13.162	B
D - A5 (South)	770	192	1080	1227	0.627	767	599	0.9	1.6	7.773	A
E - A426	503	126	618	1427	0.353	503	1229	0.4	0.5	3.894	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	1022	255	724	1483	0.689	1018	640	1.2	2.2	7.662	A
B - Rugby Road	865	216	1193	1296	0.668	862	549	1.0	2.0	8.209	A
C - Gibbet Lane	127	32	1927	251	0.504	124	128	0.4	1.0	27.865	D
D - A5 (South)	942	236	1318	1105	0.853	929	733	1.6	5.1	19.080	C
E - A426	617	154	749	1359	0.454	615	1499	0.5	0.8	4.833	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	1022	255	729	1480	0.690	1022	646	2.2	2.2	7.840	A
B - Rugby Road	865	216	1198	1294	0.669	865	553	2.0	2.0	8.398	A
C - Gibbet Lane	127	32	1934	249	0.509	126	129	1.0	1.0	29.414	D
D - A5 (South)	942	236	1325	1102	0.855	941	735	5.1	5.4	21.878	C
E - A426	617	154	758	1354	0.455	617	1508	0.8	0.8	4.880	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	834	209	602	1547	0.539	838	535	2.2	1.2	5.106	A
B - Rugby Road	707	177	983	1413	0.500	711	457	2.0	1.0	5.154	A
C - Gibbet Lane	103	26	1587	372	0.278	106	106	1.0	0.4	13.650	B
D - A5 (South)	770	192	1090	1222	0.630	784	603	5.4	1.7	8.492	A
E - A426	503	126	632	1419	0.355	505	1242	0.8	0.6	3.941	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	699	175	501	1600	0.437	700	444	1.2	0.8	4.006	A
B - Rugby Road	592	148	821	1503	0.394	593	380	1.0	0.7	3.963	A
C - Gibbet Lane	87	22	1326	465	0.186	87	88	0.4	0.2	9.550	A
D - A5 (South)	644	161	909	1314	0.490	648	504	1.7	1.0	5.425	A
E - A426	422	105	522	1476	0.286	422	1034	0.6	0.4	3.416	A

2036 WoDWS, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	B - Rugby Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J47	A5/A426/Gibbet Lane	Standard Roundabout		A, B, C, D, E	13.00	B

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	6	E - A426	13.00	B

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2036 WoDWS	PM	PRTM 2.2 Demand Flows	ONE HOUR	16:45	18:15	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 - A5 (North)		ONE HOUR	✓	743	100.000
B - Rugby Road		ONE HOUR	✓	755	100.000
C - Gibbet Lane		ONE HOUR	✓	114	100.000
D - A5 (South)		ONE HOUR	✓	857	100.000
E - A426		ONE HOUR	✓	1037	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	7	30	279	427
	B - Rugby Road	1	0	16	200	538
	C - Gibbet Lane	23	24	0	14	53
	D - A5 (South)	529	147	21	8	152
	E - A426	346	546	17	123	5

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	0	0	0	0
	B - Rugby Road	0	0	0	0	0
	C - Gibbet Lane	0	0	0	0	0
	D - A5 (South)	0	0	0	0	0
	E - A426	0	0	0	0	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)
A - A5 (North)	0.61	6.77	1.5	A	682	1023
B - Rugby Road	0.59	6.30	1.4	A	693	1039
C - Gibbet Lane	0.40	18.73	0.6	C	105	157
D - A5 (South)	0.80	15.31	3.9	C	786	1180
E - A426	0.87	19.80	6.0	C	952	1427

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	559	140	667	1513	0.370	557	673	0.0	0.6	3.755	A
B - Rugby Road	568	142	682	1581	0.360	566	542	0.0	0.6	3.542	A
C - Gibbet Lane	86	21	1185	515	0.167	85	63	0.0	0.2	8.361	A
D - A5 (South)	645	161	803	1368	0.471	642	468	0.0	0.9	4.930	A
E - A426	781	195	564	1455	0.537	776	881	0.0	1.1	5.272	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	668	167	798	1444	0.462	667	806	0.6	0.9	4.623	A
B - Rugby Road	679	170	816	1506	0.451	678	649	0.6	0.8	4.342	A
C - Gibbet Lane	102	26	1419	432	0.237	102	75	0.2	0.3	10.903	B
D - A5 (South)	770	193	961	1288	0.598	768	560	0.9	1.5	6.899	A
E - A426	932	233	675	1397	0.667	929	1054	1.1	2.0	7.633	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	818	205	969	1355	0.604	815	979	0.9	1.5	6.642	A
B - Rugby Road	831	208	997	1405	0.592	829	788	0.8	1.4	6.220	A
C - Gibbet Lane	126	31	1734	320	0.393	124	92	0.3	0.6	18.298	C
D - A5 (South)	944	236	1175	1179	0.801	935	683	1.5	3.7	14.248	B
E - A426	1142	285	821	1322	0.864	1127	1288	2.0	5.6	17.354	C

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	818	205	980	1349	0.606	818	989	1.5	1.5	6.772	A
B - Rugby Road	831	208	1002	1403	0.593	831	796	1.4	1.4	6.296	A
C - Gibbet Lane	126	31	1740	317	0.395	125	92	0.6	0.6	18.734	C
D - A5 (South)	944	236	1179	1176	0.802	943	687	3.7	3.9	15.309	C
E - A426	1142	285	829	1318	0.866	1140	1293	5.6	6.0	19.799	C

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	668	167	814	1436	0.465	671	819	1.5	0.9	4.715	A
B - Rugby Road	679	170	823	1502	0.452	681	661	1.4	0.8	4.399	A
C - Gibbet Lane	102	26	1428	428	0.239	104	76	0.6	0.3	11.131	B
D - A5 (South)	770	193	967	1285	0.600	780	565	3.9	1.5	7.260	A
E - A426	932	233	685	1392	0.670	948	1062	6.0	2.1	8.375	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	559	140	674	1510	0.371	561	680	0.9	0.6	3.796	A
B - Rugby Road	568	142	687	1578	0.360	569	548	0.8	0.6	3.575	A
C - Gibbet Lane	86	21	1193	512	0.168	86	63	0.3	0.2	8.463	A
D - A5 (South)	645	161	808	1366	0.472	648	471	1.5	0.9	5.030	A
E - A426	781	195	569	1452	0.538	784	887	2.1	1.2	5.421	A

2036 WD, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	B - Rugby Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J47	A5/A426/Gibbet Lane	Standard Roundabout		A, B, C, D, E	13.95	B

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	-2	C - Gibbet Lane	13.95	B

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2036 WD	AM	PRTM 2.2 Demand Flows	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 - A5 (North)		ONE HOUR	✓	986	100.000
B - Rugby Road		ONE HOUR	✓	793	100.000
C - Gibbet Lane		ONE HOUR	✓	130	100.000
D - A5 (South)		ONE HOUR	✓	863	100.000
E - A426		ONE HOUR	✓	557	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	6	43	430	507
	B - Rugby Road	2	0	29	157	605
	C - Gibbet Lane	29	24	1	8	68
	D - A5 (South)	393	229	33	10	198
	E - A426	216	219	16	106	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	0	0	0	0
	B - Rugby Road	0	0	0	0	0
	C - Gibbet Lane	0	0	0	0	0
	D - A5 (South)	0	0	0	0	0
	E - A426	0	0	0	0	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)
A - A5 (North)	0.73	8.78	2.6	A	905	1357
B - Rugby Road	0.69	9.33	2.2	A	728	1092
C - Gibbet Lane	0.64	43.13	1.6	E	119	179
D - A5 (South)	0.88	25.49	6.4	D	792	1188
E - A426	0.46	4.97	0.8	A	511	767

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	742	186	478	1612	0.460	739	479	0.0	0.8	4.107	A
B - Rugby Road	597	149	859	1482	0.403	594	358	0.0	0.7	4.043	A
C - Gibbet Lane	98	24	1362	452	0.216	97	91	0.0	0.3	10.103	B
D - A5 (South)	650	162	926	1306	0.498	646	533	0.0	1.0	5.425	A
E - A426	419	105	539	1467	0.286	418	1032	0.0	0.4	3.426	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	886	222	572	1563	0.567	885	574	0.8	1.3	5.294	A
B - Rugby Road	713	178	1028	1388	0.514	711	429	0.7	1.0	5.309	A
C - Gibbet Lane	117	29	1630	357	0.328	116	109	0.3	0.5	14.913	B
D - A5 (South)	776	194	1108	1213	0.640	773	638	1.0	1.7	8.129	A
E - A426	501	125	645	1412	0.355	500	1236	0.4	0.5	3.943	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	1086	271	696	1498	0.725	1081	696	1.3	2.5	8.522	A
B - Rugby Road	873	218	1256	1261	0.692	869	521	1.0	2.2	9.063	A
C - Gibbet Lane	143	36	1991	228	0.627	139	133	0.5	1.5	38.699	E
D - A5 (South)	950	238	1351	1089	0.873	934	779	1.7	5.8	21.373	C
E - A426	613	153	780	1343	0.457	612	1505	0.5	0.8	4.915	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	1086	271	702	1495	0.726	1085	703	2.5	2.6	8.776	A
B - Rugby Road	873	218	1261	1258	0.694	873	526	2.2	2.2	9.335	A
C - Gibbet Lane	143	36	2000	225	0.636	143	134	1.5	1.6	43.129	E
D - A5 (South)	950	238	1360	1084	0.876	948	783	5.8	6.4	25.489	D
E - A426	613	153	792	1337	0.459	613	1516	0.8	0.8	4.973	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	886	222	581	1558	0.569	891	585	2.6	1.3	5.440	A
B - Rugby Road	713	178	1036	1383	0.515	717	436	2.2	1.1	5.444	A
C - Gibbet Lane	117	29	1643	352	0.332	121	111	1.6	0.5	15.890	C
D - A5 (South)	776	194	1121	1206	0.643	794	643	6.4	1.9	9.099	A
E - A426	501	125	664	1403	0.357	502	1251	0.8	0.6	3.999	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	742	186	482	1610	0.461	744	484	1.3	0.9	4.168	A
B - Rugby Road	597	149	865	1479	0.404	599	361	1.1	0.7	4.097	A
C - Gibbet Lane	98	24	1371	449	0.218	99	92	0.5	0.3	10.316	B
D - A5 (South)	650	162	934	1302	0.499	653	537	1.9	1.0	5.580	A
E - A426	419	105	546	1464	0.286	420	1041	0.6	0.4	3.449	A

2036 WD, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	B - Rugby Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J47	A5/A426/Gibbet Lane	Standard Roundabout		A, B, C, D, E	16.68	C

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	1	E - A426	16.68	C

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2036 WD	PM	PRTM 2.2 Demand Flows	ONE HOUR	16:45	18:15	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 - A5 (North)		ONE HOUR	✓	754	100.000
B - Rugby Road		ONE HOUR	✓	765	100.000
C - Gibbet Lane		ONE HOUR	✓	127	100.000
D - A5 (South)		ONE HOUR	✓	901	100.000
E - A426		ONE HOUR	✓	1062	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	7	30	304	413
	B - Rugby Road	1	0	18	229	517
	C - Gibbet Lane	24	27	0	18	58
	D - A5 (South)	572	160	26	10	133
	E - A426	346	571	18	122	5

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	0	0	0	0
	B - Rugby Road	0	0	0	0	0
	C - Gibbet Lane	0	0	0	0	0
	D - A5 (South)	0	0	0	0	0
	E - A426	0	0	0	0	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)
A - A5 (North)	0.63	7.30	1.7	A	692	1038
B - Rugby Road	0.61	6.55	1.5	A	702	1053
C - Gibbet Lane	0.45	21.14	0.8	C	117	175
D - A5 (South)	0.83	17.77	4.7	C	827	1240
E - A426	0.91	29.17	8.9	D	975	1462

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	568	142	703	1495	0.380	565	706	0.0	0.6	3.863	A
B - Rugby Road	576	144	695	1573	0.366	574	572	0.0	0.6	3.595	A
C - Gibbet Lane	96	24	1200	510	0.188	95	69	0.0	0.2	8.658	A
D - A5 (South)	678	170	783	1378	0.492	674	512	0.0	1.0	5.086	A
E - A426	800	200	614	1429	0.560	795	844	0.0	1.3	5.632	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	678	169	841	1422	0.477	677	845	0.6	0.9	4.821	A
B - Rugby Road	688	172	832	1497	0.459	687	685	0.6	0.8	4.438	A
C - Gibbet Lane	114	29	1437	425	0.268	114	82	0.2	0.4	11.525	B
D - A5 (South)	810	202	938	1300	0.623	807	613	1.0	1.6	7.273	A
E - A426	955	239	735	1366	0.699	951	1010	1.3	2.2	8.577	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	830	208	1016	1330	0.624	827	1024	0.9	1.6	7.115	A
B - Rugby Road	842	211	1015	1395	0.604	840	828	0.8	1.5	6.451	A
C - Gibbet Lane	140	35	1755	312	0.448	138	100	0.4	0.8	20.469	C
D - A5 (South)	992	248	1146	1194	0.831	981	747	1.6	4.5	16.124	C
E - A426	1169	292	893	1285	0.910	1147	1234	2.2	7.8	23.116	C

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	830	208	1031	1323	0.628	830	1036	1.6	1.7	7.302	A
B - Rugby Road	842	211	1021	1392	0.605	842	840	1.5	1.5	6.546	A
C - Gibbet Lane	140	35	1762	310	0.451	140	101	0.8	0.8	21.144	C
D - A5 (South)	992	248	1150	1191	0.833	991	751	4.5	4.7	17.775	C
E - A426	1169	292	902	1280	0.913	1165	1239	7.8	8.9	29.166	D

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	678	169	864	1410	0.481	681	864	1.7	0.9	4.957	A
B - Rugby Road	688	172	841	1492	0.461	690	704	1.5	0.9	4.504	A
C - Gibbet Lane	114	29	1448	421	0.271	116	84	0.8	0.4	11.842	B
D - A5 (South)	810	202	944	1296	0.625	822	619	4.7	1.7	7.776	A
E - A426	955	239	748	1360	0.702	980	1018	8.9	2.4	10.105	B

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	568	142	711	1490	0.381	569	713	0.9	0.6	3.914	A
B - Rugby Road	576	144	701	1570	0.367	577	579	0.9	0.6	3.628	A
C - Gibbet Lane	96	24	1208	507	0.189	96	69	0.4	0.2	8.783	A
D - A5 (South)	678	170	789	1376	0.493	681	516	1.7	1.0	5.206	A
E - A426	800	200	620	1426	0.561	804	850	2.4	1.3	5.835	A

Appendix 4: Mitigated Gibbet Roundabout J10 Output (Full Reassignment)

Junctions 10

ARCADY 10 - Roundabout Module

Filename: J26 240214 - A5_A426_Gibbet Lane (Miti) Flow Amends.j10
Path: X:\NTT\NTT2814_Hinckley Rail Freight Interchange\02. Project Delivery\01. WIP\Design and Calculations\T&I Planning\04 Junction Modelling\J26_JTC 47 - A5 - A426 - Gibbet Lane
Report generation date: 14/02/2024 13:24:53

Summary of junction performance

	AM						PM					
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity
	2036 WoDWS											
A - A5 (North)	D5	2.2	7.84	0.69	A	9 % [D - A5 (South)]	D6	1.5	6.78	0.61	A	9 % [E - A426]
B - Rugby Road		2.0	8.40	0.67	A			1.4	6.30	0.59	A	
C - Gibbet Lane		0.6	17.86	0.39	C			0.5	13.10	0.31	B	
D - A5 (South)		3.8	14.91	0.80	B			2.9	11.39	0.75	B	
E - A426		0.8	4.59	0.44	A			4.9	15.92	0.84	C	
	2036 WD											
A - A5 (North)	D7	2.6	8.78	0.73	A	6 % [C - Gibbet Lane]	D8	1.7	7.31	0.63	A	4 % [E - A426]
B - Rugby Road		2.2	9.34	0.69	A			1.5	6.55	0.61	A	
C - Gibbet Lane		0.9	22.40	0.47	C			0.5	14.26	0.36	B	
D - A5 (South)		4.2	16.67	0.82	C			3.4	12.71	0.78	B	
E - A426		0.8	4.67	0.44	A			6.8	21.98	0.88	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. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

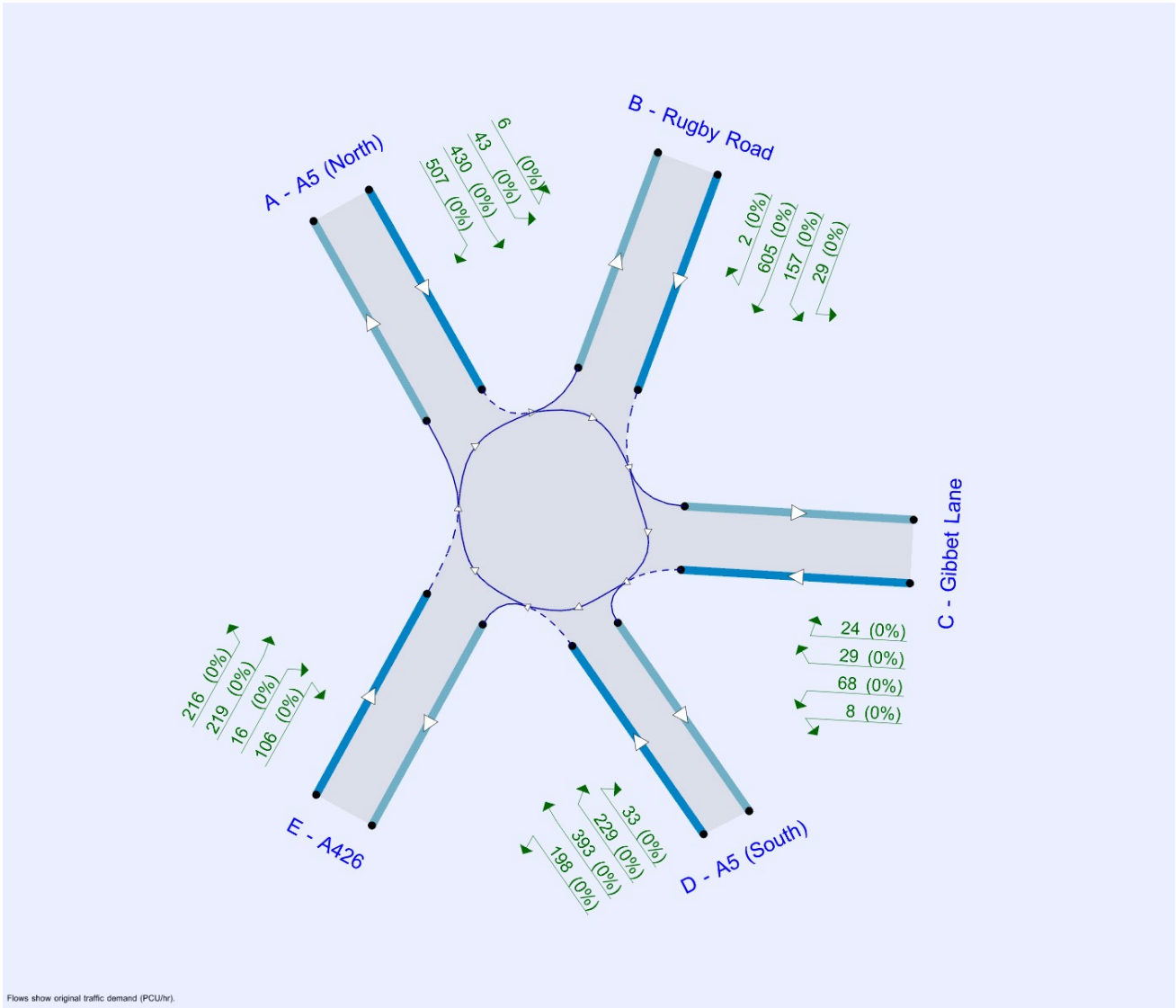
File summary

File Description

Title	J47 - A5/A426/Gibbet Lane
Location	
Site number	J47
Date	18/12/2020
Version	V0.1
Status	Existing
Identifier	
Client	
Jobnumber	NTT2814
Enumerator	BWB
Description	

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	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2036 WoDWS	AM	PRTM 2.2 Demand Flows	ONE HOUR	07:45	09:15	15	✓
D6	2036 WoDWS	PM	PRTM 2.2 Demand Flows	ONE HOUR	16:45	18:15	15	✓
D7	2036 WD	AM	PRTM 2.2 Demand Flows	ONE HOUR	07:45	09:15	15	✓
D8	2036 WD	PM	PRTM 2.2 Demand Flows	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2036 WoDWS, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	B - Rugby Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J47	A5/A426/Gibbet Lane	Standard Roundabout		A, B, C, D, E	9.64	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	9	D - A5 (South)	9.64	A

Arms

Arms

Arm	Name	Description	No give-way line
A	A5 (North)		
B	Rugby Road		
C	Gibbet Lane		
D	A5 (South)		
E	A426		

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
A - A5 (North)	3.86	8.86	15.8	28.0	70.0	43.0		
B - Rugby Road	3.20	6.69	54.0	45.0	71.0	20.0		
C - Gibbet Lane	2.65	7.00	5.0	7.7	73.0	33.0		
D - A5 (South)	3.95	8.00	20.0	30.0	70.0	44.0		
E - A426	3.42	7.50	17.5	35.0	71.0	27.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - A5 (North)	0.524	1862
B - Rugby Road	0.556	1960
C - Gibbet Lane	0.373	1049
D - A5 (South)	0.526	1879
E - A426	0.524	1799

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2036 WoDWS	AM	PRTM 2.2 Demand Flows	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 - A5 (North)		ONE HOUR	✓	928	100.000
B - Rugby Road		ONE HOUR	✓	786	100.000
C - Gibbet Lane		ONE HOUR	✓	115	100.000
D - A5 (South)		ONE HOUR	✓	856	100.000
E - A426		ONE HOUR	✓	560	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	6	37	393	492
	B - Rugby Road	2	0	28	155	601
	C - Gibbet Lane	22	25	0	6	62
	D - A5 (South)	360	240	35	6	215
	E - A426	203	232	17	108	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	0	0	0	0
	B - Rugby Road	0	0	0	0	0
	C - Gibbet Lane	0	0	0	0	0
	D - A5 (South)	0	0	0	0	0
	E - A426	0	0	0	0	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)
A - A5 (North)	0.69	7.84	2.2	A	852	1277
B - Rugby Road	0.67	8.40	2.0	A	721	1082
C - Gibbet Lane	0.39	17.86	0.6	C	106	158
D - A5 (South)	0.80	14.91	3.8	B	785	1178
E - A426	0.44	4.59	0.8	A	514	771

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	699	175	497	1602	0.436	696	440	0.0	0.8	3.957	A
B - Rugby Road	592	148	816	1506	0.393	589	377	0.0	0.6	3.914	A
C - Gibbet Lane	87	22	1317	558	0.155	86	88	0.0	0.2	7.611	A
D - A5 (South)	644	161	902	1404	0.459	641	501	0.0	0.8	4.696	A
E - A426	422	105	517	1528	0.276	420	1027	0.0	0.4	3.244	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	834	209	595	1551	0.538	833	526	0.8	1.2	5.001	A
B - Rugby Road	707	177	976	1417	0.499	705	451	0.6	1.0	5.050	A
C - Gibbet Lane	103	26	1577	461	0.224	103	105	0.2	0.3	10.033	B
D - A5 (South)	770	192	1080	1311	0.587	767	599	0.8	1.4	6.597	A
E - A426	503	126	618	1475	0.341	503	1229	0.4	0.5	3.702	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	1022	255	726	1482	0.689	1018	642	1.2	2.2	7.683	A
B - Rugby Road	865	216	1193	1296	0.668	862	551	1.0	2.0	8.211	A
C - Gibbet Lane	127	32	1927	331	0.383	125	128	0.3	0.6	17.413	C
D - A5 (South)	942	236	1319	1185	0.795	934	733	1.4	3.6	13.862	B
E - A426	617	154	753	1405	0.439	616	1500	0.5	0.8	4.557	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	1022	255	730	1480	0.690	1022	646	2.2	2.2	7.842	A
B - Rugby Road	865	216	1198	1294	0.669	865	554	2.0	2.0	8.399	A
C - Gibbet Lane	127	32	1934	328	0.386	127	129	0.6	0.6	17.857	C
D - A5 (South)	942	236	1325	1182	0.798	942	735	3.6	3.8	14.915	B
E - A426	617	154	759	1401	0.440	617	1508	0.8	0.8	4.588	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	834	209	600	1548	0.539	838	532	2.2	1.2	5.100	A
B - Rugby Road	707	177	983	1413	0.500	711	456	2.0	1.0	5.153	A
C - Gibbet Lane	103	26	1587	457	0.226	105	106	0.6	0.3	10.245	B
D - A5 (South)	770	192	1089	1306	0.589	779	603	3.8	1.5	6.944	A
E - A426	503	126	628	1470	0.342	504	1240	0.8	0.5	3.734	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	699	175	500	1600	0.437	700	443	1.2	0.8	4.007	A
B - Rugby Road	592	148	821	1503	0.394	593	380	1.0	0.7	3.963	A
C - Gibbet Lane	87	22	1326	555	0.156	87	88	0.3	0.2	7.700	A
D - A5 (South)	644	161	909	1401	0.460	647	504	1.5	0.9	4.789	A
E - A426	422	105	521	1526	0.276	422	1034	0.5	0.4	3.265	A

2036 WoDWS, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	B - Rugby Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J47	A5/A426/Gibbet Lane	Standard Roundabout		A, B, C, D, E	10.71	B

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	9	E - A426	10.71	B

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2036 WoDWS	PM	PRTM 2.2 Demand Flows	ONE HOUR	16:45	18:15	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 - A5 (North)		ONE HOUR	✓	743	100.000
B - Rugby Road		ONE HOUR	✓	755	100.000
C - Gibbet Lane		ONE HOUR	✓	114	100.000
D - A5 (South)		ONE HOUR	✓	857	100.000
E - A426		ONE HOUR	✓	1037	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	7	30	279	427
	B - Rugby Road	1	0	16	200	538
	C - Gibbet Lane	23	24	0	14	53
	D - A5 (South)	529	147	21	8	152
	E - A426	346	546	17	123	5

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	0	0	0	0
	B - Rugby Road	0	0	0	0	0
	C - Gibbet Lane	0	0	0	0	0
	D - A5 (South)	0	0	0	0	0
	E - A426	0	0	0	0	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)
A - A5 (North)	0.61	6.78	1.5	A	682	1023
B - Rugby Road	0.59	6.30	1.4	A	693	1039
C - Gibbet Lane	0.31	13.10	0.5	B	105	157
D - A5 (South)	0.75	11.39	2.9	B	786	1180
E - A426	0.84	15.92	4.9	C	952	1427

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	559	140	667	1513	0.370	557	673	0.0	0.6	3.756	A
B - Rugby Road	568	142	682	1581	0.360	566	542	0.0	0.6	3.542	A
C - Gibbet Lane	86	21	1185	607	0.141	85	63	0.0	0.2	6.886	A
D - A5 (South)	645	161	803	1457	0.443	642	468	0.0	0.8	4.403	A
E - A426	781	195	564	1503	0.519	776	881	0.0	1.1	4.924	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	668	167	799	1444	0.463	667	806	0.6	0.9	4.624	A
B - Rugby Road	679	170	817	1506	0.451	678	649	0.6	0.8	4.342	A
C - Gibbet Lane	102	26	1419	520	0.197	102	75	0.2	0.2	8.606	A
D - A5 (South)	770	193	961	1373	0.561	769	560	0.8	1.3	5.934	A
E - A426	932	233	675	1445	0.645	929	1054	1.1	1.8	6.942	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	818	205	972	1353	0.604	815	982	0.9	1.5	6.660	A
B - Rugby Road	831	208	998	1405	0.592	829	790	0.8	1.4	6.223	A
C - Gibbet Lane	126	31	1734	403	0.312	125	92	0.2	0.4	12.921	B
D - A5 (South)	944	236	1175	1261	0.748	937	684	1.3	2.8	10.922	B
E - A426	1142	285	824	1367	0.835	1130	1289	1.8	4.6	14.546	B

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	818	205	980	1349	0.606	818	989	1.5	1.5	6.775	A
B - Rugby Road	831	208	1002	1403	0.593	831	797	1.4	1.4	6.297	A
C - Gibbet Lane	126	31	1740	400	0.314	125	92	0.4	0.5	13.098	B
D - A5 (South)	944	236	1179	1259	0.750	943	687	2.8	2.9	11.386	B
E - A426	1142	285	829	1365	0.837	1141	1294	4.6	4.9	15.917	C

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	668	167	810	1438	0.464	671	816	1.5	0.9	4.707	A
B - Rugby Road	679	170	823	1502	0.452	681	658	1.4	0.8	4.396	A
C - Gibbet Lane	102	26	1428	517	0.198	103	76	0.5	0.3	8.721	A
D - A5 (South)	770	193	967	1370	0.562	777	564	2.9	1.3	6.130	A
E - A426	932	233	683	1441	0.647	944	1061	4.9	1.9	7.408	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	559	140	673	1510	0.370	561	679	0.9	0.6	3.795	A
B - Rugby Road	568	142	687	1578	0.360	569	547	0.8	0.6	3.575	A
C - Gibbet Lane	86	21	1193	605	0.142	86	63	0.3	0.2	6.951	A
D - A5 (South)	645	161	808	1454	0.444	647	471	1.3	0.8	4.475	A
E - A426	781	195	569	1501	0.520	784	887	1.9	1.1	5.041	A

2036 WD, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	B - Rugby Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J47	A5/A426/Gibbet Lane	Standard Roundabout		A, B, C, D, E	10.80	B

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	6	C - Gibbet Lane	10.80	B

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2036 WD	AM	PRTM 2.2 Demand Flows	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 - A5 (North)		ONE HOUR	✓	986	100.000
B - Rugby Road		ONE HOUR	✓	793	100.000
C - Gibbet Lane		ONE HOUR	✓	130	100.000
D - A5 (South)		ONE HOUR	✓	863	100.000
E - A426		ONE HOUR	✓	557	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	6	43	430	507
	B - Rugby Road	2	0	29	157	605
	C - Gibbet Lane	29	24	1	8	68
	D - A5 (South)	393	229	33	10	198
	E - A426	216	219	16	106	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	0	0	0	0
	B - Rugby Road	0	0	0	0	0
	C - Gibbet Lane	0	0	0	0	0
	D - A5 (South)	0	0	0	0	0
	E - A426	0	0	0	0	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)
A - A5 (North)	0.73	8.78	2.6	A	905	1357
B - Rugby Road	0.69	9.34	2.2	A	728	1092
C - Gibbet Lane	0.47	22.40	0.9	C	119	179
D - A5 (South)	0.82	16.67	4.2	C	792	1188
E - A426	0.44	4.67	0.8	A	511	767

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	742	186	478	1612	0.460	739	479	0.0	0.8	4.108	A
B - Rugby Road	597	149	859	1482	0.403	594	358	0.0	0.7	4.043	A
C - Gibbet Lane	98	24	1362	541	0.181	97	91	0.0	0.2	8.084	A
D - A5 (South)	650	162	926	1392	0.467	646	533	0.0	0.9	4.807	A
E - A426	419	105	540	1516	0.277	418	1032	0.0	0.4	3.273	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	886	222	572	1563	0.567	885	574	0.8	1.3	5.295	A
B - Rugby Road	713	178	1028	1388	0.514	711	429	0.7	1.0	5.309	A
C - Gibbet Lane	117	29	1630	441	0.265	116	109	0.2	0.4	11.055	B
D - A5 (South)	776	194	1109	1296	0.599	773	638	0.9	1.5	6.861	A
E - A426	501	125	646	1460	0.343	500	1236	0.4	0.5	3.747	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	1086	271	698	1497	0.725	1081	699	1.3	2.6	8.545	A
B - Rugby Road	873	218	1256	1261	0.692	869	523	1.0	2.2	9.066	A
C - Gibbet Lane	143	36	1991	307	0.467	141	134	0.4	0.8	21.493	C
D - A5 (South)	950	238	1353	1167	0.814	940	779	1.5	4.0	15.210	C
E - A426	613	153	785	1387	0.442	612	1508	0.5	0.8	4.636	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	1086	271	702	1495	0.726	1085	704	2.6	2.6	8.783	A
B - Rugby Road	873	218	1262	1258	0.694	873	526	2.2	2.2	9.336	A
C - Gibbet Lane	143	36	2000	303	0.472	143	134	0.8	0.9	22.404	C
D - A5 (South)	950	238	1360	1163	0.817	949	783	4.0	4.2	16.669	C
E - A426	613	153	793	1383	0.443	613	1517	0.8	0.8	4.674	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	886	222	578	1560	0.568	891	581	2.6	1.3	5.428	A
B - Rugby Road	713	178	1036	1384	0.515	717	433	2.2	1.1	5.441	A
C - Gibbet Lane	117	29	1643	437	0.268	119	111	0.9	0.4	11.397	B
D - A5 (South)	776	194	1119	1290	0.601	787	643	4.2	1.5	7.296	A
E - A426	501	125	657	1454	0.344	502	1248	0.8	0.5	3.784	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	742	186	482	1610	0.461	744	483	1.3	0.9	4.167	A
B - Rugby Road	597	149	865	1479	0.404	599	361	1.1	0.7	4.098	A
C - Gibbet Lane	98	24	1371	538	0.182	98	92	0.4	0.2	8.204	A
D - A5 (South)	650	162	933	1388	0.468	652	537	1.5	0.9	4.912	A
E - A426	419	105	545	1513	0.277	420	1041	0.5	0.4	3.293	A

2036 WD, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	B - Rugby Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J47	A5/A426/Gibbet Lane	Standard Roundabout		A, B, C, D, E	13.06	B

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	4	E - A426	13.06	B

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2036 WD	PM	PRTM 2.2 Demand Flows	ONE HOUR	16:45	18:15	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 - A5 (North)		ONE HOUR	✓	754	100.000
B - Rugby Road		ONE HOUR	✓	765	100.000
C - Gibbet Lane		ONE HOUR	✓	127	100.000
D - A5 (South)		ONE HOUR	✓	901	100.000
E - A426		ONE HOUR	✓	1062	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	7	30	304	413
	B - Rugby Road	1	0	18	229	517
	C - Gibbet Lane	24	27	0	18	58
	D - A5 (South)	572	160	26	10	133
	E - A426	346	571	18	122	5

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A5 (North)	B - Rugby Road	C - Gibbet Lane	D - A5 (South)	E - A426
From	A - A5 (North)	0	0	0	0	0
	B - Rugby Road	0	0	0	0	0
	C - Gibbet Lane	0	0	0	0	0
	D - A5 (South)	0	0	0	0	0
	E - A426	0	0	0	0	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)
A - A5 (North)	0.63	7.31	1.7	A	692	1038
B - Rugby Road	0.61	6.55	1.5	A	702	1053
C - Gibbet Lane	0.36	14.26	0.5	B	117	175
D - A5 (South)	0.78	12.71	3.4	B	827	1240
E - A426	0.88	21.98	6.8	C	975	1462

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	568	142	703	1494	0.380	565	706	0.0	0.6	3.864	A
B - Rugby Road	576	144	695	1573	0.366	574	573	0.0	0.6	3.595	A
C - Gibbet Lane	96	24	1200	602	0.159	95	69	0.0	0.2	7.092	A
D - A5 (South)	678	170	783	1467	0.462	675	512	0.0	0.9	4.527	A
E - A426	800	200	614	1477	0.541	795	844	0.0	1.2	5.241	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	678	169	841	1422	0.477	677	845	0.6	0.9	4.822	A
B - Rugby Road	688	172	833	1497	0.459	687	685	0.6	0.8	4.438	A
C - Gibbet Lane	114	29	1437	514	0.222	114	83	0.2	0.3	8.997	A
D - A5 (South)	810	202	938	1386	0.585	808	613	0.9	1.4	6.209	A
E - A426	955	239	735	1414	0.675	951	1010	1.2	2.0	7.727	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	830	208	1021	1328	0.625	827	1028	0.9	1.6	7.149	A
B - Rugby Road	842	211	1016	1395	0.604	840	832	0.8	1.5	6.456	A
C - Gibbet Lane	140	35	1755	395	0.354	139	101	0.3	0.5	14.011	B
D - A5 (South)	992	248	1146	1276	0.778	984	748	1.4	3.3	12.042	B
E - A426	1169	292	896	1329	0.880	1153	1235	2.0	6.2	18.803	C

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	830	208	1032	1322	0.628	830	1037	1.6	1.7	7.315	A
B - Rugby Road	842	211	1021	1392	0.605	842	841	1.5	1.5	6.548	A
C - Gibbet Lane	140	35	1762	392	0.357	140	101	0.5	0.5	14.261	B
D - A5 (South)	992	248	1150	1274	0.779	992	752	3.3	3.4	12.709	B
E - A426	1169	292	902	1326	0.882	1167	1240	6.2	6.8	21.983	C

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	678	169	858	1413	0.480	681	859	1.7	0.9	4.938	A
B - Rugby Road	688	172	840	1493	0.461	690	699	1.5	0.9	4.501	A
C - Gibbet Lane	114	29	1447	510	0.224	115	83	0.5	0.3	9.146	A
D - A5 (South)	810	202	944	1382	0.586	818	618	3.4	1.4	6.462	A
E - A426	955	239	744	1409	0.678	973	1017	6.8	2.2	8.592	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 (North)	568	142	710	1491	0.381	569	713	0.9	0.6	3.910	A
B - Rugby Road	576	144	700	1570	0.367	577	578	0.9	0.6	3.630	A
C - Gibbet Lane	96	24	1208	599	0.160	96	69	0.3	0.2	7.167	A
D - A5 (South)	678	170	789	1464	0.463	681	516	1.4	0.9	4.609	A
E - A426	800	200	619	1474	0.542	803	850	2.2	1.2	5.397	A

Appendix 5: Existing Cross-in-Hands Roundabout J10 Output (Full Reassignment)

Junctions 10

ARCADY 10 - Roundabout Module

Version: 10.0.2.1574

For sales and distribution information, program advice and maintenance, contact TRL Software:
+44 (0)1344 379777 software@trl.co.uk trlsoftware.com

Filename: J27_240213 A5 A4303 B4027 Coal Pit Ln (Existing) Flow Amends.j10
Path: X:\NTT\NTT2814_Hinckley Rail Freight Interchange\02. Project Delivery\01. WIP\Design and Calculations\T&I Planning\04 Junction Modelling\J27_JTC 48 - A5 - A4303 - B4027 - Coal Pit Lane
Report generation date: 14/02/2024 10:44:19

Summary of junction performance

	AM						PM					
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity
	2023											
A - A5 N	D1	1.6	5.19	0.61	A	42 % [A - A5 N]	D2	0.6	3.23	0.38	A	46 % [D - B4027 S]
B - A4303 E		0.8	3.03	0.44	A			0.8	2.75	0.43	A	
C - A5 S		0.6	3.53	0.36	A			1.1	4.64	0.51	A	
D - B4027 S		0.3	4.03	0.21	A			0.7	6.38	0.41	A	
E - Coal Pit Lane W		0.5	6.16	0.32	A			0.2	6.39	0.20	A	
	WoD 2036											
A - A5 N	D3	9.0	22.85	0.91	C	3 % [A - A5 N]	D4	1.3	4.98	0.57	A	6 % [D - B4027 S]
B - A4303 E		1.9	5.35	0.66	A			1.6	4.33	0.62	A	
C - A5 S		1.2	5.44	0.55	A			3.4	11.08	0.78	B	
D - B4027 S		0.5	5.66	0.34	A			2.9	19.66	0.75	C	
E - Coal Pit Lane W		1.2	11.13	0.54	B			0.7	12.25	0.40	B	
	WoDWS 2036											
A - A5 N	D5	9.1	23.10	0.91	C	3 % [A - A5 N]	D6	1.3	5.00	0.57	A	9 % [D - B4027 S]
B - A4303 E		1.9	5.39	0.66	A			1.6	4.24	0.62	A	
C - A5 S		1.2	5.39	0.54	A			3.4	11.11	0.78	B	
D - B4027 S		0.5	5.58	0.33	A			2.1	15.81	0.69	C	
E - Coal Pit Lane W		1.1	10.74	0.53	B			0.6	11.40	0.37	B	
	WD 2036											
A - A5 N	D7	9.1	23.79	0.91	C	3 % [A - A5 N]	D8	1.6	5.62	0.62	A	5 % [D - B4027 S]
B - A4303 E		2.3	6.06	0.70	A			1.6	4.36	0.62	A	
C - A5 S		1.4	6.03	0.59	A			4.5	14.10	0.83	B	
D - B4027 S		0.6	6.14	0.36	A			2.9	20.24	0.75	C	
E - Coal Pit Lane W		2.2	17.58	0.69	C			0.6	12.59	0.39	B	

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. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

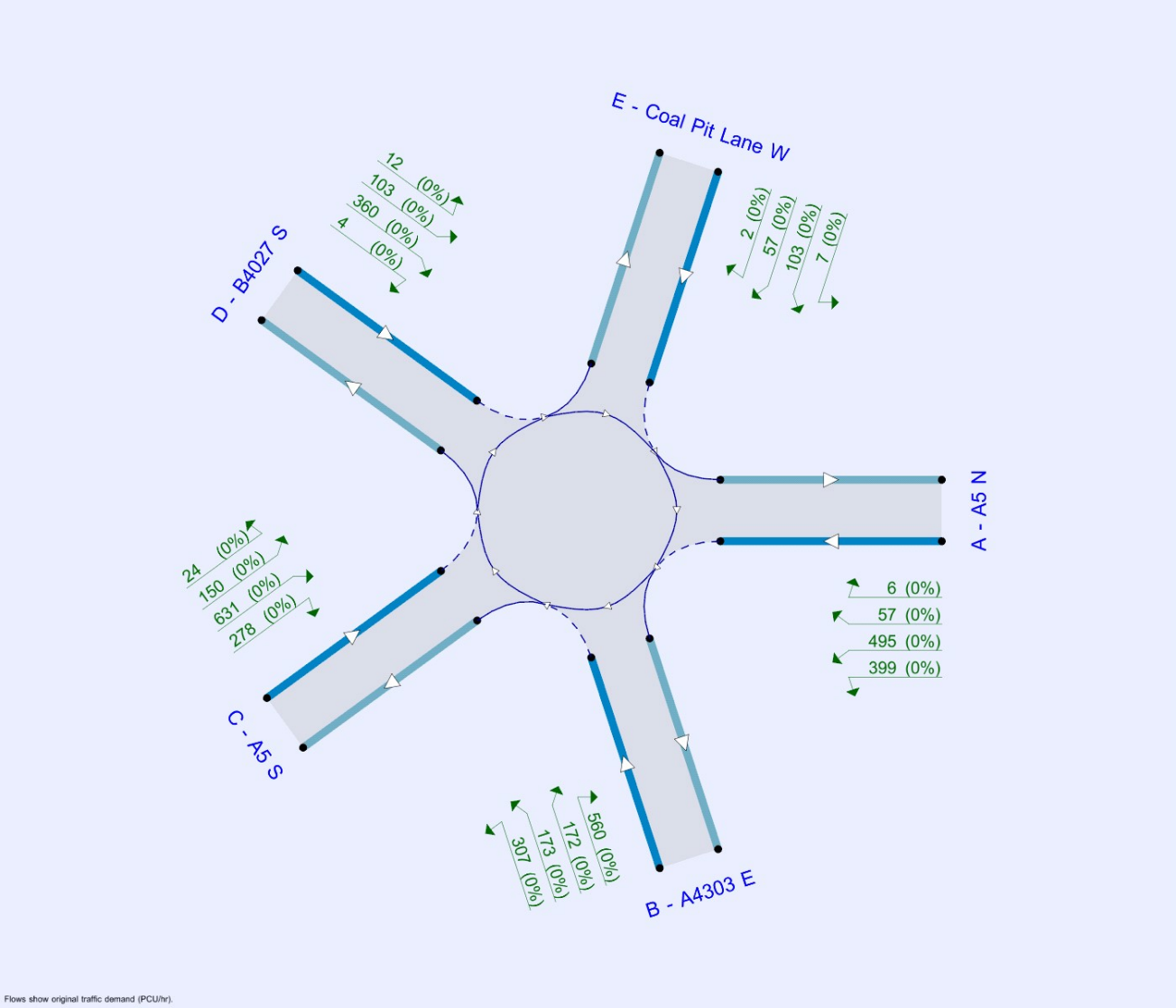
File summary

File Description

Title	J48
Location	A5 / B4027 / Coal Pit lane
Site number	J48
Date	21/12/2020
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	NTT2814
Enumerator	BWB\petr.jandik
Description	

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	2023	AM	ONE HOUR	07:15	08:45	15	✓
D2	2023	PM	ONE HOUR	16:15	17:45	15	✓
D3	WoD 2036	AM	ONE HOUR	07:15	08:45	15	✓
D4	WoD 2036	PM	ONE HOUR	16:15	17:45	15	✓
D5	WoDWS 2036	AM	ONE HOUR	07:15	08:45	15	✓
D6	WoDWS 2036	PM	ONE HOUR	16:15	17:45	15	✓
D7	WD 2036	AM	ONE HOUR	07:15	08:45	15	✓
D8	WD 2036	PM	ONE HOUR	16:15	17:45	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2023, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	A - A5 N - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J48	A5 / B4027 / Coal Pit lane	Standard Roundabout		A, B, C, D, E	4.23	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	42	A - A5 N	4.23	A

Arms

Arms

Arm	Name	Description	No give-way line
A	A5 N		
B	A4303 E		
C	A5 S		
D	B4027 S		
E	Coal Pit Lane W		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
A - A5 N	4.76	7.35	42.5	45.8	93.4	30.0		
B - A4303 E	7.17	8.52	22.3	67.0	79.5	33.0		
C - A5 S	4.79	6.96	18.1	53.0	92.3	31.0		
D - B4027 S	3.37	6.12	16.3	42.8	88.1	34.0		
E - Coal Pit Lane W	3.23	6.69	7.4	20.5	88.4	54.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - A5 N	0.524	2157
B - A4303 E	0.608	2575
C - A5 S	0.499	1978
D - B4027 S	0.444	1581
E - Coal Pit Lane W	0.381	1283

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	2023	AM	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 - A5 N		ONE HOUR	✓	992	100.000
B - A4303 E		ONE HOUR	✓	857	100.000
C - A5 S		ONE HOUR	✓	527	100.000
D - B4027 S		ONE HOUR	✓	214	100.000
E - Coal Pit Lane W		ONE HOUR	✓	255	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - A5 N	B - A4303 E	C - A5 S	D - B4027 S	E - Coal Pit Lane W
From	A - A5 N	0	437	503	48	4
	B - A4303 E	332	0	226	223	76
	C - A5 S	216	234	2	13	62
	D - B4027 S	40	154	19	0	1
	E - Coal Pit Lane W	20	149	80	6	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A5 N	B - A4303 E	C - A5 S	D - B4027 S	E - Coal Pit Lane W
From	A - A5 N	0	0	0	0	0
	B - A4303 E	0	0	0	0	0
	C - A5 S	0	0	0	0	0
	D - B4027 S	0	0	0	0	0
	E - Coal Pit Lane W	0	0	0	0	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)
A - A5 N	0.61	5.19	1.6	A	910	1365
B - A4303 E	0.44	3.03	0.8	A	786	1180
C - A5 S	0.36	3.53	0.6	A	484	725
D - B4027 S	0.21	4.03	0.3	A	196	295
E - Coal Pit Lane W	0.32	6.16	0.5	A	234	351

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	747	187	483	1904	0.392	744	456	0.0	0.6	3.098	A
B - A4303 E	645	161	497	2274	0.284	644	731	0.0	0.4	2.206	A
C - A5 S	397	99	517	1720	0.231	396	623	0.0	0.3	2.715	A
D - B4027 S	161	40	695	1273	0.127	161	218	0.0	0.1	3.235	A
E - Coal Pit Lane W	192	48	748	998	0.192	191	107	0.0	0.2	4.457	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	892	223	578	1854	0.481	891	546	0.6	0.9	3.734	A
B - A4303 E	770	193	594	2214	0.348	770	875	0.4	0.5	2.493	A
C - A5 S	474	118	619	1669	0.284	473	745	0.3	0.4	3.010	A
D - B4027 S	192	48	832	1212	0.159	192	260	0.1	0.2	3.529	A
E - Coal Pit Lane W	229	57	896	942	0.243	229	128	0.2	0.3	5.046	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	1092	273	708	1786	0.612	1090	669	0.9	1.6	5.150	A
B - A4303 E	944	236	727	2133	0.442	943	1070	0.5	0.8	3.020	A
C - A5 S	580	145	758	1600	0.363	580	912	0.4	0.6	3.526	A
D - B4027 S	236	59	1018	1129	0.209	235	319	0.2	0.3	4.026	A
E - Coal Pit Lane W	281	70	1096	866	0.324	280	157	0.3	0.5	6.143	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	1092	273	709	1786	0.612	1092	669	1.6	1.6	5.191	A
B - A4303 E	944	236	729	2132	0.442	944	1072	0.8	0.8	3.027	A
C - A5 S	580	145	759	1600	0.363	580	914	0.6	0.6	3.531	A
D - B4027 S	236	59	1020	1129	0.209	236	319	0.3	0.3	4.030	A
E - Coal Pit Lane W	281	70	1098	865	0.325	281	157	0.5	0.5	6.160	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	892	223	580	1853	0.481	894	547	1.6	0.9	3.766	A
B - A4303 E	770	193	597	2213	0.348	771	878	0.8	0.5	2.501	A
C - A5 S	474	118	620	1669	0.284	474	748	0.6	0.4	3.018	A
D - B4027 S	192	48	834	1211	0.159	193	261	0.3	0.2	3.534	A
E - Coal Pit Lane W	229	57	898	941	0.244	230	129	0.5	0.3	5.064	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	747	187	485	1903	0.393	748	458	0.9	0.6	3.120	A
B - A4303 E	645	161	499	2272	0.284	646	734	0.5	0.4	2.214	A
C - A5 S	397	99	519	1719	0.231	397	626	0.4	0.3	2.723	A
D - B4027 S	161	40	698	1272	0.127	161	219	0.2	0.1	3.242	A
E - Coal Pit Lane W	192	48	751	997	0.193	192	108	0.3	0.2	4.477	A

2023, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	A - A5 N - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J48	A5 / B4027 / Coal Pit lane	Standard Roundabout		A, B, C, D, E	4.01	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	46	D - B4027 S	4.01	A

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	2023	PM	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 - A5 N		ONE HOUR	✓	629	100.000
B - A4303 E		ONE HOUR	✓	899	100.000
C - A5 S		ONE HOUR	✓	746	100.000
D - B4027 S		ONE HOUR	✓	361	100.000
E - Coal Pit Lane W		ONE HOUR	✓	128	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - A5 N	B - A4303 E	C - A5 S	D - B4027 S	E - Coal Pit Lane W
From	A - A5 N	0	262	337	26	4
	B - A4303 E	405	0	236	128	130
	C - A5 S	418	203	0	17	108
	D - B4027 S	74	277	3	0	7
	E - Coal Pit Lane W	5	79	43	1	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A5 N	B - A4303 E	C - A5 S	D - B4027 S	E - Coal Pit Lane W
From	A - A5 N	0	0	0	0	0
	B - A4303 E	0	0	0	0	0
	C - A5 S	0	0	0	0	0
	D - B4027 S	0	0	0	0	0
	E - Coal Pit Lane W	0	0	0	0	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)
A - A5 N	0.38	3.23	0.6	A	577	866
B - A4303 E	0.43	2.75	0.8	A	825	1237
C - A5 S	0.51	4.64	1.1	A	685	1027
D - B4027 S	0.41	6.38	0.7	A	331	497
E - Coal Pit Lane W	0.20	6.39	0.2	A	117	176

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	474	118	454	1919	0.247	472	677	0.0	0.3	2.486	A
B - A4303 E	677	169	311	2386	0.284	675	616	0.0	0.4	2.102	A
C - A5 S	562	140	521	1718	0.327	560	465	0.0	0.5	3.102	A
D - B4027 S	272	68	952	1159	0.235	271	129	0.0	0.3	4.048	A
E - Coal Pit Lane W	96	24	1035	889	0.108	96	187	0.0	0.1	4.537	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	565	141	544	1872	0.302	565	810	0.3	0.4	2.754	A
B - A4303 E	808	202	372	2349	0.344	808	737	0.4	0.5	2.335	A
C - A5 S	671	168	623	1667	0.402	670	556	0.5	0.7	3.609	A
D - B4027 S	325	81	1139	1076	0.302	324	155	0.3	0.4	4.786	A
E - Coal Pit Lane W	115	29	1239	811	0.142	115	224	0.1	0.2	5.169	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	693	173	666	1808	0.383	692	992	0.4	0.6	3.223	A
B - A4303 E	990	247	455	2299	0.431	989	902	0.5	0.8	2.747	A
C - A5 S	821	205	763	1597	0.514	820	681	0.7	1.0	4.622	A
D - B4027 S	397	99	1394	962	0.413	396	189	0.4	0.7	6.349	A
E - Coal Pit Lane W	141	35	1517	705	0.200	141	274	0.2	0.2	6.368	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	693	173	667	1807	0.383	693	993	0.6	0.6	3.228	A
B - A4303 E	990	247	456	2298	0.431	990	904	0.8	0.8	2.750	A
C - A5 S	821	205	764	1597	0.514	821	682	1.0	1.1	4.642	A
D - B4027 S	397	99	1396	962	0.413	397	189	0.7	0.7	6.381	A
E - Coal Pit Lane W	141	35	1519	704	0.200	141	274	0.2	0.2	6.387	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	565	141	546	1871	0.302	566	812	0.6	0.4	2.762	A
B - A4303 E	808	202	373	2349	0.344	809	740	0.8	0.5	2.339	A
C - A5 S	671	168	625	1666	0.402	672	557	1.1	0.7	3.625	A
D - B4027 S	325	81	1142	1074	0.302	326	155	0.7	0.4	4.816	A
E - Coal Pit Lane W	115	29	1243	810	0.142	115	224	0.2	0.2	5.189	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	474	118	457	1918	0.247	474	680	0.4	0.3	2.496	A
B - A4303 E	677	169	312	2386	0.284	677	619	0.5	0.4	2.109	A
C - A5 S	562	140	523	1717	0.327	562	466	0.7	0.5	3.118	A
D - B4027 S	272	68	956	1157	0.235	272	130	0.4	0.3	4.071	A
E - Coal Pit Lane W	96	24	1040	887	0.109	97	188	0.2	0.1	4.555	A

WoD 2036, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	A - A5 N - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J48	A5 / B4027 / Coal Pit lane	Standard Roundabout		A, B, C, D, E	12.01	B

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	3	A - A5 N	12.01	B

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	WoD 2036	AM	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 - A5 N		ONE HOUR	✓	1362	100.000
B - A4303 E		ONE HOUR	✓	1177	100.000
C - A5 S		ONE HOUR	✓	724	100.000
D - B4027 S		ONE HOUR	✓	294	100.000
E - Coal Pit Lane W		ONE HOUR	✓	350	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - A5 N	B - A4303 E	C - A5 S	D - B4027 S	E - Coal Pit Lane W
From	A - A5 N	0	600	691	66	5
	B - A4303 E	456	0	311	306	104
	C - A5 S	297	321	3	18	85
	D - B4027 S	55	212	26	0	1
	E - Coal Pit Lane W	27	205	110	8	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A5 N	B - A4303 E	C - A5 S	D - B4027 S	E - Coal Pit Lane W
From	A - A5 N	0	0	0	0	0
	B - A4303 E	0	0	0	0	0
	C - A5 S	0	0	0	0	0
	D - B4027 S	0	0	0	0	0
	E - Coal Pit Lane W	0	0	0	0	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)
A - A5 N	0.91	22.85	9.0	C	1250	1875
B - A4303 E	0.66	5.35	1.9	A	1080	1620
C - A5 S	0.55	5.44	1.2	A	664	997
D - B4027 S	0.34	5.66	0.5	A	270	405
E - Coal Pit Lane W	0.54	11.13	1.2	B	321	482

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	1025	256	663	1810	0.567	1020	626	0.0	1.3	4.532	A
B - A4303 E	886	222	681	2162	0.410	883	1002	0.0	0.7	2.810	A
C - A5 S	545	136	709	1624	0.336	543	855	0.0	0.5	3.324	A
D - B4027 S	221	55	954	1158	0.191	220	299	0.0	0.2	3.835	A
E - Coal Pit Lane W	263	66	1028	892	0.296	262	146	0.0	0.4	5.700	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	1224	306	794	1741	0.703	1220	750	1.3	2.3	6.849	A
B - A4303 E	1058	265	815	2080	0.509	1057	1200	0.7	1.0	3.512	A
C - A5 S	651	163	848	1555	0.419	650	1023	0.5	0.7	3.976	A
D - B4027 S	264	66	1141	1075	0.246	264	357	0.2	0.3	4.438	A
E - Coal Pit Lane W	315	79	1230	815	0.386	314	175	0.4	0.6	7.176	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	1500	375	971	1648	0.910	1476	917	2.3	8.1	18.823	C
B - A4303 E	1296	324	987	1976	0.656	1293	1460	1.0	1.9	5.244	A
C - A5 S	797	199	1037	1461	0.546	795	1243	0.7	1.2	5.395	A
D - B4027 S	324	81	1396	962	0.337	323	436	0.3	0.5	5.631	A
E - Coal Pit Lane W	385	96	1505	710	0.543	383	214	0.6	1.2	10.945	B

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	1500	375	974	1647	0.911	1496	919	8.1	9.0	22.848	C
B - A4303 E	1296	324	999	1968	0.658	1296	1472	1.9	1.9	5.351	A
C - A5 S	797	199	1040	1459	0.546	797	1255	1.2	1.2	5.439	A
D - B4027 S	324	81	1399	960	0.337	324	438	0.5	0.5	5.656	A
E - Coal Pit Lane W	385	96	1508	709	0.544	385	215	1.2	1.2	11.126	B

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	1224	306	799	1738	0.704	1251	753	9.0	2.4	7.755	A
B - A4303 E	1058	265	833	2069	0.511	1062	1217	1.9	1.1	3.585	A
C - A5 S	651	163	853	1552	0.419	653	1041	1.2	0.7	4.012	A
D - B4027 S	264	66	1146	1072	0.246	265	360	0.5	0.3	4.463	A
E - Coal Pit Lane W	315	79	1235	813	0.387	317	176	1.2	0.6	7.289	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	1025	256	668	1807	0.567	1030	630	2.4	1.3	4.657	A
B - A4303 E	886	222	687	2158	0.411	888	1010	1.1	0.7	2.838	A
C - A5 S	545	136	713	1622	0.336	546	862	0.7	0.5	3.346	A
D - B4027 S	221	55	958	1156	0.192	222	300	0.3	0.2	3.855	A
E - Coal Pit Lane W	263	66	1033	890	0.296	264	147	0.6	0.4	5.764	A

WoD 2036, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	A - A5 N - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J48	A5 / B4027 / Coal Pit lane	Standard Roundabout		A, B, C, D, E	8.67	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	6	D - B4027 S	8.67	A

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	WoD 2036	PM	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 - A5 N		ONE HOUR	✓	866	100.000
B - A4303 E		ONE HOUR	✓	1237	100.000
C - A5 S		ONE HOUR	✓	1026	100.000
D - B4027 S		ONE HOUR	✓	497	100.000
E - Coal Pit Lane W		ONE HOUR	✓	176	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - A5 N	B - A4303 E	C - A5 S	D - B4027 S	E - Coal Pit Lane W
From	A - A5 N	0	360	464	36	6
	B - A4303 E	557	0	325	176	179
	C - A5 S	575	279	0	23	149
	D - B4027 S	102	381	4	0	10
	E - Coal Pit Lane W	7	109	59	1	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A5 N	B - A4303 E	C - A5 S	D - B4027 S	E - Coal Pit Lane W
From	A - A5 N	0	0	0	0	0
	B - A4303 E	0	0	0	0	0
	C - A5 S	0	0	0	0	0
	D - B4027 S	0	0	0	0	0
	E - Coal Pit Lane W	0	0	0	0	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)
A - A5 N	0.57	4.98	1.3	A	795	1192
B - A4303 E	0.62	4.33	1.6	A	1135	1703
C - A5 S	0.78	11.08	3.4	B	941	1412
D - B4027 S	0.75	19.66	2.9	C	456	684
E - Coal Pit Lane W	0.40	12.25	0.7	B	162	242

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	652	163	623	1830	0.356	650	931	0.0	0.6	3.044	A
B - A4303 E	931	233	428	2316	0.402	929	846	0.0	0.7	2.592	A
C - A5 S	772	193	717	1620	0.477	769	639	0.0	0.9	4.210	A
D - B4027 S	374	94	1309	1000	0.374	372	177	0.0	0.6	5.705	A
E - Coal Pit Lane W	133	33	1422	741	0.179	132	258	0.0	0.2	5.895	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	779	195	747	1766	0.441	778	1114	0.6	0.8	3.639	A
B - A4303 E	1112	278	512	2264	0.491	1111	1012	0.7	1.0	3.118	A
C - A5 S	922	231	858	1550	0.595	920	765	0.9	1.4	5.696	A
D - B4027 S	447	112	1566	886	0.504	445	212	0.6	1.0	8.136	A
E - Coal Pit Lane W	158	40	1702	635	0.249	158	309	0.2	0.3	7.541	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	953	238	909	1681	0.567	951	1360	0.8	1.3	4.920	A
B - A4303 E	1362	340	626	2195	0.620	1359	1234	1.0	1.6	4.294	A
C - A5 S	1130	282	1049	1454	0.777	1122	936	1.4	3.3	10.608	B
D - B4027 S	547	137	1912	732	0.747	540	259	1.0	2.7	18.133	C
E - Coal Pit Lane W	194	48	2076	493	0.393	193	377	0.3	0.6	11.949	B

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	953	238	917	1677	0.569	953	1366	1.3	1.3	4.975	A
B - A4303 E	1362	340	628	2194	0.621	1362	1242	1.6	1.6	4.326	A
C - A5 S	1130	282	1051	1453	0.777	1129	938	3.3	3.4	11.077	B
D - B4027 S	547	137	1921	728	0.751	547	260	2.7	2.9	19.656	C
E - Coal Pit Lane W	194	48	2089	488	0.397	194	379	0.6	0.7	12.247	B

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	779	195	758	1760	0.442	781	1123	1.3	0.8	3.682	A
B - A4303 E	1112	278	514	2263	0.491	1115	1024	1.6	1.0	3.143	A
C - A5 S	922	231	861	1549	0.596	930	768	3.4	1.5	5.887	A
D - B4027 S	447	112	1578	881	0.507	454	213	2.9	1.0	8.577	A
E - Coal Pit Lane W	158	40	1721	628	0.252	159	311	0.7	0.3	7.710	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	652	163	630	1827	0.357	653	936	0.8	0.6	3.070	A
B - A4303 E	931	233	430	2314	0.402	932	853	1.0	0.7	2.607	A
C - A5 S	772	193	720	1619	0.477	775	642	1.5	0.9	4.277	A
D - B4027 S	374	94	1317	997	0.375	376	178	1.0	0.6	5.816	A
E - Coal Pit Lane W	133	33	1433	737	0.180	133	260	0.3	0.2	5.961	A

WoDWS 2036, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	A - A5 N - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J48	A5 / B4027 / Coal Pit lane	Standard Roundabout		A, B, C, D, E	12.09	B

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	3	A - A5 N	12.09	B

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	WoDWS 2036	AM	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 - A5 N		ONE HOUR	✓	1368	100.000
B - A4303 E		ONE HOUR	✓	1186	100.000
C - A5 S		ONE HOUR	✓	717	100.000
D - B4027 S		ONE HOUR	✓	284	100.000
E - Coal Pit Lane W		ONE HOUR	✓	339	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - A5 N	B - A4303 E	C - A5 S	D - B4027 S	E - Coal Pit Lane W
From	A - A5 N	0	608	691	64	5
	B - A4303 E	466	0	315	300	105
	C - A5 S	294	325	3	17	78
	D - B4027 S	49	210	24	0	1
	E - Coal Pit Lane W	24	200	107	8	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A5 N	B - A4303 E	C - A5 S	D - B4027 S	E - Coal Pit Lane W
From	A - A5 N	0	0	0	0	0
	B - A4303 E	0	0	0	0	0
	C - A5 S	0	0	0	0	0
	D - B4027 S	0	0	0	0	0
	E - Coal Pit Lane W	0	0	0	0	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)
A - A5 N	0.91	23.10	9.1	C	1255	1883
B - A4303 E	0.66	5.39	1.9	A	1088	1632
C - A5 S	0.54	5.39	1.2	A	658	987
D - B4027 S	0.33	5.58	0.5	A	261	391
E - Coal Pit Lane W	0.53	10.74	1.1	B	311	467

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	1030	257	657	1813	0.568	1025	625	0.0	1.3	4.539	A
B - A4303 E	893	223	676	2165	0.412	890	1006	0.0	0.7	2.818	A
C - A5 S	540	135	711	1623	0.333	538	854	0.0	0.5	3.311	A
D - B4027 S	214	53	957	1156	0.185	213	292	0.0	0.2	3.812	A
E - Coal Pit Lane W	255	64	1028	891	0.286	254	142	0.0	0.4	5.631	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	1230	307	787	1745	0.705	1226	748	1.3	2.3	6.881	A
B - A4303 E	1066	267	808	2084	0.512	1065	1204	0.7	1.0	3.527	A
C - A5 S	645	161	851	1553	0.415	644	1022	0.5	0.7	3.954	A
D - B4027 S	255	64	1146	1073	0.238	255	349	0.2	0.3	4.400	A
E - Coal Pit Lane W	305	76	1231	814	0.374	304	170	0.4	0.6	7.044	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	1506	377	962	1653	0.911	1483	915	2.3	8.2	18.972	C
B - A4303 E	1306	326	979	1980	0.659	1302	1466	1.0	1.9	5.282	A
C - A5 S	789	197	1040	1459	0.541	788	1242	0.7	1.2	5.346	A
D - B4027 S	313	78	1401	959	0.326	312	426	0.3	0.5	5.557	A
E - Coal Pit Lane W	373	93	1506	710	0.526	371	207	0.6	1.1	10.579	B

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	1506	377	966	1651	0.912	1503	917	8.2	9.1	23.097	C
B - A4303 E	1306	326	991	1973	0.662	1306	1477	1.9	1.9	5.392	A
C - A5 S	789	197	1043	1457	0.542	789	1253	1.2	1.2	5.389	A
D - B4027 S	313	78	1405	958	0.327	313	428	0.5	0.5	5.581	A
E - Coal Pit Lane W	373	93	1509	708	0.527	373	208	1.1	1.1	10.739	B

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	1230	307	792	1742	0.706	1256	751	9.1	2.5	7.795	A
B - A4303 E	1066	267	826	2073	0.514	1070	1222	1.9	1.1	3.598	A
C - A5 S	645	161	856	1551	0.416	646	1040	1.2	0.7	3.988	A
D - B4027 S	255	64	1151	1070	0.239	256	352	0.5	0.3	4.424	A
E - Coal Pit Lane W	305	76	1236	812	0.375	307	171	1.1	0.6	7.146	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	1030	257	662	1810	0.569	1034	628	2.5	1.3	4.665	A
B - A4303 E	893	223	682	2161	0.413	894	1014	1.1	0.7	2.844	A
C - A5 S	540	135	715	1621	0.333	541	861	0.7	0.5	3.335	A
D - B4027 S	214	53	962	1154	0.185	214	293	0.3	0.2	3.833	A
E - Coal Pit Lane W	255	64	1034	889	0.287	256	143	0.6	0.4	5.690	A

WoDWS 2036, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	A - A5 N - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J48	A5 / B4027 / Coal Pit lane	Standard Roundabout		A, B, C, D, E	8.01	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	9	D - B4027 S	8.01	A

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	WoDWS 2036	PM	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 - A5 N		ONE HOUR	✓	884	100.000
B - A4303 E		ONE HOUR	✓	1233	100.000
C - A5 S		ONE HOUR	✓	1038	100.000
D - B4027 S		ONE HOUR	✓	450	100.000
E - Coal Pit Lane W		ONE HOUR	✓	166	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - A5 N	B - A4303 E	C - A5 S	D - B4027 S	E - Coal Pit Lane W
From	A - A5 N	0	392	459	28	5
	B - A4303 E	564	0	334	162	173
	C - A5 S	576	294	0	22	146
	D - B4027 S	87	347	4	0	12
	E - Coal Pit Lane W	7	103	55	1	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A5 N	B - A4303 E	C - A5 S	D - B4027 S	E - Coal Pit Lane W
From	A - A5 N	0	0	0	0	0
	B - A4303 E	0	0	0	0	0
	C - A5 S	0	0	0	0	0
	D - B4027 S	0	0	0	0	0
	E - Coal Pit Lane W	0	0	0	0	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)
A - A5 N	0.57	5.00	1.3	A	811	1217
B - A4303 E	0.62	4.24	1.6	A	1131	1697
C - A5 S	0.78	11.11	3.4	B	952	1429
D - B4027 S	0.69	15.81	2.1	C	413	619
E - Coal Pit Lane W	0.37	11.40	0.6	B	152	228

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	666	166	602	1842	0.361	663	925	0.0	0.6	3.050	A
B - A4303 E	928	232	414	2324	0.399	926	851	0.0	0.7	2.571	A
C - A5 S	781	195	700	1629	0.480	778	639	0.0	0.9	4.214	A
D - B4027 S	339	85	1318	996	0.340	337	160	0.0	0.5	5.444	A
E - Coal Pit Lane W	125	31	1403	749	0.167	124	252	0.0	0.2	5.757	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	795	199	721	1779	0.447	794	1107	0.6	0.8	3.649	A
B - A4303 E	1108	277	496	2274	0.487	1107	1019	0.7	0.9	3.082	A
C - A5 S	933	233	838	1560	0.598	931	765	0.9	1.5	5.702	A
D - B4027 S	405	101	1578	881	0.459	403	191	0.5	0.8	7.514	A
E - Coal Pit Lane W	149	37	1679	644	0.232	149	302	0.2	0.3	7.270	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	973	243	878	1697	0.574	971	1352	0.8	1.3	4.947	A
B - A4303 E	1358	339	606	2207	0.615	1355	1243	0.9	1.6	4.213	A
C - A5 S	1143	286	1025	1466	0.779	1135	936	1.5	3.4	10.637	B
D - B4027 S	495	124	1927	726	0.683	491	234	0.8	2.0	15.003	C
E - Coal Pit Lane W	183	46	2049	503	0.364	182	368	0.3	0.6	11.177	B

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	973	243	885	1694	0.575	973	1358	1.3	1.3	4.998	A
B - A4303 E	1358	339	608	2206	0.615	1358	1250	1.6	1.6	4.242	A
C - A5 S	1143	286	1027	1465	0.780	1142	938	3.4	3.4	11.113	B
D - B4027 S	495	124	1935	722	0.686	495	235	2.0	2.1	15.812	C
E - Coal Pit Lane W	183	46	2060	498	0.367	183	370	0.6	0.6	11.402	B

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	795	199	730	1775	0.448	797	1116	1.3	0.8	3.688	A
B - A4303 E	1108	277	498	2273	0.488	1111	1029	1.6	1.0	3.106	A
C - A5 S	933	233	841	1559	0.599	941	768	3.4	1.5	5.900	A
D - B4027 S	405	101	1589	876	0.462	410	192	2.1	0.9	7.805	A
E - Coal Pit Lane W	149	37	1695	637	0.234	150	304	0.6	0.3	7.405	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	666	166	607	1839	0.362	667	931	0.8	0.6	3.072	A
B - A4303 E	928	232	416	2322	0.400	929	858	1.0	0.7	2.586	A
C - A5 S	781	195	703	1627	0.480	784	642	1.5	0.9	4.281	A
D - B4027 S	339	85	1326	992	0.341	340	161	0.9	0.5	5.530	A
E - Coal Pit Lane W	125	31	1413	745	0.168	125	253	0.3	0.2	5.816	A

WD 2036, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	A - A5 N - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J48	A5 / B4027 / Coal Pit lane	Standard Roundabout		A, B, C, D, E	13.06	B

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	3	A - A5 N	13.06	B

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	WD 2036	AM	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 - A5 N		ONE HOUR	✓	1325	100.000
B - A4303 E		ONE HOUR	✓	1231	100.000
C - A5 S		ONE HOUR	✓	771	100.000
D - B4027 S		ONE HOUR	✓	303	100.000
E - Coal Pit Lane W		ONE HOUR	✓	419	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - A5 N	B - A4303 E	C - A5 S	D - B4027 S	E - Coal Pit Lane W
From	A - A5 N	0	549	714	55	7
	B - A4303 E	495	0	333	305	98
	C - A5 S	345	329	3	17	77
	D - B4027 S	53	221	28	0	1
	E - Coal Pit Lane W	32	255	123	9	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A5 N	B - A4303 E	C - A5 S	D - B4027 S	E - Coal Pit Lane W
From	A - A5 N	0	0	0	0	0
	B - A4303 E	0	0	0	0	0
	C - A5 S	0	0	0	0	0
	D - B4027 S	0	0	0	0	0
	E - Coal Pit Lane W	0	0	0	0	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)
A - A5 N	0.91	23.79	9.1	C	1216	1824
B - A4303 E	0.70	6.06	2.3	A	1130	1694
C - A5 S	0.59	6.03	1.4	A	707	1061
D - B4027 S	0.36	6.14	0.6	A	278	417
E - Coal Pit Lane W	0.69	17.58	2.2	C	384	577

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	998	249	725	1777	0.561	992	694	0.0	1.3	4.558	A
B - A4303 E	927	232	703	2148	0.431	924	1014	0.0	0.8	2.933	A
C - A5 S	580	145	727	1615	0.359	578	900	0.0	0.6	3.464	A
D - B4027 S	228	57	1016	1130	0.202	227	290	0.0	0.3	3.981	A
E - Coal Pit Lane W	315	79	1106	862	0.366	313	137	0.0	0.6	6.533	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	1191	298	868	1702	0.700	1187	830	1.3	2.3	6.945	A
B - A4303 E	1107	277	841	2064	0.536	1105	1214	0.8	1.1	3.747	A
C - A5 S	693	173	870	1544	0.449	692	1077	0.6	0.8	4.220	A
D - B4027 S	272	68	1215	1042	0.261	272	346	0.3	0.4	4.675	A
E - Coal Pit Lane W	377	94	1323	779	0.483	375	164	0.6	0.9	8.883	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	1459	365	1060	1602	0.911	1435	1015	2.3	8.2	19.368	C
B - A4303 E	1355	339	1018	1956	0.693	1351	1476	1.1	2.2	5.906	A
C - A5 S	849	212	1063	1448	0.586	847	1307	0.8	1.4	5.963	A
D - B4027 S	334	83	1486	921	0.362	333	423	0.4	0.6	6.106	A
E - Coal Pit Lane W	461	115	1618	667	0.692	457	201	0.9	2.1	16.752	C

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	1459	365	1065	1599	0.912	1455	1018	8.2	9.1	23.788	C
B - A4303 E	1355	339	1032	1948	0.696	1355	1489	2.2	2.3	6.064	A
C - A5 S	849	212	1067	1446	0.587	849	1320	1.4	1.4	6.030	A
D - B4027 S	334	83	1491	920	0.363	334	425	0.6	0.6	6.143	A
E - Coal Pit Lane W	461	115	1623	665	0.694	461	201	2.1	2.2	17.582	C

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	1191	298	876	1698	0.702	1218	835	9.1	2.4	7.896	A
B - A4303 E	1107	277	861	2052	0.539	1111	1233	2.3	1.2	3.844	A
C - A5 S	693	173	876	1541	0.450	695	1097	1.4	0.8	4.270	A
D - B4027 S	272	68	1222	1039	0.262	273	349	0.6	0.4	4.708	A
E - Coal Pit Lane W	377	94	1330	777	0.485	382	165	2.2	1.0	9.221	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	998	249	731	1774	0.562	1002	698	2.4	1.3	4.690	A
B - A4303 E	927	232	710	2144	0.432	928	1023	1.2	0.8	2.965	A
C - A5 S	580	145	731	1613	0.360	581	908	0.8	0.6	3.494	A
D - B4027 S	228	57	1021	1128	0.202	229	291	0.4	0.3	4.005	A
E - Coal Pit Lane W	315	79	1112	860	0.367	317	138	1.0	0.6	6.652	A

WD 2036, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	A - A5 N - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J48	A5 / B4027 / Coal Pit lane	Standard Roundabout		A, B, C, D, E	9.68	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	5	D - B4027 S	9.68	A

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	WD 2036	PM	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 - A5 N		ONE HOUR	✓	957	100.000
B - A4303 E		ONE HOUR	✓	1212	100.000
C - A5 S		ONE HOUR	✓	1083	100.000
D - B4027 S		ONE HOUR	✓	479	100.000
E - Coal Pit Lane W		ONE HOUR	✓	169	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - A5 N	B - A4303 E	C - A5 S	D - B4027 S	E - Coal Pit Lane W
From	A - A5 N	0	399	495	57	6
	B - A4303 E	560	0	307	173	172
	C - A5 S	631	278	0	24	150
	D - B4027 S	103	360	4	0	12
	E - Coal Pit Lane W	7	103	57	2	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A5 N	B - A4303 E	C - A5 S	D - B4027 S	E - Coal Pit Lane W
From	A - A5 N	0	0	0	0	0
	B - A4303 E	0	0	0	0	0
	C - A5 S	0	0	0	0	0
	D - B4027 S	0	0	0	0	0
	E - Coal Pit Lane W	0	0	0	0	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)
A - A5 N	0.62	5.62	1.6	A	878	1317
B - A4303 E	0.62	4.36	1.6	A	1112	1668
C - A5 S	0.83	14.10	4.5	B	994	1491
D - B4027 S	0.75	20.24	2.9	C	440	659
E - Coal Pit Lane W	0.39	12.59	0.6	B	155	233

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	720	180	602	1842	0.391	718	975	0.0	0.6	3.197	A
B - A4303 E	912	228	466	2292	0.398	910	854	0.0	0.7	2.600	A
C - A5 S	815	204	728	1615	0.505	811	647	0.0	1.0	4.459	A
D - B4027 S	361	90	1347	983	0.367	358	192	0.0	0.6	5.741	A
E - Coal Pit Lane W	127	32	1451	731	0.174	126	255	0.0	0.2	5.949	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	860	215	720	1780	0.483	859	1167	0.6	0.9	3.906	A
B - A4303 E	1090	272	557	2237	0.487	1088	1022	0.7	0.9	3.132	A
C - A5 S	974	243	871	1543	0.631	971	775	1.0	1.7	6.269	A
D - B4027 S	431	108	1612	866	0.498	429	230	0.6	1.0	8.216	A
E - Coal Pit Lane W	152	38	1736	622	0.244	151	305	0.2	0.3	7.647	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	1054	263	876	1698	0.621	1051	1423	0.9	1.6	5.540	A
B - A4303 E	1334	334	682	2161	0.617	1332	1245	0.9	1.6	4.327	A
C - A5 S	1192	298	1066	1446	0.825	1182	948	1.7	4.3	13.117	B
D - B4027 S	527	132	1967	708	0.745	520	281	1.0	2.7	18.538	C
E - Coal Pit Lane W	186	47	2115	478	0.390	185	372	0.3	0.6	12.242	B

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	1054	263	884	1694	0.622	1054	1432	1.6	1.6	5.622	A
B - A4303 E	1334	334	684	2160	0.618	1334	1254	1.6	1.6	4.360	A
C - A5 S	1192	298	1068	1445	0.825	1192	950	4.3	4.5	14.103	B
D - B4027 S	527	132	1978	703	0.750	527	282	2.7	2.9	20.243	C
E - Coal Pit Lane W	186	47	2130	472	0.394	186	374	0.6	0.6	12.593	B

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	860	215	732	1773	0.485	863	1179	1.6	1.0	3.966	A
B - A4303 E	1090	272	560	2235	0.488	1092	1035	1.6	1.0	3.159	A
C - A5 S	974	243	874	1542	0.631	985	778	4.5	1.7	6.587	A
D - B4027 S	431	108	1628	859	0.502	438	231	2.9	1.0	8.703	A
E - Coal Pit Lane W	152	38	1758	614	0.248	153	308	0.6	0.3	7.841	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A5 N	720	180	608	1839	0.392	722	982	1.0	0.6	3.228	A
B - A4303 E	912	228	468	2291	0.398	914	861	1.0	0.7	2.615	A
C - A5 S	815	204	731	1613	0.505	818	651	1.7	1.0	4.544	A
D - B4027 S	361	90	1356	979	0.368	362	193	1.0	0.6	5.854	A
E - Coal Pit Lane W	127	32	1462	726	0.175	128	257	0.3	0.2	6.021	A