

Himley Village, NW Bicester

Addendum to Technical Note 1 – Assessment of early phases of NW Bicester on Howes Lane / Lords Lane corridor

Prepared for

P3Eco

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1.0 INTRODUCTION

This addendum to our Technical Note 1 (TN1) sets out an updated methodology and assessment of the traffic impact of the early phases of NW Bicester on the Howes Lane / Lords Lane corridor. As for the first note the developments that have been considered in this assessment are:

- The Exemplar scheme (396 homes)
- Application 1 (500 homes)
- Himley Village (500 homes)
- Himley Village (1000 homes)
- Himley Village (1700 homes)

Changes to the assessment methodology have been made following comments from Oxfordshire County Council (OCC) and include:

- The use of 2013 survey information provided by OCC to provide an updated traffic baseline. The surveys include the impact of the opening of Vendee Drive on baseline traffic movements.
- Amendments to the assumptions regarding internal trips added to the network for Himley Village as follows:
 - 100% of the internal trips identified in the TA added to the network for 500 homes (unchanged from TN1)
 - 70% of the internal trips identified in the TA added to the network for 1000 homes (increased by 20% in comparison to TN1)
 - 30% of the internal trips identified in the TA added to the network for 1700 homes (increased by 30% in comparison to TN1)
- 50% of Himley Village trips with a destination / origin in the Bicester East ward now assumed to travel through the Howes Lane / Bucknell Road and Lords Lane / Bucknell Road junctions (0% assumed in TN1).

2.0 BACKGROUND

The Howes Lane / Bucknell Road junction has been identified as a key capacity constraint on the Howes Lane / Lords Lane corridor. A new strategic link road within the NW Bicester site with an underpass beneath the railway line is proposed to relieve this capacity constraint. This strategic link will facilitate not only NW Bicester but has wider benefits for housing and employment growth elsewhere in the town. The alignment of the strategic link road and connecting junctions have been incorporated into a number of different outline planning applications for NW Bicester.

Based on a traffic assessment by Hyder, OCC have come to the view that the strategic link road needs to be implemented at or before occupation of 900 homes and 4ha of employment land across NW Bicester. Delivery of the link road is contingent on securing agreement from Network Rail to the underpass which currently introduces significant uncertainty over cost and timetable into the delivery programme.

The assessment by Hyder explicitly assumed an even distribution of housing and employment across the entire NW Bicester site. In broad terms the agreed trigger point means the delivery of 450 homes and 2ha of employment on both the north and south of the railway line. The trigger of 900 homes includes the Exemplar of 396 homes, which has commenced.

We have undertaken a detailed assessment of traffic generation and distribution that takes into account the likely distribution of trips from the key development sites identified. This demonstrates that the impacts of the development sites north of the railway on the Lords Lane / Bucknell Road and Howes Lane / Bucknell Road junctions are far greater than the impact of Himley Village to the south of the railway.

The requirement for the link road is supported by the findings of this report. Moreover P3Eco fully supports the need for the link road and is willing to make a proportionate contribution to its delivery. This report is intended to highlight the fact that land to the south of the railway has a significantly lower impact on the key Howes Lane / Bucknell Road and Lords Lane / Bucknell Road junctions and therefore that significantly more housing can be delivered with less traffic impact if this fact is reflected in the allocation of housing in the early phases of NW Bicester. The findings of this report strongly reinforce the conclusion that it is only development at Himley village which can proceed within the constraints of the 900 trigger.

3.0 SCENARIOS TESTED

The impact of the NW Bicester schemes have been assessed against a 2021 baseline. The baseline is derived from a 2013 survey that has been factored up to 2021 using TEMPRO growth factors. The TEMPRO growth factor used is 1.123, which is comprised of a Regional Traffic Forecast of 1.1187, a local TEMPRO factor of 1.0623 and a regional TEMPRO growth factor of 1.0582.

The following scenarios have been assessed:

- 2021 with background growth only
- 2021 with background growth, Exemplar and Application 1
- 2021 with background growth, Exemplar, Application 1 and Himley Village (500 homes)
- 2021 with background growth, Exemplar, Application 1 and Himley Village (1000 homes)
- 2021 with background growth, Exemplar, Application 1 and Himley Village (1700 homes)
- 2021 with background growth, Exemplar and Himley Village (500 homes)
- 2021 with background growth, Exemplar and Himley Village (1000 homes)
- 2021 with background growth, Exemplar and Himley Village (1700 homes)

4.0 VEHICLE TRIP RATES AND CONTAINMENT

Trip rates for the Exemplar development were taken from table 8.7 of the approved TA. The TA produced by Hyder for application 1 and the TA produced by Alan Baxter for the Himley Village scheme used a consistent methodology to derive trip rates, which have been adopted for this assessment. The methodology involved the creation of a set of total person trip rates for each land use based on comparable sites in the TRICS database. These are set out in tables 8.1-8.4 in Alan Baxter's TA for Himley, with table 8.14 setting out the 85th percentile vehicle trip rates for the residential use.

In order to ensure a robust worst case for assessment the 85th percentile trip rate has been applied. Furthermore, for the Application 1 site, 30% of the trips set out in Table 8.14 of the Application 1 TA have been applied to the network, rather than the 19% of trips that would be suggested by implementation of 500 homes. This represents the additional trips that would be added to the network from other, non-residential uses on-site that would be delivered early to support the residential uses. For consistency a similar uplift to 40% has been applied to the Himley Village 500 homes scenario.

The trip rate figures referred to above include the containment assumptions agreed with OCC. In order to set out a robust worst case we have assumed that Himley Village will achieve a lower level of containment in the earlier phases of delivery than has been agreed previously with OCC. We have assumed that all of the internal trips set out in table 8.14 will be added to the local highway network. For the Himley Village (1000 unit) development scenario we have assumed that 70% of internal trips will be added to the network with 30% of the internal trips added to the network for the 1700 unit scenario. For the Application 1 site we have assumed that 50% of the internal trips set out in Table 8.14 will be added to the network, which is reasonable given that there will be 896 homes with both the Exemplar and Application 1 implemented.

The Exemplar TA applied a different methodology to that used for the application 1 and 2 schemes and Himley Village. An initial containment level of 17.4% was assumed for the early stages of development along with a higher trip rate. To ensure a robust assessment we have applied the higher trips rates and the 17.4% containment rate. These are the trip generation figures set out in table 8.7 of the Exemplar TA.

The total vehicle trips added to the network for each development scenario are set out below.

Table 1: Exemplar trips

	AM peak			PM peak		
	IN	OUT	TOTAL	IN	OUT	TOTAL
Internal	-	-	-	-	-	-
External in Bicester	-	-	-	-	-	-
External outside Bicester	153	150	303	113	126	239
TOTAL	153	150	303	113	126	239

Table 2: Application 1 trips

	AM peak			PM peak		
	IN	OUT	TOTAL	IN	OUT	TOTAL
Internal	4	12	16	5	3	9
External in Bicester	34	62	96	56	40	96
External outside Bicester	73	156	229	154	82	236
TOTAL	116	242	358	221	129	350

Table 3: Himley Village (500 unit scenario) trips

	AM peak			PM peak		
	IN	OUT	TOTAL	IN	OUT	TOTAL
Internal	8	21	29	9	6	15
External in Bicester	30	54	83	49	34	83
External outside Bicester	74	145	218	144	105	249
TOTAL	111	220	330	202	145	347

Table 4: Himley Village (1000 unit scenario) trips

	AM peak			PM peak		
	IN	OUT	TOTAL	IN	OUT	TOTAL
Internal	8	22	30	9	6	16
External in Bicester	44	79	123	72	51	123
External outside Bicester	109	214	322	212	155	367
TOTAL	160	315	475	294	212	505

Table 5: Himley Village (1700 unit scenario) trips

	AM peak			PM peak		
	IN	OUT	TOTAL	IN	OUT	TOTAL
Internal	6	16	22	7	5	11
External in Bicester	74	134	208	122	86	208
External outside Bicester	184	362	546	360	262	622
TOTAL	264	512	776	489	353	841

5.0 BACKGROUND GROWTH

As set out in section 3, a 2021 baseline has been used to test the scenarios outlined. This sets an ambitious but we believe achievable date to deliver 900 homes to the north of the railway.

In terms of Himley Village the applicant P3Eco has confirmed that it has the ability to deliver 1700 homes by 2021. The lower levels of 1000 and 500 homes could equally be delivered by this date.

The application of TEMPRO growth factors are assumed to cover background growth in traffic across the wider area plus specific growth in Bicester and at SW Bicester.

6.0 TRIP DISTRIBUTION

The TA produced by Hyder for application 1 and application 2 and the TA produced by Alan Baxter for the Himley Village scheme used the 2007 Bicester Household Travel Diary survey in order to identify baseline travel patterns and to inform containment assumptions. In the absence of access to OCC's Bicester Saturn Model this data has been used to identify the distribution of residential trips onto the network from the three development sites. Using the

Travel Diary survey an assessment has been made as to the routing that will be taken from the three sites to the various destinations and specifically whether the Lords Lane / Howes Lane corridor will be used. This is set out in Table 6.

Table 6: All household trips main destinations from the 2007 Bicester Household Travel Diary Survey (source: Table 2.2 of the Exemplar Travel Plan)

District/ Ward Name	% of Trips	Himley Village via Howes Lane corridor?	App 1 via Howes Lane corridor?	Exemplar via Howes Lane corridor?
Bicester Town Ward	18.9%	N	N	N
Oxford District (B)	9.0%	N	Y	Y
Bicester East Ward	8.7%	Y*	N	N
Kidlington Wards	7.8%	N	Y	Y
Bicester South Ward	7.8%	N	N	N
Bicester West Ward	6.8%	N	Y	Y
Bicester North Ward	6.5%	Y	N	N
Wards South and West of Bicester	4.7%	N	Y	Y
South Oxfordshire District	3.4%	N	Y	Y
Wards North and West of Bicester	3.0%	Y	N	N
South Northamptonshire District	2.4%	N	N	N
West Oxfordshire District	2.4%	N	Y	Y
Banbury	2.3%	N	N	N
Total	83.7%	13.9%	34.1%	34.1%

* 50% of trips to Bicester East ward assumed to pass through the Howes Lane corridor

The figures in Table 6 only account for 83.7% of trips and therefore they have been factored up in the same proportions to account for 100% of trips. The adjusted figures are set out in Table 7.

These distribution figures have been used to identify the volume of traffic from the Himley Village, Application 1 and Exemplar schemes that will use the Lords Lane / Bucknell Road and Howes Lane / Bucknell Road junctions. For Himley Village it is assumed that all trips will enter and leave via Middleton Stoney Road. The totals in Table 7 demonstrate the relative impact of the three development areas on these junctions.

Table 7: All household trips main destinations from the 2007 Bicester Household Travel Diary Survey factored to 100%

District/ Ward Name	% of Trips	Himley Village via Howes Lane corridor?	App 1 via Howes Lane corridor?	Exemplar via Howes Lane corridor?
Bicester Town Ward	22.6%	N	N	N
Oxford District (B)	10.8%	N	Y	Y
Bicester East Ward	10.4%	Y*	N	N
Kidlington Wards	9.3%	N	Y	Y
Bicester South Ward	9.3%	N	N	N
Bicester West Ward	8.1%	N	Y	Y
Bicester North Ward	7.8%	Y	N	N
Wards South and West of Bicester	5.6%	N	Y	Y
South Oxfordshire District	4.1%	N	Y	Y
Wards North and West of Bicester	3.6%	Y	N	N
South Northamptonshire District	2.9%	N	N	N
West Oxfordshire District	2.9%	N	Y	Y
Banbury	2.7%	N	N	N
Total	100.0%	16.5%	40.7%	40.7%

* 50% of trips to Bicester East ward assumed to pass through the Howes Lane corridor

The distributions in Table 7 have been applied to the total trips set out in Tables 1 to 6. Taking account of the containment and non-residential trip assumptions previously stated, the trips that will pass through the Howes Lane / Bucknell Road and Lords Lane / Bucknell Road junctions for each development area are set out in Tables 8 – 12.

Table 8: Exemplar trips

	AM peak			PM peak		
	IN	OUT	TOTAL	IN	OUT	TOTAL
Internal	-	-	-	-	-	-
External in Bicester	-	-	-	-	-	-
External outside Bicester	56	54	110	41	47	88
TOTAL	56	54	110	41	47	88

Table 9: Application 1 trips

	AM peak			PM peak		
	IN	OUT	TOTAL	IN	OUT	TOTAL
Internal	2	5	7	2	1	4
External in Bicester	14	25	39	23	16	39
External outside Bicester	30	64	93	63	33	96
TOTAL	47	99	146	90	52	142

Table 10: Himley Village (500 unit scenario) trips

	AM peak			PM peak		
	IN	OUT	TOTAL	IN	OUT	TOTAL
Internal	1	4	5	2	1	3
External in Bicester	5	9	14	8	6	14
External outside Bicester	12	24	36	24	17	41
TOTAL	18	36	55	33	24	57

Table 11: Himley Village (1000 unit scenario) trips

	AM peak			PM peak		
	IN	OUT	TOTAL	IN	OUT	TOTAL
Internal	1	4	5	2	1	3
External in Bicester	7	13	20	12	8	20
External outside Bicester	18	35	53	35	26	61
TOTAL	26	52	79	49	35	84

Table 12: Himley Village (1700 unit scenario) trips

	AM peak			PM peak		
	IN	OUT	TOTAL	IN	OUT	TOTAL
Internal	1	3	4	1	1	2
External in Bicester	12	22	34	20	14	34
External outside Bicester	30	60	90	60	43	103
TOTAL	44	85	128	81	58	139

7.0 CHANGES IN TRAFFIC VOLUMES AS A RESULT OF VENDEE DRIVE

The 2013 traffic surveys include the impact of the opening of Vendee Drive. The changes to traffic volumes in comparison to the 2010 baseline are significant, particularly for the movement from Howes Lane to Lords Lane, and are greater than was assumed in the SW Bicester TA and TN1.

A comparison of the baseline traffic volumes used in this Addendum against the baseline flows used in TN1 are set out in Tables 13 – 16. These figures include background growth to 2021. Overall an increase of around 13% is experienced in the AM peak and 8% in the PM peak, although the increases in flows between Howes Lane and Lords Lane are significantly greater.

Table 13: Change in traffic volumes at Lords Lane / Bucknell Road junction as a result of updated traffic surveys

AM (08.00-09.00)		TO			
		Lords Lane	Bucknell Road (N)	Bucknell Road (S)	TOTAL
FROM	Lords Lane	0	-15	-174	-189
	Bucknell Road (N)	12	0	-7	4
	Bucknell Road (S)	246	27	0	272
	TOTAL	257	11	-181	88
PM (08.00-09.00)		TO			
		Lords Lane	Bucknell Road (N)	Bucknell Road (S)	TOTAL
FROM	Lords Lane	0	50	282	332
	Bucknell Road (N)	3	0	2	5
	Bucknell Road (S)	-192	-6	0	-198
	TOTAL	-189	44	284	139

Table 14: Percentage change in traffic volumes at Lords Lane / Bucknell Road junction as a result of updated traffic surveys

AM (08.00-09.00)		TO			
		Lords Lane	Bucknell Road (N)	Bucknell Road (S)	TOTAL
FROM	Lords Lane	0	-18%	-25%	-24%
	Bucknell Road (N)	27%	0	-9%	4%
	Bucknell Road (S)	50%	39%	0	49%
	TOTAL	49%	8%	-23%	6%
PM (08.00-09.00)		TO			
		Lords Lane	Bucknell Road (N)	Bucknell Road (S)	TOTAL
FROM	Lords Lane	0	114%	43%	48%
	Bucknell Road (N)	6%	0	2%	4%
	Bucknell Road (S)	-25%	-9%	0	-24%
	TOTAL	-23%	42%	39%	8%

Table 15: Change in traffic volumes at Howes Lane / Bucknell Road junction as a result of updated traffic surveys

AM (08.00-09.00)		TO			
		Howes Lane	Bucknell Road (N)	Bucknell Road (S)	TOTAL
FROM	Howes Lane	0	316	25	340
	Bucknell Road (N)	-120	0	-61	-181
	Bucknell Road (S)	66	-43	0	23
	TOTAL	-53	272	-37	182
PM (08.00-09.00)		TO			
		Howes Lane	Bucknell Road (N)	Bucknell Road (S)	TOTAL
FROM	Howes Lane	0	-158	12	-147
	Bucknell Road (N)	216	0	68	284
	Bucknell Road (S)	29	-39	0	-11
	TOTAL	244	-198	79	126

Table 16: Percentage change in traffic volumes at Howes Lane / Bucknell Road junction as a result of updated traffic surveys

AM (08.00-09.00)		TO			
		Howes Lane	Bucknell Road (N)	Bucknell Road (S)	TOTAL
FROM	Howes Lane	0	84%	135%	86%
	Bucknell Road (N)	-20%	0	-34%	-23%
	Bucknell Road (S)	137%	-24%	0	10%
	TOTAL	-8%	49%	-19%	13%
PM (08.00-09.00)		TO			
		Howes Lane	Bucknell Road (N)	Bucknell Road (S)	TOTAL
FROM	Howes Lane	0	-26%	16%	-21%
	Bucknell Road (N)	43%	0	32%	39%
	Bucknell Road (S)	74%	-19%	0	-4%
	TOTAL	45%	-24%	28%	8%

8.0 TRAFFIC VOLUME CHANGES AT THE LORDS LANE / BUCKNELL ROAD AND HOWES LANE / BUCKNELL ROAD JUNCTIONS

The tables below provide an analysis of the impact of the scenarios set out in Section 3. The analysis is set out diagrammatically in Figure 1 of Appendix 1. Figures 2-9 in Appendix 2 provide the network diagrams with baseline traffic volumes as well as the additional traffic added by background growth and development at the Lords Lane / Bucknell Road and Howes Lane / Bucknell Road junctions.

The tables and analysis below focus on the Howes Lane / Bucknell Road junction as the Lords Lane junction operates with fewer capacity constraints.

8.1 Traffic volumes for the 2021 baseline with background traffic growth.

Table 17: Howes Lane / Bucknell Road 2021 with background growth AM peak

AM (08.00-09.00)		TO			
		Howes Lane	Bucknell Road (N)	Bucknell Road (S)	TOTAL
FROM	Howes Lane	0	691	43	733
	Bucknell Road (N)	474	0	119	593
	Bucknell Road (S)	115	137	0	252
	TOTAL	588	828	162	1578

Table 18: Howes Lane / Bucknell Road 2021 with background growth PM peak

PM (17.00-18.00)		TO			
		Howes Lane	Bucknell Road (N)	Bucknell Road (S)	TOTAL
FROM	Howes Lane	0	460	85	546
	Bucknell Road (N)	723	0	281	1004
	Bucknell Road (S)	67	165	0	232
	TOTAL	791	626	366	1782

8.2 Traffic volumes for the 2021 baseline with background traffic growth, Exemplar and Application 1

Table 19: Howes Lane / Bucknell Road 2021 with background growth, Exemplar and Application 1 AM peak

AM (08.00-09.00)		TO			
		Howes Lane	Bucknell Road (N)	Bucknell Road (S)	TOTAL
FROM	Howes Lane	0	764	43	807
	Bucknell Road (N)	606	0	146	753
	Bucknell Road (S)	115	173	0	288
	TOTAL	721	937	189	1847

Table 20: Howes Lane / Bucknell Road 2021 with background growth, Exemplar and Application 1 PM peak

PM (17.00-18.00)		TO			
		Howes Lane	Bucknell Road (N)	Bucknell Road (S)	TOTAL
FROM	Howes Lane	0	582	85	667
	Bucknell Road (N)	822	0	286	1108
	Bucknell Road (S)	67	180	0	247
	TOTAL	889	761	371	2022

Across both peaks there is a 15.3% increase in traffic as a result of the Exemplar and Application 1.

8.3 Traffic volumes for the 2021 baseline with background traffic growth, Exemplar, Application 1 and 500 homes at Himley Village

Table 21: Howes Lane / Bucknell Road 2021 with background growth, Exemplar, Application 1 and Himley Village 500 unit AM peak

AM (08.00-09.00)		TO			
		Howes Lane	Bucknell Road (N)	Bucknell Road (S)	TOTAL
FROM	Howes Lane	0	798	45	843
	Bucknell Road (N)	625	0	146	771
	Bucknell Road (S)	115	173	0	288
	TOTAL	739	971	191	1902

Table 22: Howes Lane / Bucknell Road 2021 with background growth, Exemplar, Application 1 and Himley Village 500 unit PM peak

PM (08.00-09.00)		TO			
		Howes Lane	Bucknell Road (N)	Bucknell Road (S)	TOTAL
FROM	Howes Lane	0	602	89	691
	Bucknell Road (N)	855	0	286	1141
	Bucknell Road (S)	67	180	0	247
	TOTAL	923	782	375	2079

Across both peaks there is a 3.3% increase in traffic as a result of 500 homes at Himley Village in comparison to the baseline with Exemplar and Application 1.

8.4 Traffic volumes for the 2021 baseline with background traffic growth, Exemplar, Application 1 and 1000 homes at Himley Village

Table 23: Howes Lane / Bucknell Road 2021 with background growth, Exemplar, Application 1 and Himley Village 1000 unit AM peak

AM (08.00-09.00)		TO			
		Howes Lane	Bucknell Road (N)	Bucknell Road (S)	TOTAL
FROM	Howes Lane	0	813	46	859
	Bucknell Road (N)	633	0	146	779
	Bucknell Road (S)	115	173	0	288
	TOTAL	747	986	192	1925

Table 24: Howes Lane / Bucknell Road 2021 with background growth, Exemplar, Application 1 and Himley Village 1000 unit PM peak

PM (08.00-09.00)		TO			
		Howes Lane	Bucknell Road (N)	Bucknell Road (S)	TOTAL
FROM	Howes Lane	0	611	91	702
	Bucknell Road (N)	870	0	286	1156
	Bucknell Road (S)	67	180	0	247
	TOTAL	938	791	377	2106

Across both peaks there is a 4.8% increase in traffic as a result of 1000 homes at Himley Village in comparison to the baseline with Exemplar and Application 1.

8.5 Traffic volumes for the 2021 baseline with background traffic growth, Exemplar, Application 1 and 1700 homes at Himley Village

Table 25: Howes Lane / Bucknell Road 2021 with background growth, Exemplar, Application 1 and Himley Village 1700 unit AM peak

AM (08.00-09.00)		TO			
		Howes Lane	Bucknell Road (N)	Bucknell Road (S)	TOTAL
FROM	Howes Lane	0	844	48	891
	Bucknell Road (N)	650	0	146	796
	Bucknell Road (S)	115	173	0	288
	TOTAL	764	1017	194	1975

Table 26: Howes Lane / Bucknell Road 2021 with background growth, Exemplar, Application 1 and Himley Village 1700 unit PM peak

PM (08.00-09.00)		TO			
		Howes Lane	Bucknell Road (N)	Bucknell Road (S)	TOTAL
FROM	Howes Lane	0	631	94	726
	Bucknell Road (N)	903	0	286	1189
	Bucknell Road (S)	67	180	0	247
	TOTAL	970	811	381	2161

Across both peaks there is an 8% increase in traffic as a result of 1700 homes at Himley Village in comparison to the baseline with Exemplar and Application 1.

8.6 Traffic volumes for the 2021 baseline with background traffic growth, Exemplar and 500 homes at Himley Village

In order to allow a direct comparison between the Himley Village scenarios and the scenario where 900 homes are constructed north of the railway, the traffic volumes for the 2021 baseline with background traffic growth, Exemplar traffic and 500 homes at Himley Village are set out below.

Table 27: Howes Lane / Bucknell Road 2021 with background growth, Exemplar and Himley Village 500 homes AM peak

AM (08.00-09.00)		TO			
		Howes Lane	Bucknell Road (N)	Bucknell Road (S)	TOTAL
FROM	Howes Lane	0	767	45	811
	Bucknell Road (N)	543	0	130	672
	Bucknell Road (S)	115	158	0	272
	TOTAL	657	924	174	1756

Table 28: Howes Lane / Bucknell Road 2021 with background growth, Exemplar and Himley Village 500 homes PM peak

PM (08.00-09.00)		TO			
		Howes Lane	Bucknell Road (N)	Bucknell Road (S)	TOTAL
FROM	Howes Lane	0	522	89	611
	Bucknell Road (N)	805	0	283	1089
	Bucknell Road (S)	67	170	0	237
	TOTAL	873	692	372	1937

Across both peaks this is a 10% increase as a result of adding 500 homes at Himley Village and the Exemplar in comparison to the 2021 baseline. This increase is 5.3% lower than the comparable increase as a result of adding the Application 1 and Exemplar traffic to the Howes Lane / Lords Lane corridor (section 8.2).

8.7 Traffic volumes for the 2021 baseline with background traffic growth, Exemplar and 1000 homes at Himley Village

Table 29: Howes Lane / Bucknell Road 2021 with background growth, Exemplar and Himley Village 1000 homes AM peak

AM (08.00-09.00)		TO			
		Howes Lane	Bucknell Road (N)	Bucknell Road (S)	TOTAL
FROM	Howes Lane	0	781	46	827
	Bucknell Road (N)	551	0	130	681
	Bucknell Road (S)	115	158	0	272
	TOTAL	666	939	175	1780

Table 30: Howes Lane / Bucknell Road 2021 with background growth, Exemplar and Himley Village 1000 homes PM peak

PM (08.00-09.00)		TO			
		Howes Lane	Bucknell Road (N)	Bucknell Road (S)	TOTAL
FROM	Howes Lane	0	531	91	622
	Bucknell Road (N)	821	0	283	1104
	Bucknell Road (S)	67	170	0	237
	TOTAL	888	701	374	1963

Across both peaks this is an 11.5% increase as a result of adding 1000 homes at Himley Village and the Exemplar in comparison to the 2021 baseline. This increase is 3.8% lower than the comparable increase as a result of adding the Application 1 and Exemplar traffic to the Howes Lane / Lords Lane corridor (section 8.2).

8.8 Traffic volumes for the 2021 baseline with background traffic growth, Exemplar and 1700 homes at Himley Village

Table 31: Howes Lane / Bucknell Road 2021 with background growth, Exemplar and Himley Village 1700 homes AM peak

AM (08.00-09.00)		TO			
		Howes Lane	Bucknell Road (N)	Bucknell Road (S)	TOTAL
FROM	Howes Lane	0	812	48	860
	Bucknell Road (N)	568	0	130	698
	Bucknell Road (S)	115	158	0	272
	TOTAL	683	970	177	1830

Table 32: Howes Lane / Bucknell Road 2021 with background growth, Exemplar and Himley Village 1700 homes PM peak

PM (08.00-09.00)		TO			
		Howes Lane	Bucknell Road (N)	Bucknell Road (S)	TOTAL
FROM	Howes Lane	0	551	94	645
	Bucknell Road (N)	853	0	283	1136
	Bucknell Road (S)	67	170	0	237
	TOTAL	920	721	378	2019

Across both peaks this is a 14.6% increase as a result of adding 1700 homes at Himley Village and the Exemplar in comparison to the 2021 baseline. This increase is 0.6% lower than the comparable increase as a result of adding the Application 1 and Exemplar traffic to the Howes Lane / Lords Lane corridor (section 8.2).

8.9 Comparison of development flows against 2021 baseline with Exemplar

Finally, a comparison has been made of the individual impact of each development scenario against the baseline and Exemplar traffic volumes at the Howes Lane / Bucknell Road and Lords Lane / Bucknell Road junctions. The baseline and Exemplar flows are set out below.

Table 33: Howes Lane / Bucknell Road 2021 with background growth and Exemplar AM peak

AM (08.00-09.00)		TO			
		Howes Lane	Bucknell Road (N)	Bucknell Road (S)	TOTAL
FROM	Howes Lane	0	732	43	775
	Bucknell Road (N)	525	0	130	654
	Bucknell Road (S)	115	158	0	272
	TOTAL	639	890	172	1701

Table 34: Howes Lane / Bucknell Road 2021 with background growth and Exemplar PM peak

PM (08.00-09.00)		TO			
		Howes Lane	Bucknell Road (N)	Bucknell Road (S)	TOTAL
FROM	Howes Lane	0	502	85	587
	Bucknell Road (N)	772	0	283	1055
	Bucknell Road (S)	67	170	0	237
	TOTAL	839	672	369	1880

By applying the trips set out in Tables 8 to 12 to the baseline flows in Tables 33 and 34 a comparison of the impact of development traffic can be made. The Application 1 traffic represents an increase of 8.1% across both peaks on top of the baseline and Exemplar traffic. By comparison the Himley Village 500 unit scenario adds 3.1% traffic, the 1000 unit scenario adds 4.5% traffic and the 1700 unit scenario adds 7.5% traffic.

9.0 JUNCTION CAPACITY ASSESSMENT

9.1 Howes Lane/Bucknell Road Junction - Existing Layout

The assessment undertaken by Hyder on behalf of A2Dominion concludes with regards to the existing Howes Lane / Bucknell Road junction that *“both tests of 900 and 1200 homes show the junction over capacity, but with the 900 homes capacity issues are not significantly worsened compared to the situation consented for the Exemplar.”* As previously stated this is based on an even distribution of housing and employment across the NW Bicester site and therefore significantly underestimates the impact of all 900 homes being delivered to the north of the railway.

Using the traffic flows that we have derived for the different scenarios we have undertaken our own capacity assessment for the Howes Lane/Bucknell Road junction. The existing junction layout has been modelled in PICADY based on the geometry used in Hyder’s model provided by OCC. The results are set out in Table 35 below.

For comparison the 2013 survey flows have been modelled. This indicates that the junction is overcapacity on Howes Lane in the AM peak and substantially overcapacity in the PM peak. This is consistent with information provided to us by OCC. In the 2021 baseline scenarios without any development at all at NW Bicester (Tables 17 and 18) the junction is shown to be substantially over capacity in both peaks.

In comparing the 2021 baseline flows with Hyder’s 900 home scenario, the baseline flows are around 50 vehicles higher. However, the movements from Howes Lane to Bucknell Road north in the AM peak and the countermovement in the PM peak are 251 and 343 vehicles higher respectively. This represents an increase of 157% and 103% respectively in comparison to the Hyder 900 homes scenario. This substantial increase is causing the junction to fail and is likely to be due in large part to the opening of Vendee Drive. The increased demand from Bucknell Road to Howes Lane blocks vehicles from being able to exit Howes Lane onto Bucknell Road south, which results in the capacity reducing dramatically until it reaches zero on Howes Lane as shown in Table 35. It should be noted that the modelling outputs should be viewed with caution at these levels of demand and that in practice queues on this scale would not materialise as drivers would choose instead to change their route or time of journey. However, they have been included in this report to give an indication of relative impact of each scenario on the junction.

The 2021 baseline with the Exemplar and 507 homes on the Application 1 site (Tables 19 and 20) has been tested. The junction is significantly over capacity on all arms in both peaks. In comparison with Hyder’s 900 home scenario, flows are around 300 vehicles higher in the AM and PM peaks. The combined maximum queue at the junction is 349 vehicles in the AM peak and 939 in the PM peak.

The 2021 baseline with Exemplar and 500 homes at Himley Village (Tables 27 and 28) has been tested. This scenario adds around 90 fewer vehicles to the junction in both peaks. As a result the junction operates with lower RFC (except on Bucknell Road in the PM) and lower levels of queueing on all arms in comparison to the Application 1 scenario. The combined maximum queue at the junction is 245 vehicles in the AM peak and 847 in the PM peak, which is significantly lower than the Exemplar and Application 1 scenario.

The 2021 baseline with Exemplar and 1000 homes at Himley Village (Tables 29 and 30) has been tested. This scenario adds around 60 fewer vehicles to the junction in both peaks. As a result the junction operates with lower RFC (except on Bucknell Road in the PM) and lower levels of queueing on all arms in comparison to the Application 1 scenario. The combined maximum

queue at the junction is 271 vehicles in the AM peak and 894 in the PM peak, which is lower than the Application 1 scenario.

The 2021 baseline with Exemplar and 1700 homes at Himley Village (Tables 31 and 32) has been tested. This scenario adds a similar level of traffic to the junction as the Application 1 scenario and as a result the junction operates with comparable RFCs and queues, albeit while delivering 1200 additional homes.

It is acknowledged that in all future scenarios the junction will be operating significantly over capacity in both peaks. In particular the 2021 baseline with Exemplar and Application 1 will result in very significant over capacity issues and very severe levels of congestion. By way of comparison the 2021 with Exemplar and 1700 homes at Himley Village results in similar capacity and congestion issues, with 500 and 1000 home scenarios have a less severe impact. This clearly demonstrates that significantly more housing can be delivered at Himley Village with similar levels of impact at the junction.

Table 35: Howes Lane / Bucknell Road PICADY results

AM (09.00-08.00)	2013 flows (provided for comparison to OCC work)		2021 baseline		2021 with Exemplar and Application 1		2021 with Exemplar and Himley Village (500 homes)		2021 with Exemplar and Himley Village (1000 homes)		2021 with Exemplar and Himley Village (1700 homes)	
	RFC	Q	RFC	Q	RFC	Q	RFC	Q	RFC	Q	RFC	Q
Movement	RFC	Q	RFC	Q	RFC	Q	RFC	Q	RFC	Q	RFC	Q
Howes Lane - left turn	1	23.1	1.17	97.1	1.61	227	1.38	194	1.43	212	1.55	253
Howes Lane - right turn	0.91	3.43	1.13	7.16	1.55	13.5	1.32	12	1.37	13.2	1.50	15.6
Bucknell Road southbound - ahead and right	0.82	3.99	0.95	8.47	1.25	108	1.11	39	1.12	45.6	1.15	60.9
Total queue	-	30.5	-	113		349	-	245	-	271	-	330
PM (17.00-18.00)	2013 flows (provided for comparison to OCC work)		2021 baseline		2021 with Exemplar and Application 1		2021 with Exemplar and Himley Village (500 homes)		2021 with Exemplar and Himley Village (1000 homes)		2021 with Exemplar and Himley Village (1700 homes)	
	RFC	Q	RFC	Q	RFC	Q	RFC	Q	RFC	Q		
Movement	RFC	Q	RFC	Q	RFC	Q	RFC	Q	RFC	Q		
Howes Lane - left turn	1.76	67.7	99*	288	99*	478	99*	410	99*	433	99*	457
Howes Lane - right turn	1.65	13.6	99*	54.6	99*	71.3	99*	71.5	99*	75.7	99*	79.3
Bucknell Road southbound - ahead and right	1.34	145	1.52	261	1.61	390	1.67	365	1.70	385	1.76	423
Total queue	-	226	-	604	-	939	-	847	-	894	-	959

**this output indicates there is effectively zero capacity available at the arm*

The full Picady outputs are available in Appendix 3.

10.0 CONCLUSIONS

As set out in Table 7 a far greater proportion of trips generated at development sites to the north of the railway will pass through the Howes Lane / Bucknell Road and Lords Lane / Bucknell Road junctions than will trips from Himley Village.

Consequently, and as demonstrated in this assessment, constructing 900 homes on the Exemplar and Application 1 sites would introduce higher traffic flows to the junctions than would any development scenario at Himley Village, including a development of up to 1700 homes. Moreover, even if 900 homes were to be constructed to the north of the railway the addition of development on Himley Village has a small additional impact of 3.3% for 500 homes, rising to 4.8% for 1000 homes and 8% for 1700 homes. This is illustrated diagrammatically in Figure 1 of Appendix 1.

A detailed capacity assessment has been undertaken for the Howes Lane/Bucknell Road junction. This has shown that even without any development on the NW Bicester site in 2021 this junction would be substantially over capacity in both peaks. The addition of 900 homes on the north side of the railway in 2021 would result in very significant over capacity issues in both the AM and PM peaks. By way of comparison, the junction performance would be similar in 2021 with only the Exemplar north of the railway combined with 1700 homes on Himley Village to the south. The impact on the junction from traffic generated by 500 units at Himley would be marginal.

This assessment supports the technical work by Hyder from December 2014 that 450 homes should be located both north and south of the railway. The most recent traffic survey data also supports this even allocation across the site. The Bucknell Road / Howes Lane junction is already above capacity and the situation will worsen as the Exemplar becomes occupied. Locating a further 507 homes north of the railway will result in severe congestion at this junction. In order to be consistent with the Hyder work from December 2014 and the understanding we have from the most recent survey data, the right allocation of the 900 homes is 450 both north and south of the railway.

Clearly there will be capacity issues at this junction with the 900 home allocation but OCC have accepted this on the basis that this will occur in the short term only. Given the disproportionate impact of placing additional homes north of the railway, beyond the 393 of the Exemplar already under construction, the findings of this report strongly reinforce the conclusion that it is only development at Himley village which can proceed within the constraints of the 900 trigger.

Appendix 1

Analysis of traffic impact of NW Bicester schemes on the Howes Lane / Bucknell Road junction

ANALYSIS OF TRAFFIC IMPACT OF NW BICESTER SCHEMES ON THE HOWES LANE/BUCKNELL ROAD JUNCTIONS

EXEMPLAR TRAFFIC GENERATION - 396 HOMES

- ASSUMES 2016 TRIP RATE
- ASSUMES 17.4% CONTAINMENT

AM		PM	
IN	OUT	IN	OUT
62	61	46	51

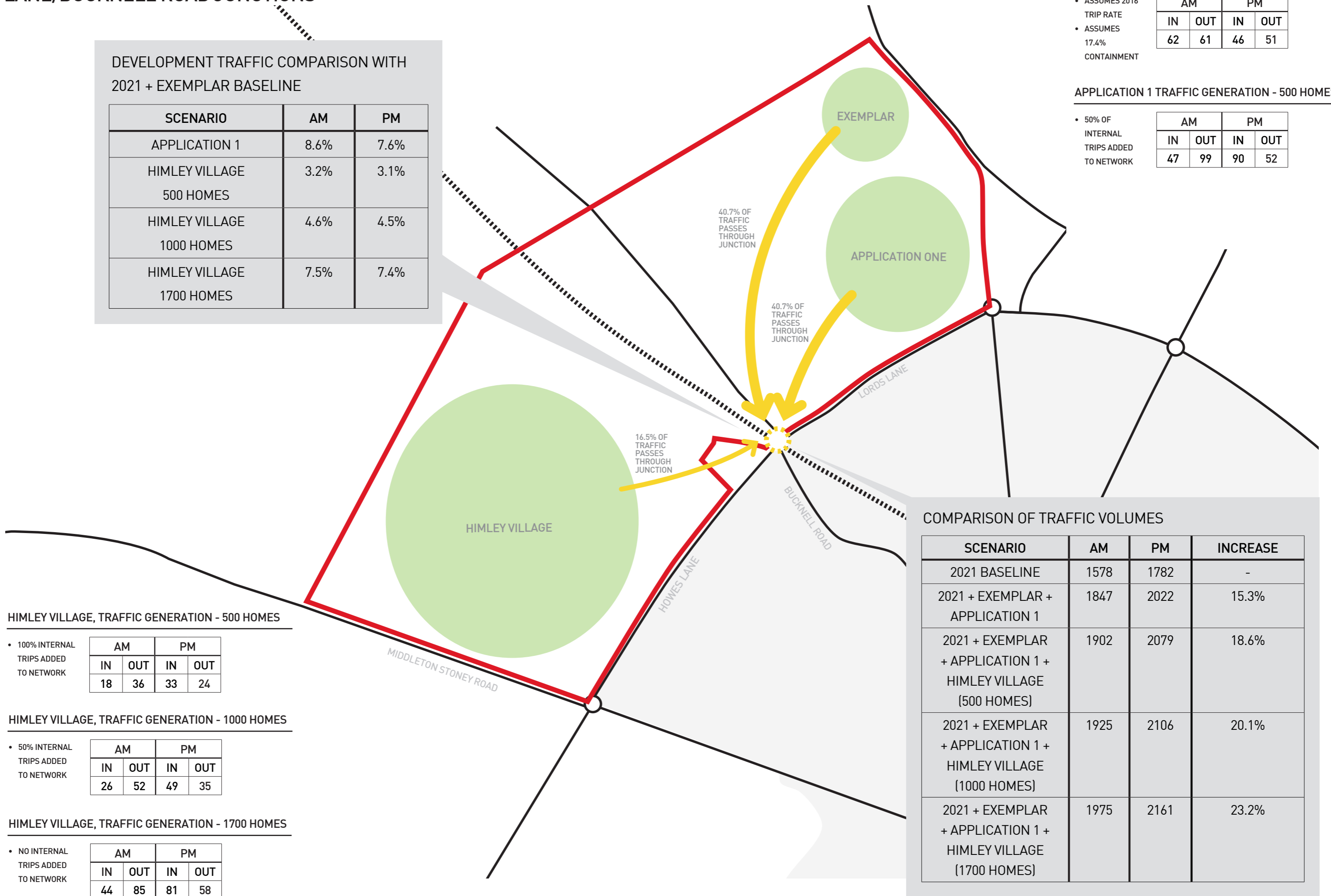
APPLICATION 1 TRAFFIC GENERATION - 500 HOMES

- 50% OF INTERNAL TRIPS ADDED TO NETWORK

AM		PM	
IN	OUT	IN	OUT
47	99	90	52

DEVELOPMENT TRAFFIC COMPARISON WITH 2021 + EXEMPLAR BASELINE

SCENARIO	AM	PM
APPLICATION 1	8.6%	7.6%
HIMLEY VILLAGE 500 HOMES	3.2%	3.1%
HIMLEY VILLAGE 1000 HOMES	4.6%	4.5%
HIMLEY VILLAGE 1700 HOMES	7.5%	7.4%



COMPARISON OF TRAFFIC VOLUMES

SCENARIO	AM	PM	INCREASE
2021 BASELINE	1578	1782	-
2021 + EXEMPLAR + APPLICATION 1	1847	2022	15.3%
2021 + EXEMPLAR + APPLICATION 1 + HIMLEY VILLAGE (500 HOMES)	1902	2079	18.6%
2021 + EXEMPLAR + APPLICATION 1 + HIMLEY VILLAGE (1000 HOMES)	1925	2106	20.1%
2021 + EXEMPLAR + APPLICATION 1 + HIMLEY VILLAGE (1700 HOMES)	1975	2161	23.2%

HIMLEY VILLAGE, TRAFFIC GENERATION - 500 HOMES

- 100% INTERNAL TRIPS ADDED TO NETWORK

AM		PM	
IN	OUT	IN	OUT
18	36	33	24

HIMLEY VILLAGE, TRAFFIC GENERATION - 1000 HOMES

- 50% INTERNAL TRIPS ADDED TO NETWORK

AM		PM	
IN	OUT	IN	OUT
26	52	49	35

HIMLEY VILLAGE, TRAFFIC GENERATION - 1700 HOMES

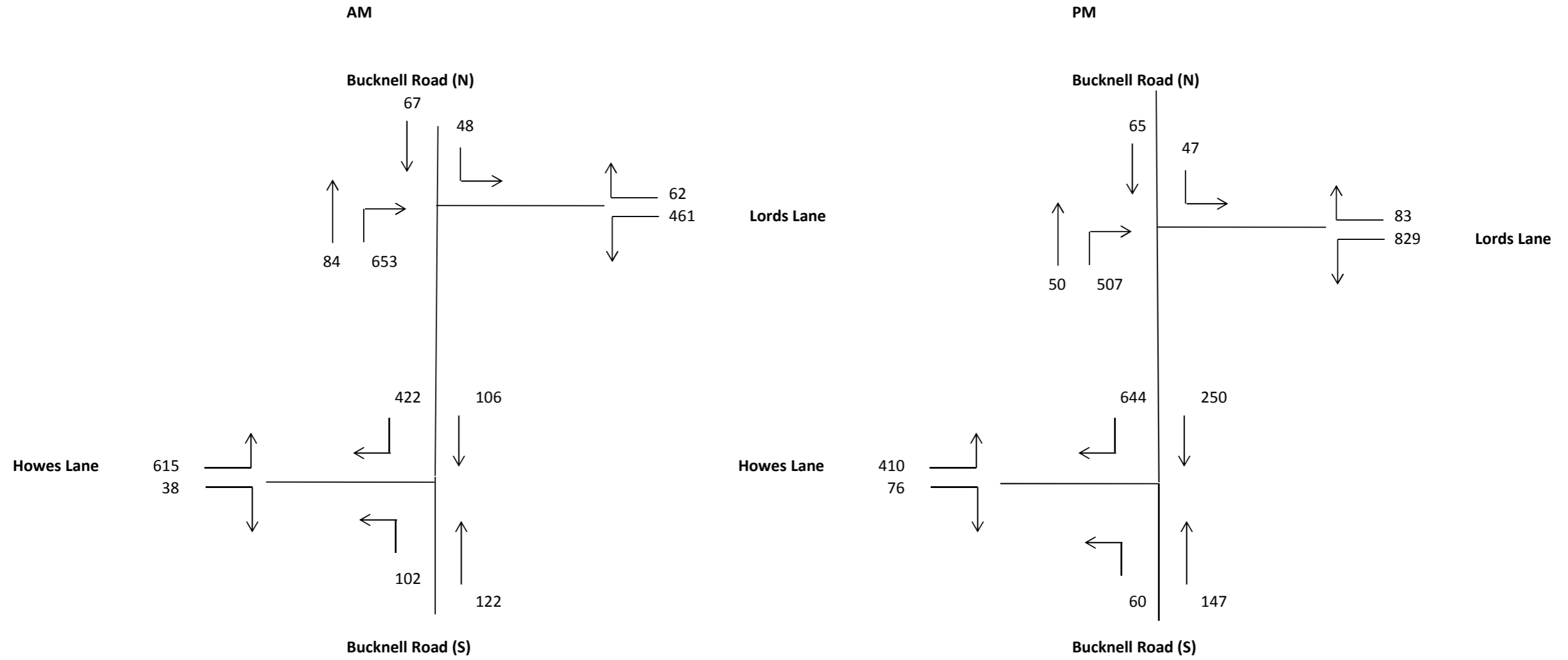
- NO INTERNAL TRIPS ADDED TO NETWORK

AM		PM	
IN	OUT	IN	OUT
44	85	81	58

Appendix 2

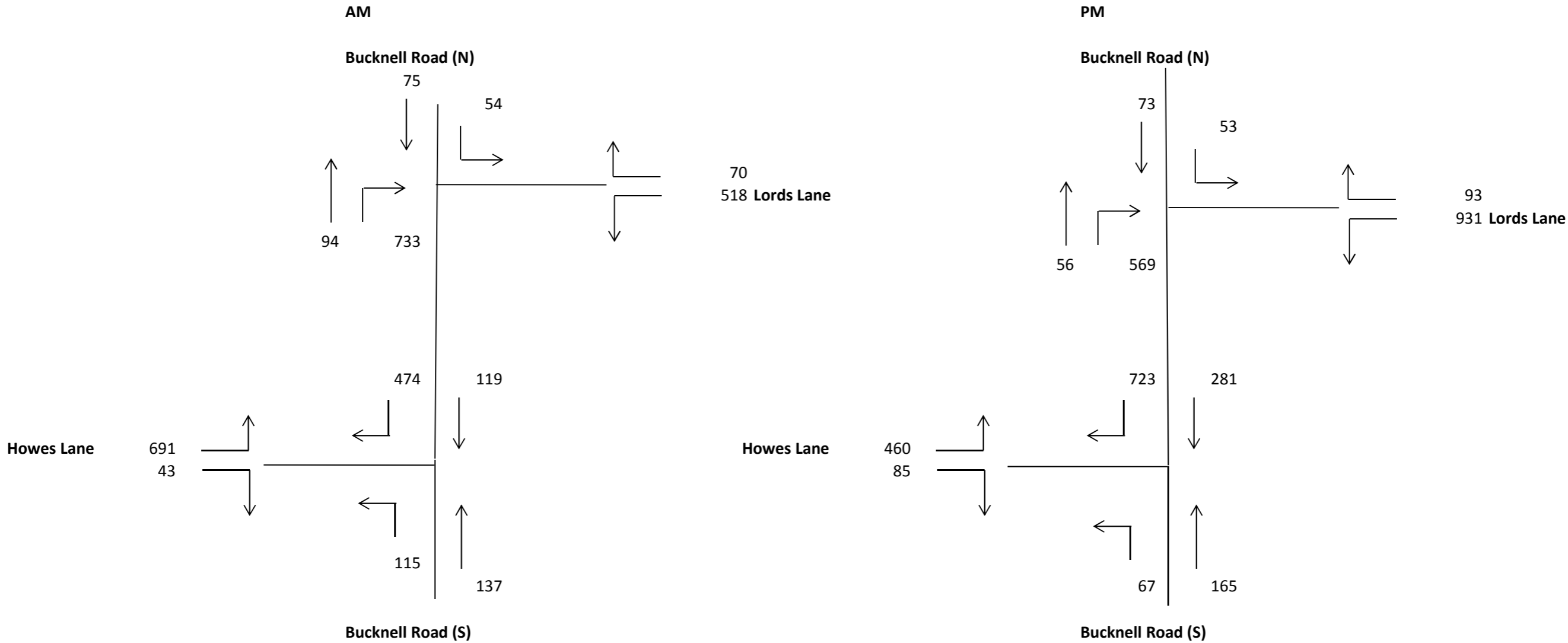
Figures 1 to 14 – network diagrams

Figure 1: 2013 Baseline



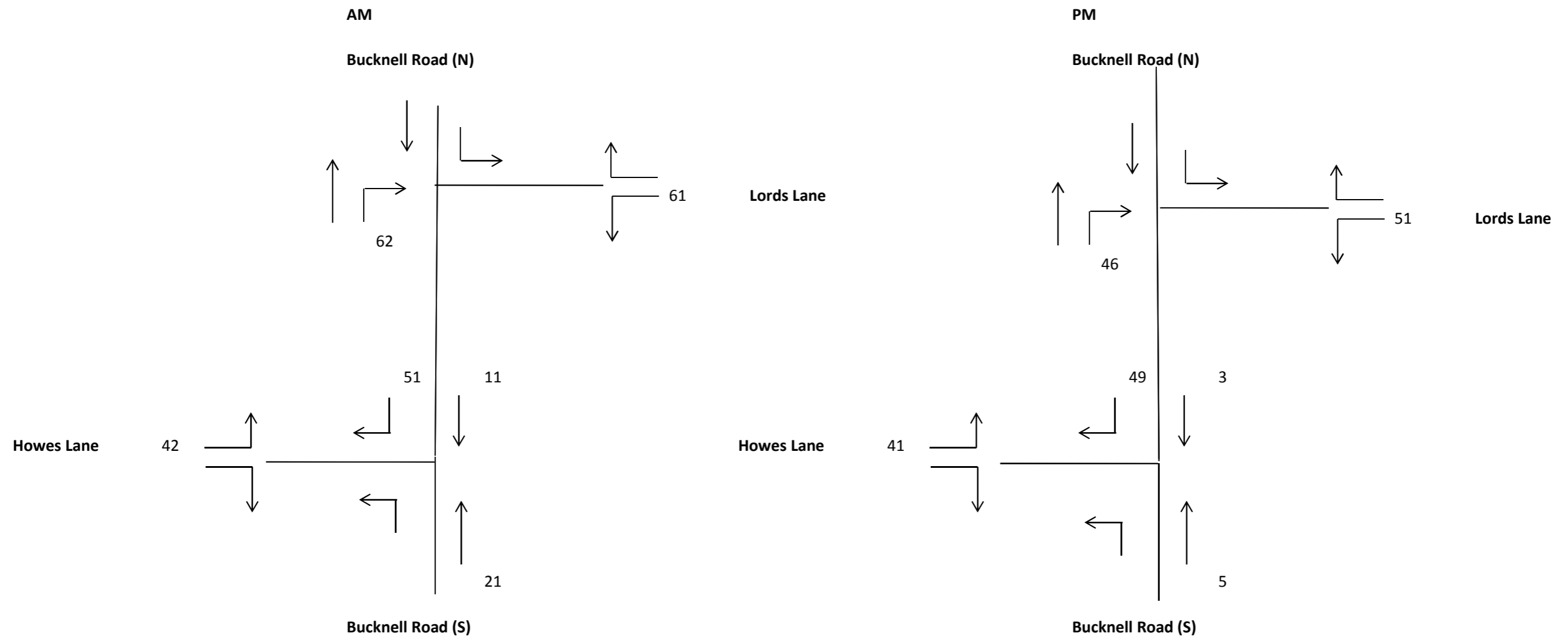
Source: OCC 27.01.16

Figure 2: 2021 baseline with background growth and perimeter road effect



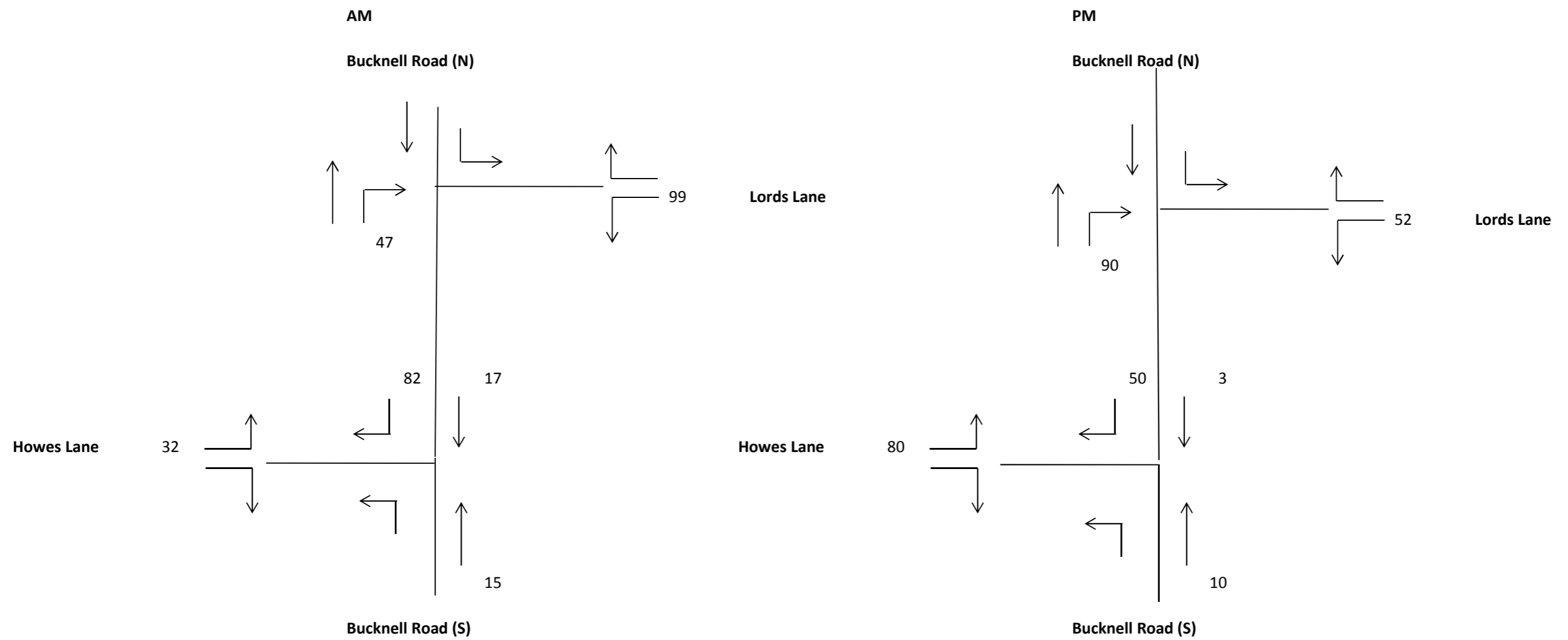
TEMPRO growth factor 2013 - 2021 1.123035

Figure 3: Exemplar traffic (396 homes)



Source: Table 8.7 of Exemplar TA; turning movements based on Figure 8.1 of Exemplar TA

Figure 4: Application 1 traffic (507 homes)



Source: Table 8.14 of Application 1 TA; turning movements based on Figure 8.1 of Exemplar TA

Figure 5: 2021 baseline with background growth, Exemplar and Application 1

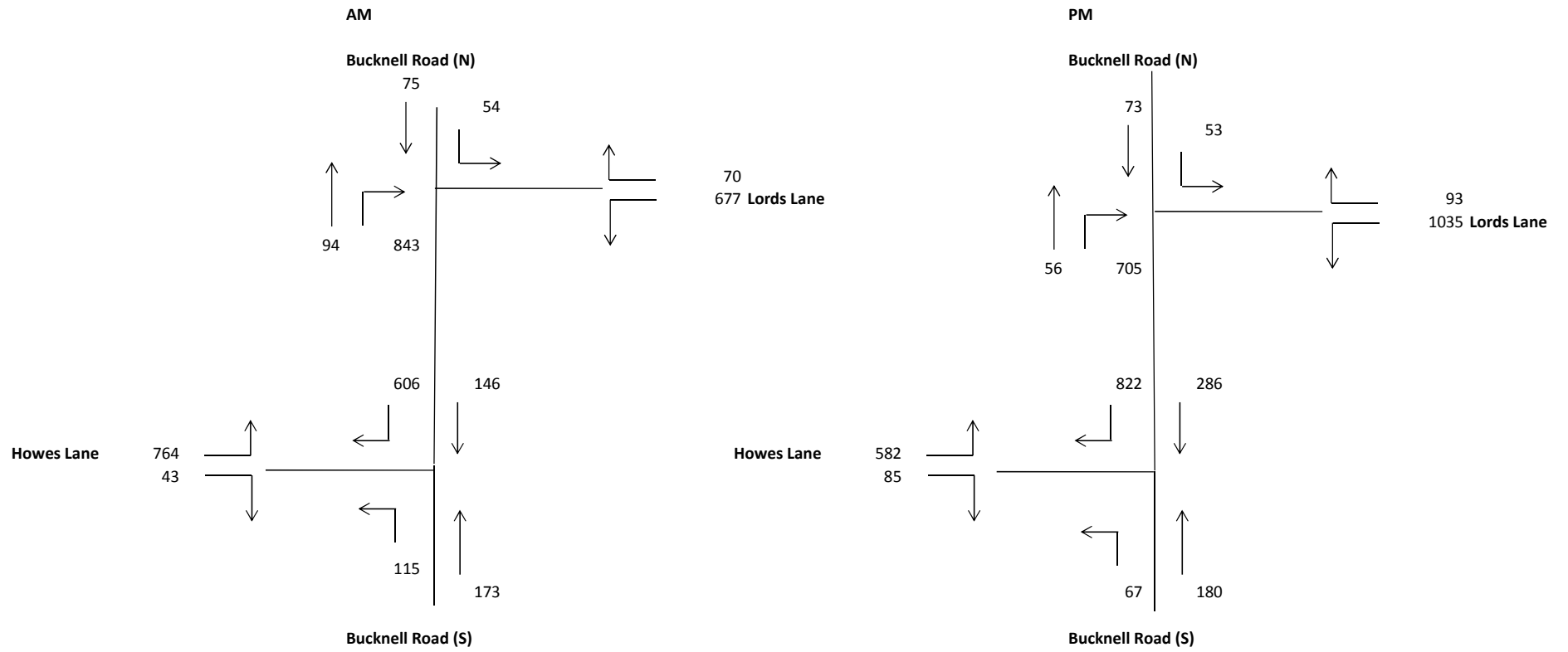
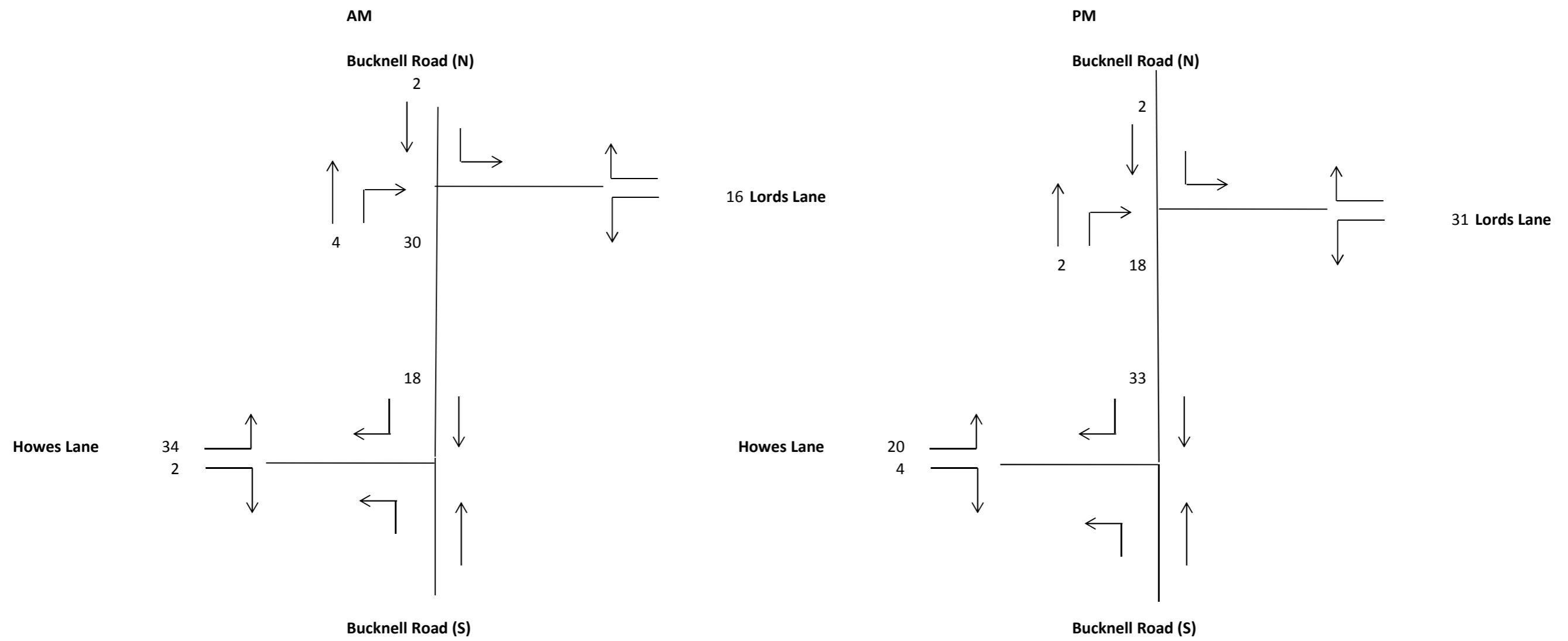
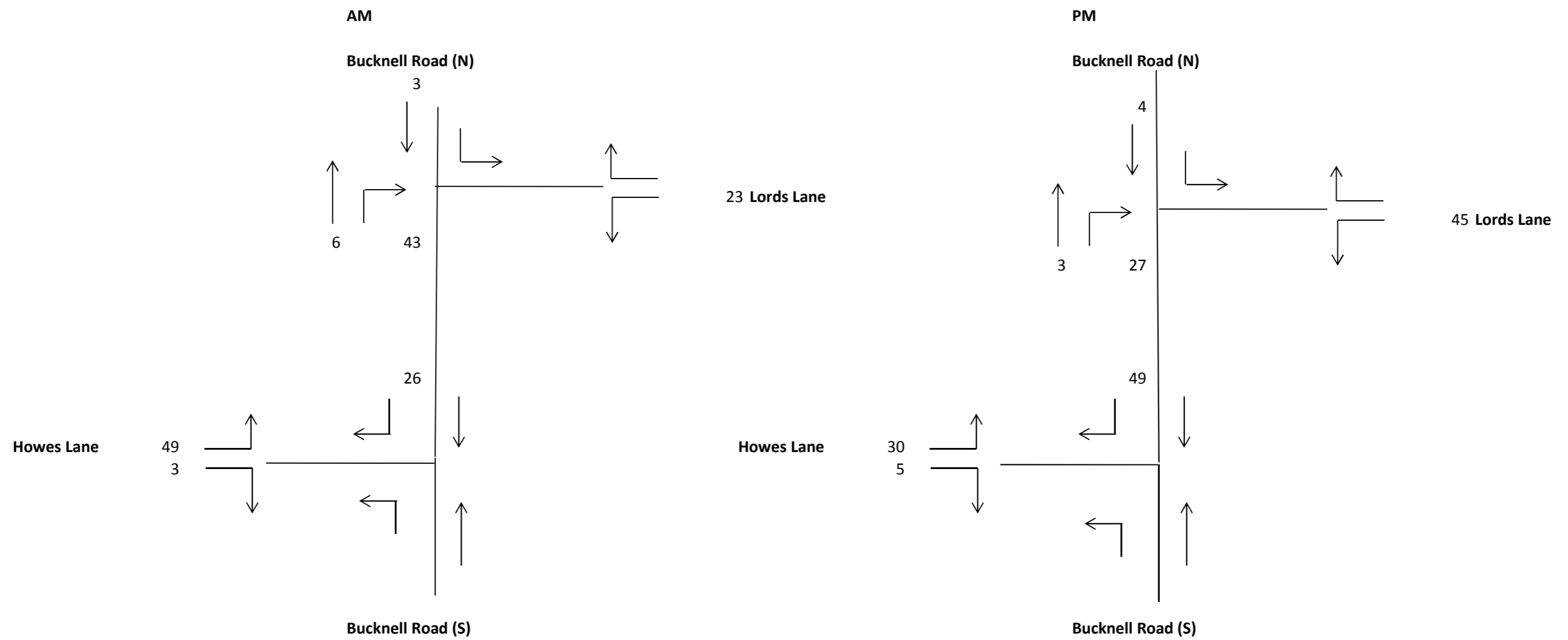


Figure 6: Himley Village traffic (500 homes)



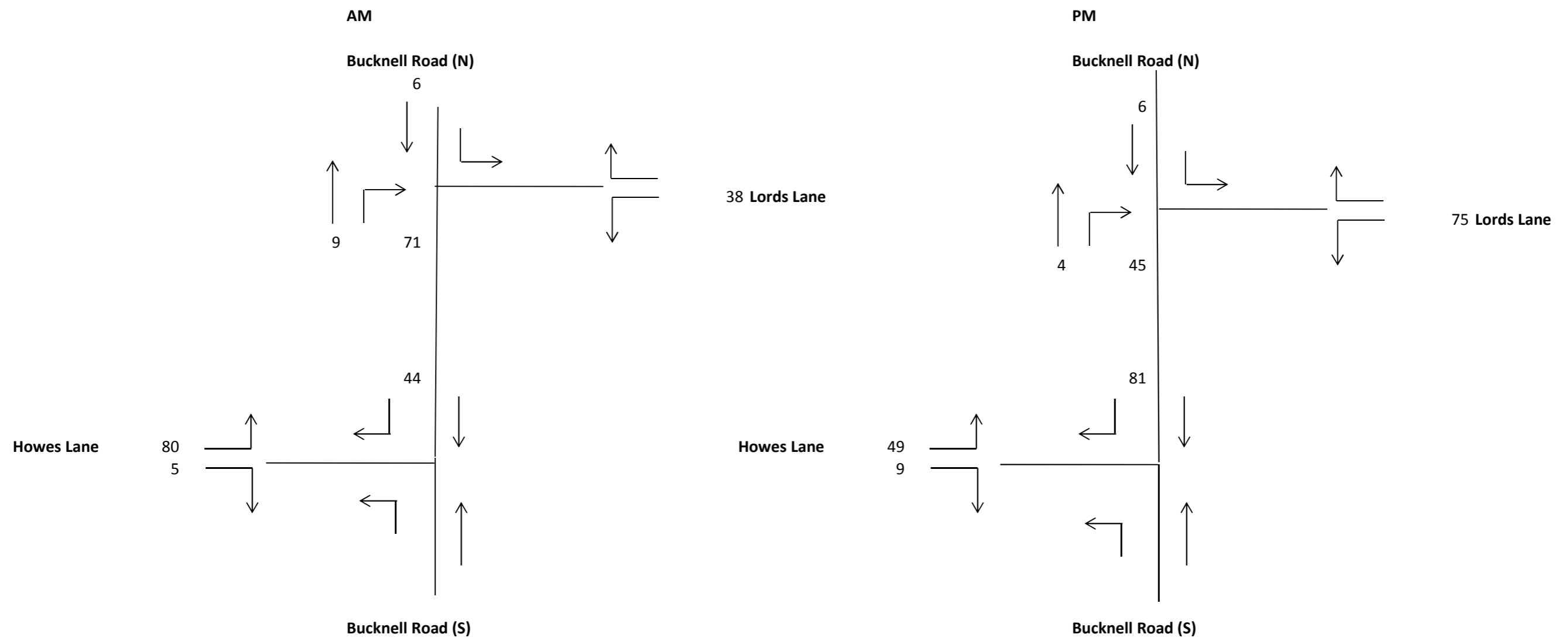
Source: Table 8.14 of Himley Village TA; Turning movements based on baseline traffic survey

Figure 7: Himley Village traffic (1000 homes)



Source: Table 8.14 of Himley Village TA; Turning movements based on baseline traffic survey

Figure 8: Himley Village traffic (1700 homes)



Source: Table 8.14 of Himley Village TA; Turning movements based on baseline traffic survey

Figure 9: 2021 baseline with Exemplar, Application 1 and Himley Village (500 homes)

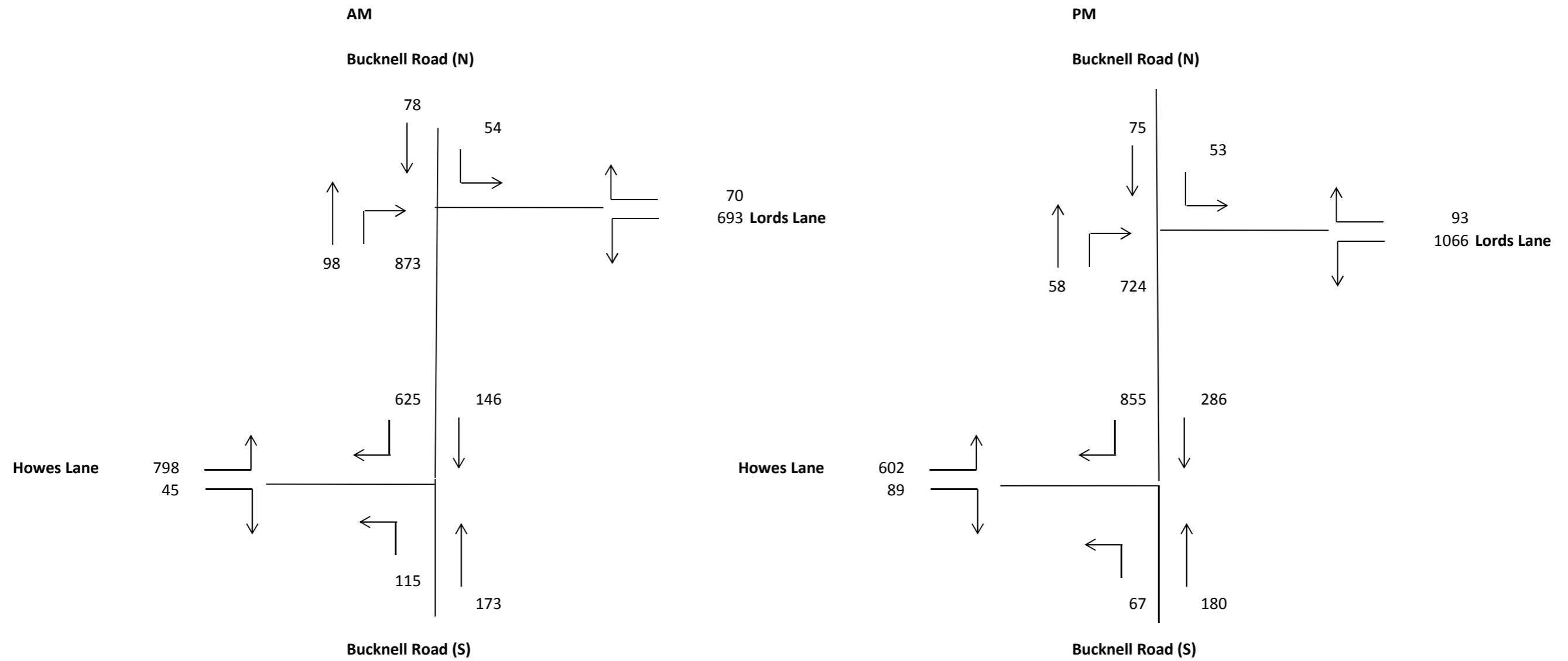


Figure 10: 2021 baseline with Exemplar, Application 1 and Himley Village (1000 homes)

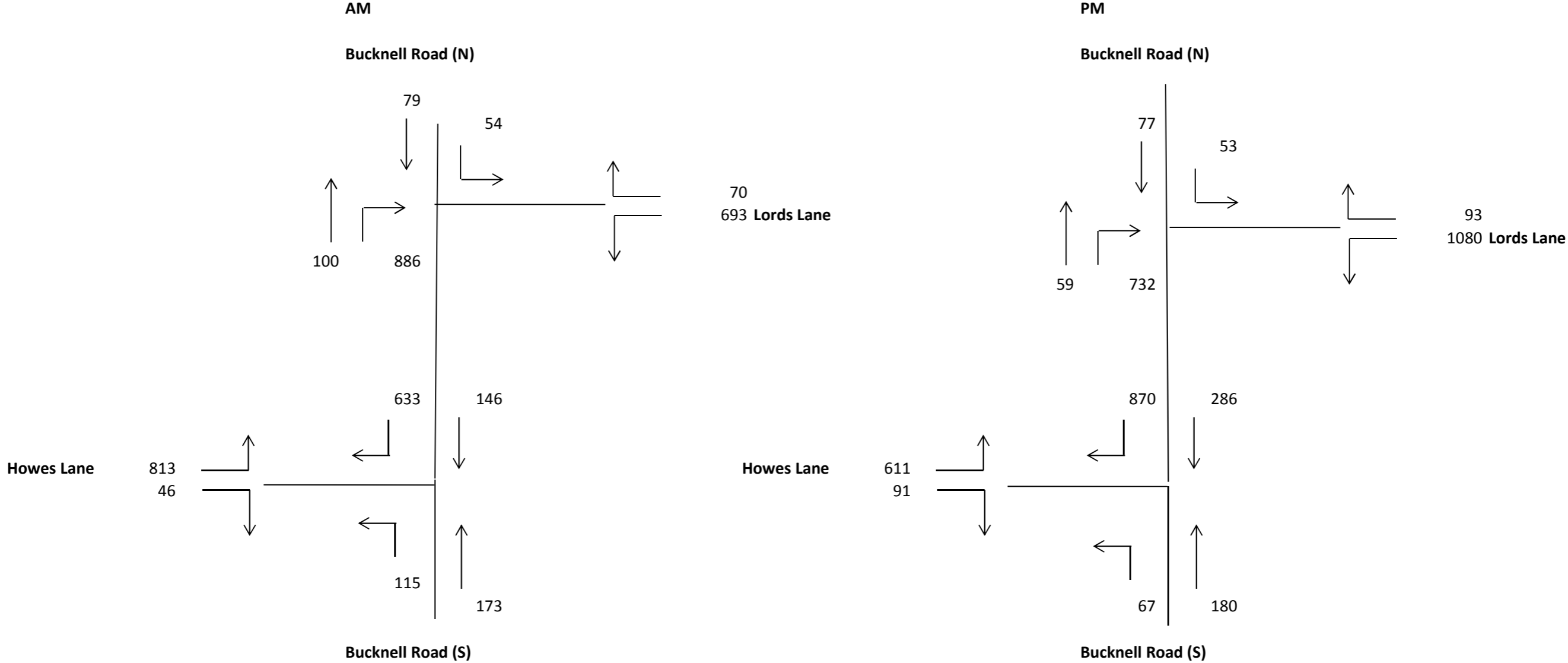


Figure 11: 2021 baseline with Exemplar, Application 1 and Himley Village (1700 homes)

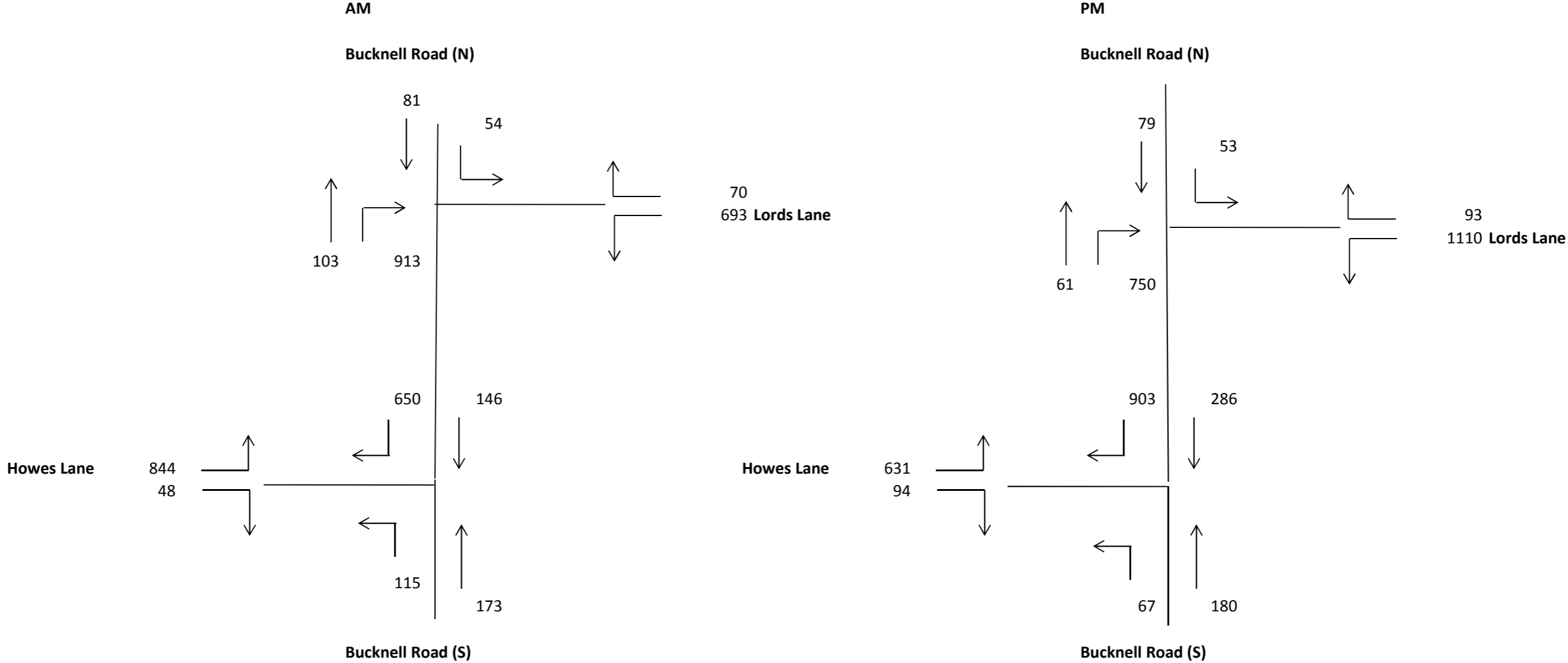


Figure 12: 2021 baseline with Exemplar and Himley Village (500 homes)

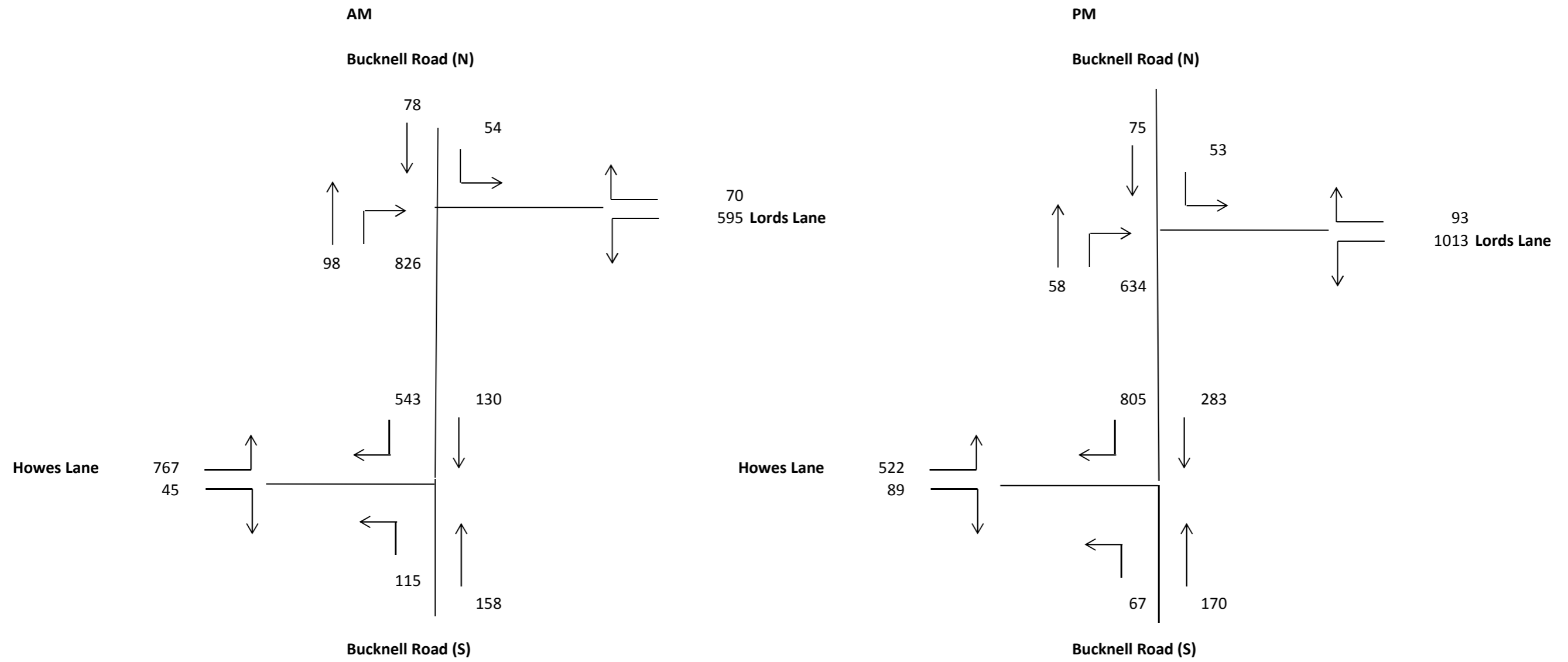


Figure 13: 2021 baseline with Exemplar and Himley Village (1000 homes)

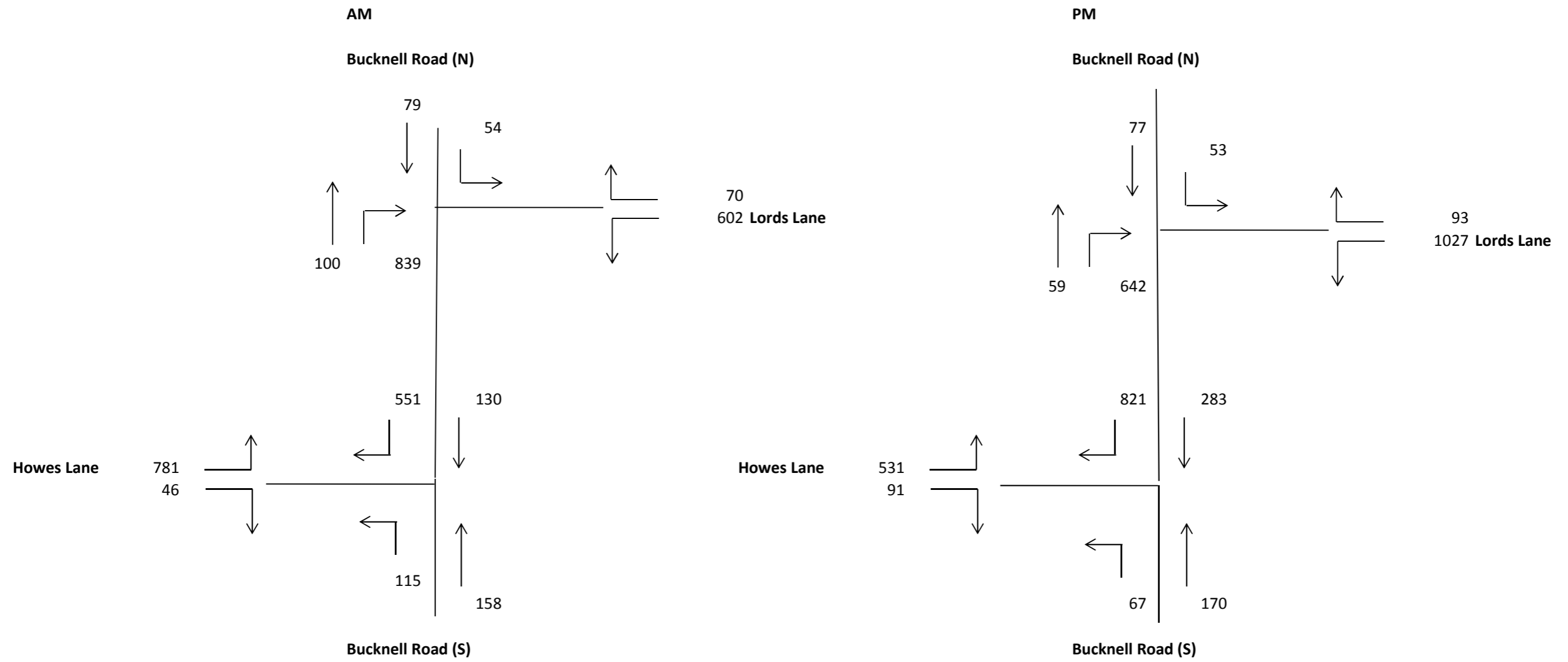
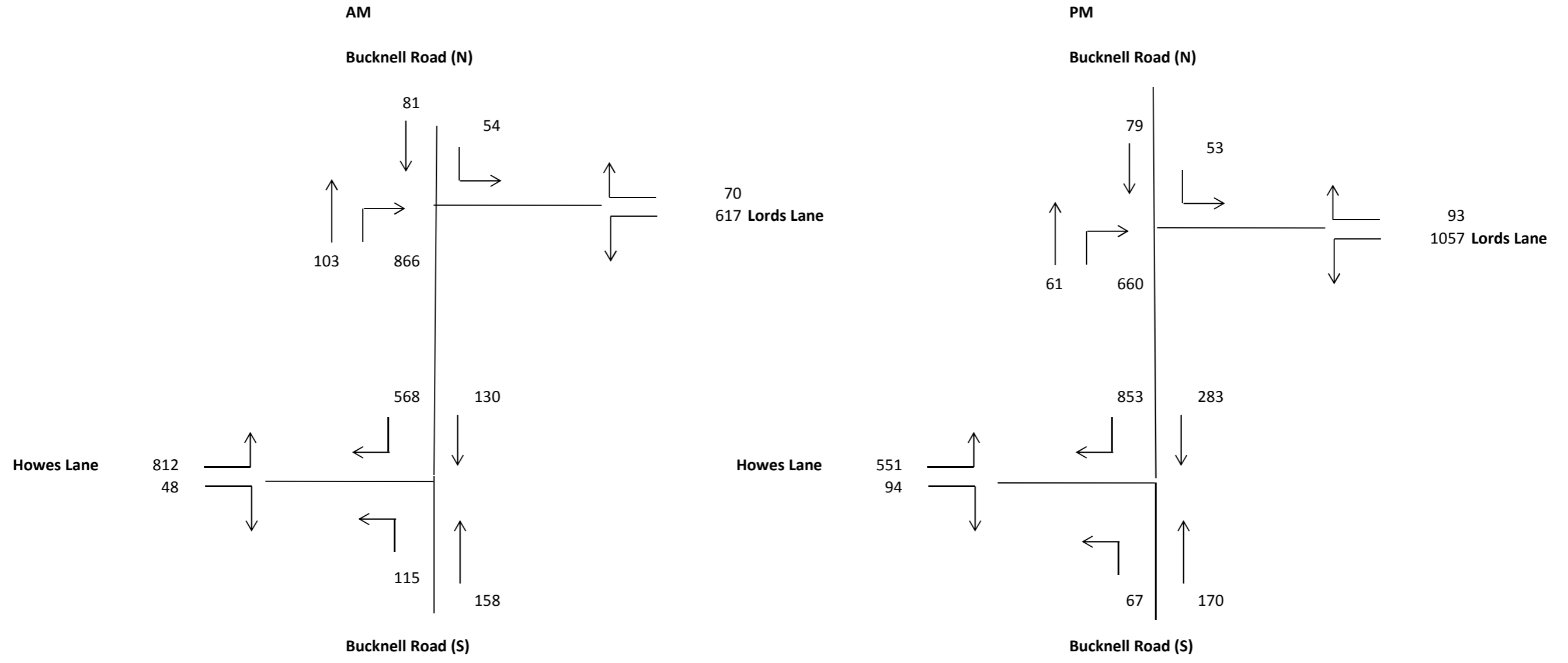


Figure 14: 2021 baseline with Exemplar and Himley Village (1700 homes)



Appendix 3

PICADY model outputs

Junctions 8
PICADY 8 - Priority Intersection Module
Version: 8.0.4.487 [15039,24/03/2014] © Copyright TRL Limited, 2016
For sales and distribution information, program advice and maintenance, contact TRL: Tel: +44 (0)1344 770758 email: software@trl.co.uk Web: http://www.trlsoftware.co.uk
The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution

Filename: Howes Lane - Bucknell RoadV4 (FLAT)no central reserve.arc8
Path: T:\1665\1665-075\14 Calculations\2016 modelling\Junctions 8 outputs\IK Feb 2016 model outputs
Report generation date: 01/02/2016 15:40:49

- » Howes Lane- Bucknell Rd - Scenario 0, AM
- » Howes Lane- Bucknell Rd - Scenario 0, PM
- » Howes Lane- Bucknell Rd - Scenario 1, AM
- » Howes Lane- Bucknell Rd - Scenario 1, PM
- » Howes Lane- Bucknell Rd - Scenario 2, AM
- » Howes Lane- Bucknell Rd - Scenario 2, PM
- » Howes Lane- Bucknell Rd - Scenario 3, AM
- » Howes Lane- Bucknell Rd - Scenario 3, PM
- » Howes Lane- Bucknell Rd - Scenario 4, AM
- » Howes Lane- Bucknell Rd - Scenario 4, PM
- » Howes Lane- Bucknell Rd - Scenario 5, AM
- » Howes Lane- Bucknell Rd - Scenario 5, PM
- » Howes Lane- Bucknell Rd - Scenario 6, AM
- » Howes Lane- Bucknell Rd - Scenario 6, PM
- » Howes Lane- Bucknell Rd - Scenario 7, AM
- » Howes Lane- Bucknell Rd - Scenario 7, PM
- » Howes Lane- Bucknell Rd - Scenario 8, AM
- » Howes Lane- Bucknell Rd - Scenario 8, PM
- » Howes Lane- Bucknell Rd - Scenario 9, AM
- » Howes Lane- Bucknell Rd - Scenario 9, PM

File summary

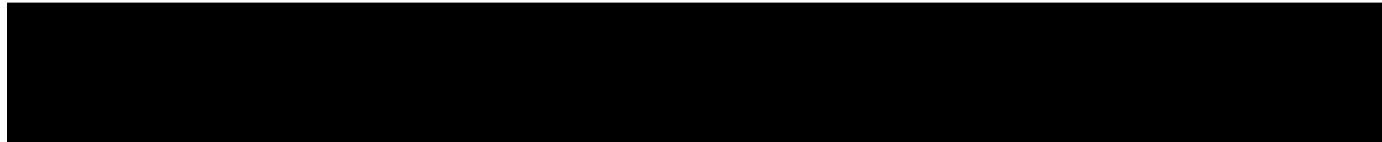
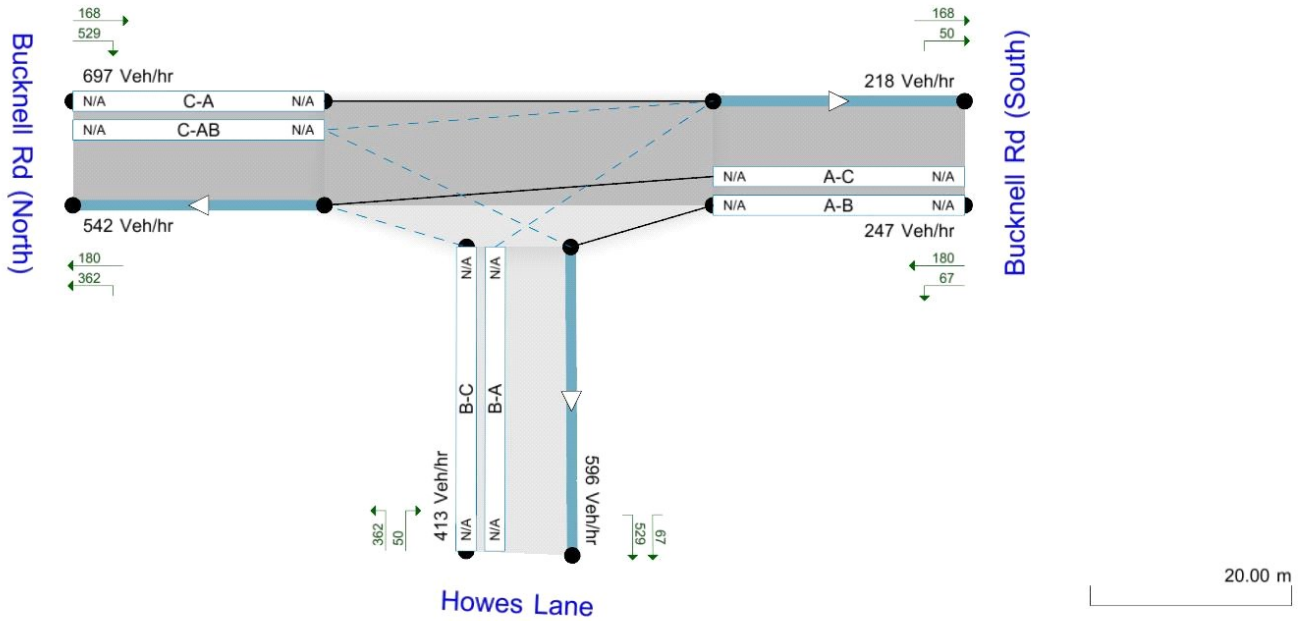
Title	(untitled)
Location	
Site Number	
Date	04/12/2015
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	achare
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

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	Veh	Veh	perHour	s	-Min	perMin



The junction diagram reflects the last run of ARCADY.

Howes Lane- Bucknell Rd - Scenario 0, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Howes Lane- Bucknell Rd	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
Scenario 0, AM	Scenario 0	AM	2013 Baseline	FLAT	08:00	09:00	60	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	A,B,C	101.32	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description	Arm Type
Bucknell Rd (South)	A	Bucknell Rd (South)		Major
Howes Lane	B	Howes Lane		Minor
Bucknell Rd (North)	C	Bucknell Rd (North)		Major

Major Arm Geometry

Name	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
Bucknell Rd (North)	6.50		0.00	✓	2.20	140.00	✓	1.00

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

Minor Arm Geometry

Name	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
Howes Lane	One lane plus flare				10.00	7.50	5.50	5.50	5.50		3.00	20	27

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	437.591	0.078	0.197	0.124	0.282
1	B-C	769.271	0.115	0.292	-	-
1	C-B	655.039	0.248	0.248	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (Veh/hr)	Flow Scaling Factor (%)
Bucknell Rd (South)	FLAT	✓	224.00	100.000
Howes Lane	FLAT	✓	653.00	100.000
Bucknell Rd (North)	FLAT	✓	528.00	100.000

Turning Proportions

Turning Counts / Proportions (Veh/hr) - (untitled) (for whole period)

		To		
		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
From	Bucknell Rd (South)	0.000	102.000	122.000
	Howes Lane	38.000	0.000	615.000
	Bucknell Rd (North)	106.000	422.000	0.000

Turning Proportions (Veh) - (untitled) (for whole period)

		To		
		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
From	Bucknell Rd (South)	0.00	0.46	0.54
	Howes Lane	0.06	0.00	0.94
	Bucknell Rd (North)	0.20	0.80	0.00

Vehicle Mix

Average PCU Per Vehicle - (untitled) (for whole period)

		To		
		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
From	Bucknell Rd (South)	1.000	1.100	1.100
	Howes Lane	1.100	1.000	1.100
	Bucknell Rd (North)	1.100	1.100	1.000

Heavy Vehicle Percentages - (untitled) (for whole period)

		To		
From		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
	Bucknell Rd (South)	0.0	10.0	10.0
	Howes Lane	10.0	0.0	10.0
	Bucknell Rd (North)	10.0	10.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	1.00	139.44	23.12	F
B-A	0.91	363.55	3.43	F
C-AB	0.82	32.88	3.99	D
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (08:00-08:15)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	615.00	571.88	0.00	624.92	0.984	10.78	50.227	F
B-A	38.00	31.89	0.00	52.78	0.720	1.53	148.668	F
C-AB	488.23	473.77	0.00	593.86	0.822	3.61	27.012	D
C-A	39.77	39.77	0.00	-	-	-	-	-
A-B	102.00	102.00	0.00	-	-	-	-	-
A-C	122.00	122.00	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	615.00	596.02	0.00	619.89	0.992	15.52	93.009	F
B-A	38.00	33.06	0.00	41.55	0.915	2.76	303.818	F
C-AB	488.23	487.29	0.00	593.86	0.822	3.85	32.326	D
C-A	39.77	39.77	0.00	-	-	-	-	-
A-B	102.00	102.00	0.00	-	-	-	-	-
A-C	122.00	122.00	0.00	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	615.00	598.78	0.00	616.11	0.998	19.58	118.044	F
B-A	38.00	36.37	0.00	44.63	0.851	3.17	342.183	F
C-AB	488.23	487.87	0.00	593.86	0.822	3.94	32.722	D
C-A	39.77	39.77	0.00	-	-	-	-	-
A-B	102.00	102.00	0.00	-	-	-	-	-
A-C	122.00	122.00	0.00	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	615.00	600.86	0.00	614.91	1.000	23.12	139.444	F
B-A	38.00	36.94	0.00	44.95	0.845	3.43	363.546	F
C-AB	488.23	488.04	0.00	593.86	0.822	3.99	32.877	D
C-A	39.77	39.77	0.00	-	-	-	-	-
A-B	102.00	102.00	0.00	-	-	-	-	-
A-C	122.00	122.00	0.00	-	-	-	-	-

Howes Lane- Bucknell Rd - Scenario 0, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Howes Lane- Bucknell Rd	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
Scenario 0, PM	Scenario 0	PM	2013 Baseline	FLAT	17:00	18:00	60	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	A,B,C	753.97	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description	Arm Type
Bucknell Rd (South)	A	Bucknell Rd (South)		Major
Howes Lane	B	Howes Lane		Minor
Bucknell Rd (North)	C	Bucknell Rd (North)		Major

Major Arm Geometry

Name	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
Bucknell Rd (North)	6.50		0.00	✓	2.20	140.00	✓	1.00

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

Minor Arm Geometry

Name	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
Howes Lane	One lane plus flare				10.00	7.50	5.50	5.50	5.50		3.00	20	27

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	448.349	0.080	0.202	0.127	0.288
1	B-C	755.407	0.113	0.286	-	-
1	C-B	655.039	0.248	0.248	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (Veh/hr)	Flow Scaling Factor (%)
Bucknell Rd (South)	FLAT	✓	207.00	100.000
Howes Lane	FLAT	✓	486.00	100.000
Bucknell Rd (North)	FLAT	✓	894.00	100.000

Turning Proportions

Turning Counts / Proportions (Veh/hr) - (untitled) (for whole period)

From	To		
	Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
Bucknell Rd (South)	0.000	60.000	147.000
Howes Lane	76.000	0.000	410.000
Bucknell Rd (North)	250.000	644.000	0.000

Turning Proportions (Veh) - (untitled) (for whole period)

		To		
From		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
	Bucknell Rd (South)	0.00	0.29	0.71
	Howes Lane	0.16	0.00	0.84
	Bucknell Rd (North)	0.28	0.72	0.00

Vehicle Mix

Average PCU Per Vehicle - (untitled) (for whole period)

		To		
From		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
	Bucknell Rd (South)	1.000	1.100	1.100
	Howes Lane	1.100	1.000	1.100
	Bucknell Rd (North)	1.100	1.100	1.000

Heavy Vehicle Percentages - (untitled) (for whole period)

		To		
From		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
	Bucknell Rd (South)	0.0	10.0	10.0
	Howes Lane	10.0	0.0	10.0
	Bucknell Rd (North)	10.0	10.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	1.76	728.92	67.74	F
B-A	1.65	872.90	13.62	F
C-AB	1.34	755.34	145.44	F
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (17:00-17:15)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	410.00	398.92	0.00	542.98	0.755	2.77	23.481	C
B-A	76.00	71.45	0.00	134.26	0.566	1.14	54.194	F
C-AB	894.00	732.10	0.00	668.97	1.336	40.48	170.924	F
C-A	0.00	0.00	0.00	-	-	-	-	-
A-B	60.00	60.00	0.00	-	-	-	-	-
A-C	147.00	147.00	0.00	-	-	-	-	-

Main results: (17:15-17:30)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	410.00	398.86	0.00	461.14	0.889	5.55	49.909	E
B-A	76.00	69.78	0.00	91.56	0.830	2.69	136.847	F
C-AB	894.00	753.00	0.00	668.97	1.336	75.73	380.932	F
C-A	0.00	0.00	0.00	-	-	-	-	-
A-B	60.00	60.00	0.00	-	-	-	-	-
A-C	147.00	147.00	0.00	-	-	-	-	-

Main results: (17:30-17:45)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	410.00	338.77	0.00	345.65	1.186	23.36	193.772	F
B-A	76.00	63.08	0.00	69.39	1.095	5.92	341.416	F
C-AB	894.00	754.36	0.00	668.97	1.336	110.64	568.527	F
C-A	0.00	0.00	0.00	-	-	-	-	-
A-B	60.00	60.00	0.00	-	-	-	-	-
A-C	147.00	147.00	0.00	-	-	-	-	-

Main results: (17:45-18:00)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	410.00	232.47	0.00	232.77	1.761	67.74	728.920	F
B-A	76.00	45.21	0.00	46.09	1.649	13.62	872.897	F
C-AB	894.00	754.79	0.00	668.97	1.336	145.44	755.341	F
C-A	0.00	0.00	0.00	-	-	-	-	-
A-B	60.00	60.00	0.00	-	-	-	-	-
A-C	147.00	147.00	0.00	-	-	-	-	-

Howes Lane- Bucknell Rd - Scenario 1, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Howes Lane- Bucknell Rd	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
Scenario 1, AM	Scenario 1	AM	2021 Baseline	FLAT	08:00	09:00	60	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	A,B,C	332.46	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description	Arm Type
Bucknell Rd (South)	A	Bucknell Rd (South)		Major
Howes Lane	B	Howes Lane		Minor
Bucknell Rd (North)	C	Bucknell Rd (North)		Major

Major Arm Geometry

Name	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
Bucknell Rd (North)	6.50		0.00	✓	2.20	140.00	✓	1.00

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

Minor Arm Geometry

Name	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
Howes Lane	One lane plus flare				10.00	7.50	5.50	5.50	5.50		3.00	20	27

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	437.591	0.078	0.197	0.124	0.282
1	B-C	769.271	0.115	0.292	-	-
1	C-B	655.039	0.248	0.248	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (Veh/hr)	Flow Scaling Factor (%)
Bucknell Rd (South)	FLAT	✓	252.00	100.000
Howes Lane	FLAT	✓	734.00	100.000
Bucknell Rd (North)	FLAT	✓	593.00	100.000

Turning Proportions

Turning Counts / Proportions (Veh/hr) - (untitled) (for whole period)

		To		
		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
From	Bucknell Rd (South)	0.000	115.000	137.000
	Howes Lane	43.000	0.000	691.000
	Bucknell Rd (North)	119.000	474.000	0.000

Turning Proportions (Veh) - (untitled) (for whole period)

		To		
		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
From	Bucknell Rd (South)	0.00	0.46	0.54
	Howes Lane	0.06	0.00	0.94
	Bucknell Rd (North)	0.20	0.80	0.00

Vehicle Mix

Average PCU Per Vehicle - (untitled) (for whole period)

		To		
		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
From	Bucknell Rd (South)	1.000	1.100	1.100
	Howes Lane	1.100	1.000	1.100
	Bucknell Rd (North)	1.100	1.100	1.000

Heavy Vehicle Percentages - (untitled) (for whole period)

		To		
		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
From	Bucknell Rd (South)	0.0	10.0	10.0
	Howes Lane	10.0	0.0	10.0
	Bucknell Rd (North)	10.0	10.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	1.17	525.58	97.09	F
B-A	1.13	703.59	7.16	F
C-AB	0.95	69.96	8.47	F
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (08:00-08:15)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	691.00	589.55	0.00	612.79	1.128	25.36	92.259	F
B-A	43.00	29.44	0.00	38.13	1.128	3.39	288.430	F
C-AB	569.15	542.67	0.00	600.63	0.948	6.62	43.876	E
C-A	23.85	23.85	0.00	-	-	-	-	-
A-B	115.00	115.00	0.00	-	-	-	-	-
A-C	137.00	137.00	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	691.00	598.07	0.00	600.61	1.151	48.60	237.414	F
B-A	43.00	38.13	0.00	42.86	1.003	4.61	457.424	F
C-AB	569.15	564.92	0.00	600.63	0.948	7.68	64.134	F
C-A	23.85	23.85	0.00	-	-	-	-	-
A-B	115.00	115.00	0.00	-	-	-	-	-
A-C	137.00	137.00	0.00	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	691.00	595.70	0.00	596.69	1.158	72.42	378.172	F
B-A	43.00	38.07	0.00	41.40	1.039	5.84	579.065	F
C-AB	569.15	567.15	0.00	600.63	0.948	8.18	68.046	F
C-A	23.85	23.85	0.00	-	-	-	-	-
A-B	115.00	115.00	0.00	-	-	-	-	-
A-C	137.00	137.00	0.00	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	691.00	592.32	0.00	592.82	1.166	97.09	525.581	F
B-A	43.00	37.73	0.00	40.11	1.072	7.16	703.586	F
C-AB	569.15	567.96	0.00	600.63	0.948	8.47	69.963	F
C-A	23.85	23.85	0.00	-	-	-	-	-
A-B	115.00	115.00	0.00	-	-	-	-	-
A-C	137.00	137.00	0.00	-	-	-	-	-

Howes Lane- Bucknell Rd - Scenario 1, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Howes Lane- Bucknell Rd	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
Scenario 1, PM	Scenario 1	PM	2021 Baseline	FLAT	17:00	18:00	60	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	A,B,C	3518399813.69	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description	Arm Type
Bucknell Rd (South)	A	Bucknell Rd (South)		Major
Howes Lane	B	Howes Lane		Minor
Bucknell Rd (North)	C	Bucknell Rd (North)		Major

Major Arm Geometry

Name	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
Bucknell Rd (North)	6.50		0.00	✓	2.20	140.00	✓	1.00

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

Minor Arm Geometry

Name	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
Howes Lane	One lane plus flare				10.00	7.50	5.50	5.50	5.50		3.00	20	27

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	448.281	0.080	0.202	0.127	0.288
1	B-C	755.495	0.113	0.286	-	-
1	C-B	655.039	0.248	0.248	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (Veh/hr)	Flow Scaling Factor (%)
Bucknell Rd (South)	FLAT	✓	232.00	100.000
Howes Lane	FLAT	✓	545.00	100.000
Bucknell Rd (North)	FLAT	✓	1004.00	100.000

Turning Proportions

Turning Counts / Proportions (Veh/hr) - (untitled) (for whole period)

	To			
		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
From	Bucknell Rd (South)	0.000	67.000	165.000
	Howes Lane	85.000	0.000	460.000
	Bucknell Rd (North)	281.000	723.000	0.000

Turning Proportions (Veh) - (untitled) (for whole period)

		To		
From		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
	Bucknell Rd (South)	0.00	0.29	0.71
	Howes Lane	0.16	0.00	0.84
	Bucknell Rd (North)	0.28	0.72	0.00

Vehicle Mix

Average PCU Per Vehicle - (untitled) (for whole period)

		To		
From		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
	Bucknell Rd (South)	1.000	1.100	1.100
	Howes Lane	1.100	1.000	1.100
	Bucknell Rd (North)	1.100	1.100	1.000

Heavy Vehicle Percentages - (untitled) (for whole period)

		To		
From		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
	Bucknell Rd (South)	0.0	10.0	10.0
	Howes Lane	10.0	0.0	10.0
	Bucknell Rd (North)	10.0	10.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	999999999.00	999999999.00	287.83	F
B-A	999999999.00	999999999.00	54.57	F
C-AB	1.52	1306.72	260.65	F
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (17:00-17:15)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	460.00	418.43	0.00	458.70	1.003	10.39	999999999.000	F
B-A	85.00	68.35	0.00	84.76	1.003	4.16	999999999.000	F
C-AB	1004.00	733.48	0.00	662.33	1.516	67.63	247.459	F
C-A	0.00	0.00	0.00	-	-	-	-	-
A-B	67.00	67.00	0.00	-	-	-	-	-
A-C	165.00	165.00	0.00	-	-	-	-	-

Main results: (17:15-17:30)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	460.00	270.25	0.00	271.11	1.697	57.83	999999999.000	F
B-A	85.00	53.38	0.00	54.95	1.547	12.07	999999999.000	F
C-AB	1004.00	746.36	0.00	662.33	1.516	132.04	609.175	F
C-A	0.00	0.00	0.00	-	-	-	-	-
A-B	67.00	67.00	0.00	-	-	-	-	-
A-C	165.00	165.00	0.00	-	-	-	-	-

Main results: (17:30-17:45)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	460.00	0.00	0.00	0.00	999999999.000	172.83	999999999.000	F
B-A	85.00	0.00	0.00	0.00	999999999.000	33.32	999999999.000	F
C-AB	1004.00	746.73	0.00	662.33	1.516	196.36	957.810	F
C-A	0.00	0.00	0.00	-	-	-	-	-
A-B	67.00	67.00	0.00	-	-	-	-	-
A-C	165.00	165.00	0.00	-	-	-	-	-

Main results: (17:45-18:00)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	460.00	0.00	0.00	0.00	999999999.000	287.83	999999999.000	F
B-A	85.00	0.00	0.00	0.00	999999999.000	54.57	999999999.000	F
C-AB	1004.00	746.83	0.00	662.33	1.516	260.65	1306.717	F
C-A	0.00	0.00	0.00	-	-	-	-	-
A-B	67.00	67.00	0.00	-	-	-	-	-
A-C	165.00	165.00	0.00	-	-	-	-	-

Howes Lane- Bucknell Rd - Scenario 2, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Howes Lane- Bucknell Rd	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
Scenario 2, AM	Scenario 2	AM	2021 Baseline with background growth and Exemplar	FLAT	08:00	09:00	60	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	A,B,C	544.92	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description	Arm Type
Bucknell Rd (South)	A	Bucknell Rd (South)		Major
Howes Lane	B	Howes Lane		Minor
Bucknell Rd (North)	C	Bucknell Rd (North)		Major

Major Arm Geometry

Name	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
Bucknell Rd (North)	6.50		0.00	✓	2.20	140.00	✓	1.00

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

Minor Arm Geometry

Name	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
Howes Lane	One lane plus flare				10.00	7.50	5.50	5.50	5.50		3.00	20	27

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	437.591	0.078	0.197	0.124	0.282
1	B-C	769.271	0.115	0.292	-	-
1	C-B	655.039	0.248	0.248	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (Veh/hr)	Flow Scaling Factor (%)
Bucknell Rd (South)	FLAT	✓	273.00	100.000
Howes Lane	FLAT	✓	775.00	100.000
Bucknell Rd (North)	FLAT	✓	655.00	100.000

Turning Proportions

Turning Counts / Proportions (Veh/hr) - (untitled) (for whole period)

		To		
		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
From	Bucknell Rd (South)	0.000	115.000	158.000
	Howes Lane	43.000	0.000	732.000
	Bucknell Rd (North)	130.000	525.000	0.000

Turning Proportions (Veh) - (untitled) (for whole period)

		To		
		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
From	Bucknell Rd (South)	0.00	0.42	0.58
	Howes Lane	0.06	0.00	0.94
	Bucknell Rd (North)	0.20	0.80	0.00

Vehicle Mix

Average PCU Per Vehicle - (untitled) (for whole period)

		To		
		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
From	Bucknell Rd (South)	1.000	1.100	1.100
	Howes Lane	1.100	1.000	1.100
	Bucknell Rd (North)	1.100	1.100	1.000

Heavy Vehicle Percentages - (untitled) (for whole period)

		To		
From		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
	Bucknell Rd (South)	0.0	10.0	10.0
	Howes Lane	10.0	0.0	10.0
	Bucknell Rd (North)	10.0	10.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	1.28	837.54	151.39	F
B-A	1.21	1006.99	9.71	F
C-AB	1.07	186.86	26.03	F
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (08:00-08:15)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	732.00	587.37	0.00	603.62	1.213	36.16	124.030	F
B-A	43.00	28.00	0.00	35.46	1.213	3.75	326.659	F
C-AB	653.73	601.86	0.00	608.95	1.074	12.97	74.641	F
C-A	1.27	1.27	0.00	-	-	-	-	-
A-B	115.00	115.00	0.00	-	-	-	-	-
A-C	158.00	158.00	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	732.00	586.22	0.00	587.16	1.247	72.60	348.098	F
B-A	43.00	35.70	0.00	38.85	1.107	5.58	571.573	F
C-AB	653.73	631.72	0.00	608.95	1.074	18.47	135.316	F
C-A	1.27	1.27	0.00	-	-	-	-	-
A-B	115.00	115.00	0.00	-	-	-	-	-
A-C	158.00	158.00	0.00	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	732.00	578.69	0.00	579.00	1.264	110.93	584.633	F
B-A	43.00	35.13	0.00	36.98	1.163	7.54	783.843	F
C-AB	653.73	637.19	0.00	608.95	1.074	22.60	164.369	F
C-A	1.27	1.27	0.00	-	-	-	-	-
A-B	115.00	115.00	0.00	-	-	-	-	-
A-C	158.00	158.00	0.00	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	732.00	570.15	0.00	570.30	1.284	151.39	837.542	F
B-A	43.00	34.35	0.00	35.49	1.212	9.71	1006.992	F
C-AB	653.73	640.03	0.00	608.95	1.074	26.03	186.862	F
C-A	1.27	1.27	0.00	-	-	-	-	-
A-B	115.00	115.00	0.00	-	-	-	-	-
A-C	158.00	158.00	0.00	-	-	-	-	-

Howes Lane- Bucknell Rd - Scenario 2, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Howes Lane- Bucknell Rd	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
Scenario 2, PM	Scenario 2	PM	2021 Baseline with background growth and Exemplar	FLAT	17:00	18:00	60	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	A,B,C	3574909690.83	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description	Arm Type
Bucknell Rd (South)	A	Bucknell Rd (South)		Major
Howes Lane	B	Howes Lane		Minor
Bucknell Rd (North)	C	Bucknell Rd (North)		Major

Major Arm Geometry

Name	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
Bucknell Rd (North)	6.50		0.00	✓	2.20	140.00	✓	1.00

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

Minor Arm Geometry

Name	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
Howes Lane	One lane plus flare				10.00	7.50	5.50	5.50	5.50		3.00	20	27

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	446.447	0.080	0.201	0.126	0.287
1	B-C	757.858	0.114	0.287	-	-
1	C-B	655.039	0.248	0.248	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (Veh/hr)	Flow Scaling Factor (%)
Bucknell Rd (South)	FLAT	✓	237.00	100.000
Howes Lane	FLAT	✓	587.00	100.000
Bucknell Rd (North)	FLAT	✓	1055.00	100.000

Turning Proportions

Turning Counts / Proportions (Veh/hr) - (untitled) (for whole period)

		To		
		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
From		0.000	67.000	170.000
	Bucknell Rd (South)	0.000	67.000	170.000
	Howes Lane	85.000	0.000	502.000
	Bucknell Rd (North)	283.000	772.000	0.000

Turning Proportions (Veh) - (untitled) (for whole period)

		To		
		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
From		0.00	0.28	0.72
	Bucknell Rd (South)	0.00	0.28	0.72
	Howes Lane	0.14	0.00	0.86
	Bucknell Rd (North)	0.27	0.73	0.00

Vehicle Mix

Average PCU Per Vehicle - (untitled) (for whole period)

		To		
		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
From		1.000	1.100	1.100
	Bucknell Rd (South)	1.000	1.100	1.100
	Howes Lane	1.100	1.000	1.100
	Bucknell Rd (North)	1.100	1.100	1.000

Heavy Vehicle Percentages - (untitled) (for whole period)

		To		
		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
From		0.0	10.0	10.0
	Bucknell Rd (South)	0.0	10.0	10.0
	Howes Lane	10.0	0.0	10.0
	Bucknell Rd (North)	10.0	10.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	9999999999.00	9999999999.00	359.01	F
B-A	9999999999.00	9999999999.00	62.36	F
C-AB	1.61	1623.63	324.36	F
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (17:00-17:15)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	502.00	421.56	0.00	442.53	1.134	20.11	999999999.000	F
B-A	85.00	63.28	0.00	74.93	1.134	5.43	999999999.000	F
C-AB	1055.00	722.93	0.00	654.67	1.612	83.02	289.232	F
C-A	0.00	0.00	0.00	-	-	-	-	-
A-B	67.00	67.00	0.00	-	-	-	-	-
A-C	170.00	170.00	0.00	-	-	-	-	-

Main results: (17:15-17:30)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	502.00	150.41	0.00	150.51	3.335	108.01	999999999.000	F
B-A	85.00	27.30	0.00	27.58	3.082	19.86	999999999.000	F
C-AB	1055.00	733.05	0.00	654.67	1.612	163.51	740.535	F
C-A	0.00	0.00	0.00	-	-	-	-	-
A-B	67.00	67.00	0.00	-	-	-	-	-
A-C	170.00	170.00	0.00	-	-	-	-	-

Main results: (17:30-17:45)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	502.00	0.00	0.00	0.00	999999999.000	233.51	999999999.000	F
B-A	85.00	0.00	0.00	0.00	999999999.000	41.11	999999999.000	F
C-AB	1055.00	733.26	0.00	654.67	1.612	243.94	1181.887	F
C-A	0.00	0.00	0.00	-	-	-	-	-
A-B	67.00	67.00	0.00	-	-	-	-	-
A-C	170.00	170.00	0.00	-	-	-	-	-

Main results: (17:45-18:00)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	502.00	0.00	0.00	0.00	999999999.000	359.01	999999999.000	F
B-A	85.00	0.00	0.00	0.00	999999999.000	62.36	999999999.000	F
C-AB	1055.00	733.31	0.00	654.67	1.612	324.36	1623.627	F
C-A	0.00	0.00	0.00	-	-	-	-	-
A-B	67.00	67.00	0.00	-	-	-	-	-
A-C	170.00	170.00	0.00	-	-	-	-	-

Howes Lane- Bucknell Rd - Scenario 3, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Howes Lane- Bucknell Rd	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
Scenario 3, AM	Scenario 3	AM	2021 Baseline with Exemplar and Application 1	FLAT	08:00	09:00	60	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	A,B,C	1060.16	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description	Arm Type
Bucknell Rd (South)	A	Bucknell Rd (South)		Major
Howes Lane	B	Howes Lane		Minor
Bucknell Rd (North)	C	Bucknell Rd (North)		Major

Major Arm Geometry

Name	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
Bucknell Rd (North)	6.50		0.00	✓	2.20	140.00	✓	1.00

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

Minor Arm Geometry

Name	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
Howes Lane	One lane plus flare				10.00	7.50	5.50	5.50	5.50		3.00	20	27

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	437.591	0.078	0.197	0.124	0.282
1	B-C	769.271	0.115	0.292	-	-
1	C-B	655.039	0.248	0.248	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (Veh/hr)	Flow Scaling Factor (%)
Bucknell Rd (South)	FLAT	✓	288.00	100.000
Howes Lane	FLAT	✓	807.00	100.000
Bucknell Rd (North)	FLAT	✓	752.00	100.000

Turning Proportions

Turning Counts / Proportions (Veh/hr) - (untitled) (for whole period)

		To		
		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
From	Bucknell Rd (South)	0.000	115.000	173.000
	Howes Lane	43.000	0.000	764.000
	Bucknell Rd (North)	146.000	606.000	0.000

Turning Proportions (Veh) - (untitled) (for whole period)

		To		
		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
From	Bucknell Rd (South)	0.00	0.40	0.60
	Howes Lane	0.05	0.00	0.95
	Bucknell Rd (North)	0.19	0.81	0.00

Vehicle Mix

Average PCU Per Vehicle - (untitled) (for whole period)

		To		
		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
From	Bucknell Rd (South)	1.000	1.100	1.100
	Howes Lane	1.100	1.000	1.100
	Bucknell Rd (North)	1.100	1.100	1.000

Heavy Vehicle Percentages - (untitled) (for whole period)

		To		
From		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
	Bucknell Rd (South)	0.0	10.0	10.0
	Howes Lane	10.0	0.0	10.0
	Bucknell Rd (North)	10.0	10.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	1.61	1462.99	227.41	F
B-A	1.55	1648.15	13.46	F
C-AB	1.25	617.28	108.85	F
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (08:00-08:15)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	764.00	580.60	0.00	593.27	1.288	45.85	155.206	F
B-A	43.00	26.78	0.00	33.39	1.288	4.05	363.593	F
C-AB	752.00	626.66	0.00	603.66	1.246	31.33	136.243	F
C-A	0.00	0.00	0.00	-	-	-	-	-
A-B	115.00	115.00	0.00	-	-	-	-	-
A-C	173.00	173.00	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	764.00	562.42	0.00	562.85	1.357	96.25	476.560	F
B-A	43.00	33.04	0.00	35.18	1.222	6.54	711.721	F
C-AB	752.00	647.40	0.00	603.66	1.246	57.49	312.019	F
C-A	0.00	0.00	0.00	-	-	-	-	-
A-B	115.00	115.00	0.00	-	-	-	-	-
A-C	173.00	173.00	0.00	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	764.00	529.98	0.00	530.09	1.441	154.75	914.347	F
B-A	43.00	30.95	0.00	31.92	1.347	9.56	1140.936	F
C-AB	752.00	649.00	0.00	603.66	1.246	83.24	465.140	F
C-A	0.00	0.00	0.00	-	-	-	-	-
A-B	115.00	115.00	0.00	-	-	-	-	-
A-C	173.00	173.00	0.00	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	764.00	473.36	0.00	473.40	1.614	227.41	1462.994	F
B-A	43.00	27.40	0.00	27.80	1.547	13.46	1648.146	F
C-AB	752.00	649.53	0.00	603.66	1.246	108.85	617.284	F
C-A	0.00	0.00	0.00	-	-	-	-	-
A-B	115.00	115.00	0.00	-	-	-	-	-
A-C	173.00	173.00	0.00	-	-	-	-	-

Howes Lane- Bucknell Rd - Scenario 3, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Howes Lane- Bucknell Rd	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
Scenario 3, PM	Scenario 3	PM	2021 Baseline with Exemplar and Application 1	FLAT	17:00	18:00	60	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	A,B,C	3757747702.03	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description	Arm Type
Bucknell Rd (South)	A	Bucknell Rd (South)		Major
Howes Lane	B	Howes Lane		Minor
Bucknell Rd (North)	C	Bucknell Rd (North)		Major

Major Arm Geometry

Name	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
Bucknell Rd (North)	6.50		0.00	✓	2.20	140.00	✓	1.00

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

Minor Arm Geometry

Name	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
Howes Lane	One lane plus flare				10.00	7.50	5.50	5.50	5.50		3.00	20	27

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	443.593	0.079	0.200	0.126	0.285
1	B-C	761.536	0.114	0.289	-	-
1	C-B	655.039	0.248	0.248	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (Veh/hr)	Flow Scaling Factor (%)
Bucknell Rd (South)	FLAT	✓	247.00	100.000
Howes Lane	FLAT	✓	667.00	100.000
Bucknell Rd (North)	FLAT	✓	1108.00	100.000

Turning Proportions

Turning Counts / Proportions (Veh/hr) - (untitled) (for whole period)

		To		
		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
From		0.000	67.000	180.000
	Bucknell Rd (South)	0.000	67.000	180.000
	Howes Lane	85.000	0.000	582.000
	Bucknell Rd (North)	286.000	822.000	0.000

Turning Proportions (Veh) - (untitled) (for whole period)

		To		
		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
From		0.00	0.27	0.73
	Bucknell Rd (South)	0.00	0.27	0.73
	Howes Lane	0.13	0.00	0.87
	Bucknell Rd (North)	0.26	0.74	0.00

Vehicle Mix

Average PCU Per Vehicle - (untitled) (for whole period)

		To		
		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
From		1.000	1.100	1.100
	Bucknell Rd (South)	1.000	1.100	1.100
	Howes Lane	1.100	1.000	1.100
	Bucknell Rd (North)	1.100	1.100	1.000

Heavy Vehicle Percentages - (untitled) (for whole period)

		To		
		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
From		0.0	10.0	10.0
	Bucknell Rd (South)	0.0	10.0	10.0
	Howes Lane	10.0	0.0	10.0
	Bucknell Rd (North)	10.0	10.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	9999999999.00	9999999999.00	478.17	F
B-A	9999999999.00	9999999999.00	71.29	F
C-AB	1.71	1960.08	390.14	F
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (17:00-17:15)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	582.00	415.31	0.00	425.28	1.369	41.67	999999999.000	F
B-A	85.00	54.84	0.00	62.11	1.369	7.54	999999999.000	F
C-AB	1108.00	711.68	0.00	646.58	1.714	99.08	334.198	F
C-A	0.00	0.00	0.00	-	-	-	-	-
A-B	67.00	67.00	0.00	-	-	-	-	-
A-C	180.00	180.00	0.00	-	-	-	-	-

Main results: (17:15-17:30)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	582.00	0.00	0.00	0.00	999999999.000	187.17	999999999.000	F
B-A	85.00	0.00	0.00	0.00	999999999.000	28.79	999999999.000	F
C-AB	1108.00	719.82	0.00	646.58	1.714	196.12	881.192	F
C-A	0.00	0.00	0.00	-	-	-	-	-
A-B	67.00	67.00	0.00	-	-	-	-	-
A-C	180.00	180.00	0.00	-	-	-	-	-

Main results: (17:30-17:45)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	582.00	0.00	0.00	0.00	999999999.000	332.67	999999999.000	F
B-A	85.00	0.00	0.00	0.00	999999999.000	50.04	999999999.000	F
C-AB	1108.00	719.95	0.00	646.58	1.714	293.14	1420.428	F
C-A	0.00	0.00	0.00	-	-	-	-	-
A-B	67.00	67.00	0.00	-	-	-	-	-
A-C	180.00	180.00	0.00	-	-	-	-	-

Main results: (17:45-18:00)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	582.00	0.00	0.00	0.00	999999999.000	478.17	999999999.000	F
B-A	85.00	0.00	0.00	0.00	999999999.000	71.29	999999999.000	F
C-AB	1108.00	719.98	0.00	646.58	1.714	390.14	1960.081	F
C-A	0.00	0.00	0.00	-	-	-	-	-
A-B	67.00	67.00	0.00	-	-	-	-	-
A-C	180.00	180.00	0.00	-	-	-	-	-

Howes Lane- Bucknell Rd - Scenario 4, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Howes Lane- Bucknell Rd	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
Scenario 4, AM	Scenario 4	AM	2021 baseline, Exemplar, HV 500	FLAT	08:00	09:00	60	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	A,B,C	719.03	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description	Arm Type
Bucknell Rd (South)	A	Bucknell Rd (South)		Major
Howes Lane	B	Howes Lane		Minor
Bucknell Rd (North)	C	Bucknell Rd (North)		Major

Major Arm Geometry

Name	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
Bucknell Rd (North)	6.50		0.00	✓	2.20	140.00	✓	1.00

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

Minor Arm Geometry

Name	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
Howes Lane	One lane plus flare				10.00	7.50	5.50	5.50	5.50		3.00	20	27

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	437.591	0.078	0.197	0.124	0.282
1	B-C	769.271	0.115	0.292	-	-
1	C-B	655.039	0.248	0.248	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (Veh/hr)	Flow Scaling Factor (%)
Bucknell Rd (South)	FLAT	✓	273.00	100.000
Howes Lane	FLAT	✓	812.00	100.000
Bucknell Rd (North)	FLAT	✓	673.00	100.000

Turning Proportions

Turning Counts / Proportions (Veh/hr) - (untitled) (for whole period)

		To		
		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
From	Bucknell Rd (South)	0.000	115.000	158.000
	Howes Lane	45.000	0.000	767.000
	Bucknell Rd (North)	130.000	543.000	0.000

Turning Proportions (Veh) - (untitled) (for whole period)

		To		
		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
From	Bucknell Rd (South)	0.00	0.42	0.58
	Howes Lane	0.06	0.00	0.94
	Bucknell Rd (North)	0.19	0.81	0.00

Vehicle Mix

Average PCU Per Vehicle - (untitled) (for whole period)

		To		
		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
From	Bucknell Rd (South)	1.000	1.100	1.100
	Howes Lane	1.100	1.000	1.100
	Bucknell Rd (North)	1.100	1.100	1.000

Heavy Vehicle Percentages - (untitled) (for whole period)

		To		
From		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
	Bucknell Rd (South)	0.0	10.0	10.0
	Howes Lane	10.0	0.0	10.0
	Bucknell Rd (North)	10.0	10.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	1.38	1094.59	193.87	F
B-A	1.32	1256.10	12.06	F
C-AB	1.11	255.10	38.77	F
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (08:00-08:15)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	767.00	587.78	0.00	600.90	1.276	44.80	149.599	F
B-A	45.00	28.41	0.00	35.26	1.276	4.15	349.030	F
C-AB	673.00	609.00	0.00	607.17	1.108	16.00	85.809	F
C-A	0.00	0.00	0.00	-	-	-	-	-
A-B	115.00	115.00	0.00	-	-	-	-	-
A-C	158.00	158.00	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	767.00	580.80	0.00	581.32	1.319	91.35	436.831	F
B-A	45.00	35.47	0.00	37.84	1.189	6.53	655.543	F
C-AB	673.00	638.38	0.00	607.17	1.108	24.66	165.690	F
C-A	0.00	0.00	0.00	-	-	-	-	-
A-B	115.00	115.00	0.00	-	-	-	-	-
A-C	158.00	158.00	0.00	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	767.00	568.90	0.00	569.06	1.348	140.88	752.995	F
B-A	45.00	34.51	0.00	35.74	1.259	9.15	946.844	F
C-AB	673.00	643.49	0.00	607.17	1.108	32.03	213.409	F
C-A	0.00	0.00	0.00	-	-	-	-	-
A-B	115.00	115.00	0.00	-	-	-	-	-
A-C	158.00	158.00	0.00	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	767.00	555.03	0.00	555.10	1.382	193.87	1094.588	F
B-A	45.00	33.36	0.00	34.05	1.322	12.06	1256.103	F
C-AB	673.00	646.04	0.00	607.17	1.108	38.77	255.103	F
C-A	0.00	0.00	0.00	-	-	-	-	-
A-B	115.00	115.00	0.00	-	-	-	-	-
A-C	158.00	158.00	0.00	-	-	-	-	-

Howes Lane- Bucknell Rd - Scenario 4, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Howes Lane- Bucknell Rd	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
Scenario 4, PM	Scenario 4	PM	2021 baseline, Exemplar, HV 500	FLAT	17:00	18:00	60	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	A,B,C	3596234248.85	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description	Arm Type
Bucknell Rd (South)	A	Bucknell Rd (South)		Major
Howes Lane	B	Howes Lane		Minor
Bucknell Rd (North)	C	Bucknell Rd (North)		Major

Major Arm Geometry

Name	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
Bucknell Rd (North)	6.50		0.00	✓	2.20	140.00	✓	1.00

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

Minor Arm Geometry

Name	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
Howes Lane	One lane plus flare				10.00	7.50	5.50	5.50	5.50		3.00	20	27

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	446.588	0.080	0.201	0.127	0.287
1	B-C	757.677	0.114	0.287	-	-
1	C-B	655.039	0.248	0.248	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (Veh/hr)	Flow Scaling Factor (%)
Bucknell Rd (South)	FLAT	✓	237.00	100.000
Howes Lane	FLAT	✓	611.00	100.000
Bucknell Rd (North)	FLAT	✓	1088.00	100.000

Turning Proportions

Turning Counts / Proportions (Veh/hr) - (untitled) (for whole period)

		To		
		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
From	Bucknell Rd (South)	0.000	67.000	170.000
	Howes Lane	89.000	0.000	522.000
	Bucknell Rd (North)	283.000	805.000	0.000

Turning Proportions (Veh) - (untitled) (for whole period)

		To		
		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
From	Bucknell Rd (South)	0.00	0.28	0.72
	Howes Lane	0.15	0.00	0.85
	Bucknell Rd (North)	0.26	0.74	0.00

Vehicle Mix

Average PCU Per Vehicle - (untitled) (for whole period)

		To		
		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
From	Bucknell Rd (South)	1.000	1.100	1.100
	Howes Lane	1.100	1.000	1.100
	Bucknell Rd (North)	1.100	1.100	1.000

Heavy Vehicle Percentages - (untitled) (for whole period)

		To		
		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
From	Bucknell Rd (South)	0.0	10.0	10.0
	Howes Lane	10.0	0.0	10.0
	Bucknell Rd (North)	10.0	10.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	9999999999.00	9999999999.00	409.86	F
B-A	9999999999.00	9999999999.00	71.48	F
C-AB	1.67	1828.50	365.04	F
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (17:00-17:15)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	522.00	403.70	0.00	417.35	1.251	29.58	999999999.000	F
B-A	89.00	61.98	0.00	71.16	1.251	6.75	999999999.000	F
C-AB	1088.00	716.26	0.00	650.33	1.673	92.93	316.261	F
C-A	0.00	0.00	0.00	-	-	-	-	-
A-B	67.00	67.00	0.00	-	-	-	-	-
A-C	170.00	170.00	0.00	-	-	-	-	-

Main results: (17:15-17:30)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	522.00	44.85	0.00	44.86	11.636	148.86	999999999.000	F
B-A	89.00	8.09	0.00	8.13	10.949	26.98	999999999.000	F
C-AB	1088.00	725.07	0.00	650.33	1.673	183.67	825.853	F
C-A	0.00	0.00	0.00	-	-	-	-	-
A-B	67.00	67.00	0.00	-	-	-	-	-
A-C	170.00	170.00	0.00	-	-	-	-	-

Main results: (17:30-17:45)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	522.00	0.00	0.00	0.00	999999999.000	279.36	999999999.000	F
B-A	89.00	0.00	0.00	0.00	999999999.000	49.23	999999999.000	F
C-AB	1088.00	725.23	0.00	650.33	1.673	274.36	1326.970	F
C-A	0.00	0.00	0.00	-	-	-	-	-
A-B	67.00	67.00	0.00	-	-	-	-	-
A-C	170.00	170.00	0.00	-	-	-	-	-

Main results: (17:45-18:00)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	522.00	0.00	0.00	0.00	999999999.000	409.86	999999999.000	F
B-A	89.00	0.00	0.00	0.00	999999999.000	71.48	999999999.000	F
C-AB	1088.00	725.27	0.00	650.33	1.673	365.04	1828.498	F
C-A	0.00	0.00	0.00	-	-	-	-	-
A-B	67.00	67.00	0.00	-	-	-	-	-
A-C	170.00	170.00	0.00	-	-	-	-	-

Howes Lane- Bucknell Rd - Scenario 5, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Howes Lane- Bucknell Rd	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
Scenario 5, AM	Scenario 5	AM	2021 baseline, Exemplar, HV 1000	FLAT	08:00	09:00	60	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	A,B,C	801.22	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description	Arm Type
Bucknell Rd (South)	A	Bucknell Rd (South)		Major
Howes Lane	B	Howes Lane		Minor
Bucknell Rd (North)	C	Bucknell Rd (North)		Major

Major Arm Geometry

Name	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
Bucknell Rd (North)	6.50		0.00	✓	2.20	140.00	✓	1.00

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

Minor Arm Geometry

Name	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
Howes Lane	One lane plus flare				10.00	7.50	5.50	5.50	5.50		3.00	20	27

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	437.591	0.078	0.197	0.124	0.282
1	B-C	769.271	0.115	0.292	-	-
1	C-B	655.039	0.248	0.248	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (Veh/hr)	Flow Scaling Factor (%)
Bucknell Rd (South)	FLAT	✓	273.00	100.000
Howes Lane	FLAT	✓	827.00	100.000
Bucknell Rd (North)	FLAT	✓	681.00	100.000

Turning Proportions

Turning Counts / Proportions (Veh/hr) - (untitled) (for whole period)

		To		
		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
From	Bucknell Rd (South)	0.000	115.000	158.000
	Howes Lane	46.000	0.000	781.000
	Bucknell Rd (North)	130.000	551.000	0.000

Turning Proportions (Veh) - (untitled) (for whole period)

		To		
		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
From	Bucknell Rd (South)	0.00	0.42	0.58
	Howes Lane	0.06	0.00	0.94
	Bucknell Rd (North)	0.19	0.81	0.00

Vehicle Mix

Average PCU Per Vehicle - (untitled) (for whole period)

		To		
		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
From	Bucknell Rd (South)	1.000	1.100	1.100
	Howes Lane	1.100	1.000	1.100
	Bucknell Rd (North)	1.100	1.100	1.000

Heavy Vehicle Percentages - (untitled) (for whole period)

		To		
From		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
	Bucknell Rd (South)	0.0	10.0	10.0
	Howes Lane	10.0	0.0	10.0
	Bucknell Rd (North)	10.0	10.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	1.43	1212.88	212.11	F
B-A	1.37	1371.87	13.15	F
C-AB	1.12	290.55	45.62	F
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (08:00-08:15)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	781.00	587.40	0.00	599.54	1.303	48.40	160.518	F
B-A	46.00	28.69	0.00	35.31	1.303	4.33	357.943	F
C-AB	681.00	610.98	0.00	606.10	1.124	17.51	90.942	F
C-A	0.00	0.00	0.00	-	-	-	-	-
A-B	115.00	115.00	0.00	-	-	-	-	-
A-C	158.00	158.00	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	781.00	577.91	0.00	578.33	1.350	99.17	475.330	F
B-A	46.00	35.46	0.00	37.57	1.224	6.96	691.779	F
C-AB	681.00	639.66	0.00	606.10	1.124	27.84	180.342	F
C-A	0.00	0.00	0.00	-	-	-	-	-
A-B	115.00	115.00	0.00	-	-	-	-	-
A-C	158.00	158.00	0.00	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	781.00	563.65	0.00	563.78	1.385	153.51	828.819	F
B-A	46.00	34.31	0.00	35.35	1.301	9.89	1021.003	F
C-AB	681.00	644.33	0.00	606.10	1.124	37.01	238.136	F
C-A	0.00	0.00	0.00	-	-	-	-	-
A-B	115.00	115.00	0.00	-	-	-	-	-
A-C	158.00	158.00	0.00	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	781.00	546.60	0.00	546.65	1.429	212.11	1212.880	F
B-A	46.00	32.96	0.00	33.52	1.372	13.15	1371.871	F
C-AB	681.00	646.56	0.00	606.10	1.124	45.62	290.554	F
C-A	0.00	0.00	0.00	-	-	-	-	-
A-B	115.00	115.00	0.00	-	-	-	-	-
A-C	158.00	158.00	0.00	-	-	-	-	-

Howes Lane- Bucknell Rd - Scenario 5, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Howes Lane- Bucknell Rd	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
Scenario 5, PM	Scenario 5	PM	2021 baseline, Exemplar, HV 1000	FLAT	17:00	18:00	60	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	A,B,C	3603709227.97	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description	Arm Type
Bucknell Rd (South)	A	Bucknell Rd (South)		Major
Howes Lane	B	Howes Lane		Minor
Bucknell Rd (North)	C	Bucknell Rd (North)		Major

Major Arm Geometry

Name	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
Bucknell Rd (North)	6.50		0.00	✓	2.20	140.00	✓	1.00

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

Minor Arm Geometry

Name	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
Howes Lane	One lane plus flare				10.00	7.50	5.50	5.50	5.50		3.00	20	27

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	446.693	0.080	0.201	0.127	0.287
1	B-C	757.541	0.114	0.287	-	-
1	C-B	655.039	0.248	0.248	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (Veh/hr)	Flow Scaling Factor (%)
Bucknell Rd (South)	FLAT	✓	237.00	100.000
Howes Lane	FLAT	✓	622.00	100.000
Bucknell Rd (North)	FLAT	✓	1104.00	100.000

Turning Proportions

Turning Counts / Proportions (Veh/hr) - (untitled) (for whole period)

		To		
		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
From		0.000	67.000	170.000
	Bucknell Rd (South)	0.000	67.000	170.000
	Howes Lane	91.000	0.000	531.000
	Bucknell Rd (North)	283.000	821.000	0.000

Turning Proportions (Veh) - (untitled) (for whole period)

		To		
		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
From		0.00	0.28	0.72
	Bucknell Rd (South)	0.00	0.28	0.72
	Howes Lane	0.15	0.00	0.85
	Bucknell Rd (North)	0.26	0.74	0.00

Vehicle Mix

Average PCU Per Vehicle - (untitled) (for whole period)

		To		
		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
From		1.000	1.100	1.100
	Bucknell Rd (South)	1.000	1.100	1.100
	Howes Lane	1.100	1.000	1.100
	Bucknell Rd (North)	1.100	1.100	1.000

Heavy Vehicle Percentages - (untitled) (for whole period)

		To		
		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
From		0.0	10.0	10.0
	Bucknell Rd (South)	0.0	10.0	10.0
	Howes Lane	10.0	0.0	10.0
	Bucknell Rd (North)	10.0	10.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	9999999999.00	9999999999.00	432.91	F
B-A	9999999999.00	9999999999.00	75.74	F
C-AB	1.70	1927.63	384.56	F
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (17:00-17:15)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	531.00	392.36	0.00	403.68	1.315	34.66	999999999.000	F
B-A	91.00	61.03	0.00	69.18	1.315	7.49	999999999.000	F
C-AB	1104.00	713.15	0.00	648.34	1.703	97.71	329.402	F
C-A	0.00	0.00	0.00	-	-	-	-	-
A-B	67.00	67.00	0.00	-	-	-	-	-
A-C	170.00	170.00	0.00	-	-	-	-	-

Main results: (17:15-17:30)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	531.00	0.00	0.00	0.00	999999999.000	167.41	999999999.000	F
B-A	91.00	0.00	0.00	0.00	999999999.000	30.24	999999999.000	F
C-AB	1104.00	721.43	0.00	648.34	1.703	193.35	867.258	F
C-A	0.00	0.00	0.00	-	-	-	-	-
A-B	67.00	67.00	0.00	-	-	-	-	-
A-C	170.00	170.00	0.00	-	-	-	-	-

Main results: (17:30-17:45)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	531.00	0.00	0.00	0.00	999999999.000	300.16	999999999.000	F
B-A	91.00	0.00	0.00	0.00	999999999.000	52.99	999999999.000	F
C-AB	1104.00	721.56	0.00	648.34	1.703	288.96	1397.231	F
C-A	0.00	0.00	0.00	-	-	-	-	-
A-B	67.00	67.00	0.00	-	-	-	-	-
A-C	170.00	170.00	0.00	-	-	-	-	-

Main results: (17:45-18:00)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	531.00	0.00	0.00	0.00	999999999.000	432.91	999999999.000	F
B-A	91.00	0.00	0.00	0.00	999999999.000	75.74	999999999.000	F
C-AB	1104.00	721.60	0.00	648.34	1.703	384.56	1927.627	F
C-A	0.00	0.00	0.00	-	-	-	-	-
A-B	67.00	67.00	0.00	-	-	-	-	-
A-C	170.00	170.00	0.00	-	-	-	-	-

Howes Lane- Bucknell Rd - Scenario 6, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Howes Lane- Bucknell Rd	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
Scenario 6, AM	Scenario 6	AM	2021 baseline, Exemplar, HV 1700	FLAT	08:00	09:00	60	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	A,B,C	998.65	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description	Arm Type
Bucknell Rd (South)	A	Bucknell Rd (South)		Major
Howes Lane	B	Howes Lane		Minor
Bucknell Rd (North)	C	Bucknell Rd (North)		Major

Major Arm Geometry

Name	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
Bucknell Rd (North)	6.50		0.00	✓	2.20	140.00	✓	1.00

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

Minor Arm Geometry

Name	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
Howes Lane	One lane plus flare				10.00	7.50	5.50	5.50	5.50		3.00	20	27

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	437.591	0.078	0.197	0.124	0.282
1	B-C	769.271	0.115	0.292	-	-
1	C-B	655.039	0.248	0.248	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (Veh/hr)	Flow Scaling Factor (%)
Bucknell Rd (South)	FLAT	✓	273.00	100.000
Howes Lane	FLAT	✓	860.00	100.000
Bucknell Rd (North)	FLAT	✓	697.00	100.000

Turning Proportions

Turning Counts / Proportions (Veh/hr) - (untitled) (for whole period)

		To		
		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
From	Bucknell Rd (South)	0.000	115.000	158.000
	Howes Lane	48.000	0.000	812.000
	Bucknell Rd (North)	130.000	567.000	0.000

Turning Proportions (Veh) - (untitled) (for whole period)

		To		
		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
From	Bucknell Rd (South)	0.00	0.42	0.58
	Howes Lane	0.06	0.00	0.94
	Bucknell Rd (North)	0.19	0.81	0.00

Vehicle Mix

Average PCU Per Vehicle - (untitled) (for whole period)

		To		
		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
From	Bucknell Rd (South)	1.000	1.100	1.100
	Howes Lane	1.100	1.000	1.100
	Bucknell Rd (North)	1.100	1.100	1.000

Heavy Vehicle Percentages - (untitled) (for whole period)

		To		
From		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
	Bucknell Rd (South)	0.0	10.0	10.0
	Howes Lane	10.0	0.0	10.0
	Bucknell Rd (North)	10.0	10.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	1.55	1500.35	253.46	F
B-A	1.50	1656.85	15.58	F
C-AB	1.15	368.85	60.85	F
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (08:00-08:15)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	812.00	586.33	0.00	596.73	1.361	56.42	185.289	F
B-A	48.00	29.11	0.00	35.27	1.361	4.72	379.030	F
C-AB	697.00	613.93	0.00	604.04	1.154	20.77	101.607	F
C-A	0.00	0.00	0.00	-	-	-	-	-
A-B	115.00	115.00	0.00	-	-	-	-	-
A-C	158.00	158.00	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	812.00	571.43	0.00	571.70	1.420	116.56	563.830	F
B-A	48.00	35.20	0.00	36.85	1.302	7.92	776.825	F
C-AB	697.00	640.62	0.00	604.04	1.154	34.86	211.651	F
C-A	0.00	0.00	0.00	-	-	-	-	-
A-B	115.00	115.00	0.00	-	-	-	-	-
A-C	158.00	158.00	0.00	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	812.00	551.16	0.00	551.24	1.473	181.77	1010.241	F
B-A	48.00	33.62	0.00	34.36	1.397	11.52	1171.287	F
C-AB	697.00	644.25	0.00	604.04	1.154	48.05	292.164	F
C-A	0.00	0.00	0.00	-	-	-	-	-
A-B	115.00	115.00	0.00	-	-	-	-	-
A-C	158.00	158.00	0.00	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	812.00	525.23	0.00	525.26	1.546	253.46	1500.349	F
B-A	48.00	31.74	0.00	32.10	1.495	15.58	1656.846	F
C-AB	697.00	645.80	0.00	604.04	1.154	60.85	368.848	F
C-A	0.00	0.00	0.00	-	-	-	-	-
A-B	115.00	115.00	0.00	-	-	-	-	-
A-C	158.00	158.00	0.00	-	-	-	-	-

Howes Lane- Bucknell Rd - Scenario 6, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Howes Lane- Bucknell Rd	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
Scenario 6, PM	Scenario 6	PM	2021 baseline, Exemplar, HV 1700	FLAT	17:00	18:00	60	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	A,B,C	3621562276.18	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description	Arm Type
Bucknell Rd (South)	A	Bucknell Rd (South)		Major
Howes Lane	B	Howes Lane		Minor
Bucknell Rd (North)	C	Bucknell Rd (North)		Major

Major Arm Geometry

Name	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
Bucknell Rd (North)	6.50		0.00	✓	2.20	140.00	✓	1.00

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

Minor Arm Geometry

Name	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
Howes Lane	One lane plus flare				10.00	7.50	5.50	5.50	5.50		3.00	20	27

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	446.600	0.080	0.201	0.127	0.287
1	B-C	757.661	0.114	0.287	-	-
1	C-B	655.039	0.248	0.248	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (Veh/hr)	Flow Scaling Factor (%)
Bucknell Rd (South)	FLAT	✓	237.00	100.000
Howes Lane	FLAT	✓	645.00	100.000
Bucknell Rd (North)	FLAT	✓	1136.00	100.000

Turning Proportions

Turning Counts / Proportions (Veh/hr) - (untitled) (for whole period)

		To		
		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
From	Bucknell Rd (South)	0.000	67.000	170.000
	Howes Lane	94.000	0.000	551.000
	Bucknell Rd (North)	283.000	853.000	0.000

Turning Proportions (Veh) - (untitled) (for whole period)

		To		
		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
From	Bucknell Rd (South)	0.00	0.28	0.72
	Howes Lane	0.15	0.00	0.85
	Bucknell Rd (North)	0.25	0.75	0.00

Vehicle Mix

Average PCU Per Vehicle - (untitled) (for whole period)

		To		
		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
From	Bucknell Rd (South)	1.000	1.100	1.100
	Howes Lane	1.100	1.000	1.100
	Bucknell Rd (North)	1.100	1.100	1.000

Heavy Vehicle Percentages - (untitled) (for whole period)

		To		
		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
From	Bucknell Rd (South)	0.0	10.0	10.0
	Howes Lane	10.0	0.0	10.0
	Bucknell Rd (North)	10.0	10.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	9999999999.00	9999999999.00	457.10	F
B-A	9999999999.00	9999999999.00	79.29	F
C-AB	1.76	2125.46	423.24	F
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (17:00-17:15)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	551.00	375.59	0.00	384.15	1.434	43.85	999999999.000	F
B-A	94.00	58.84	0.00	65.54	1.434	8.79	999999999.000	F
C-AB	1136.00	707.18	0.00	644.56	1.762	107.21	355.747	F
C-A	0.00	0.00	0.00	-	-	-	-	-
A-B	67.00	67.00	0.00	-	-	-	-	-
A-C	170.00	170.00	0.00	-	-	-	-	-

Main results: (17:15-17:30)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	551.00	0.00	0.00	0.00	999999999.000	181.60	999999999.000	F
B-A	94.00	0.00	0.00	0.00	999999999.000	32.29	999999999.000	F
C-AB	1136.00	714.54	0.00	644.56	1.762	212.57	950.091	F
C-A	0.00	0.00	0.00	-	-	-	-	-
A-B	67.00	67.00	0.00	-	-	-	-	-
A-C	170.00	170.00	0.00	-	-	-	-	-

Main results: (17:30-17:45)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	551.00	0.00	0.00	0.00	999999999.000	319.35	999999999.000	F
B-A	94.00	0.00	0.00	0.00	999999999.000	55.79	999999999.000	F
C-AB	1136.00	714.64	0.00	644.56	1.762	317.91	1537.566	F
C-A	0.00	0.00	0.00	-	-	-	-	-
A-B	67.00	67.00	0.00	-	-	-	-	-
A-C	170.00	170.00	0.00	-	-	-	-	-

Main results: (17:45-18:00)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	551.00	0.00	0.00	0.00	999999999.000	457.10	999999999.000	F
B-A	94.00	0.00	0.00	0.00	999999999.000	79.29	999999999.000	F
C-AB	1136.00	714.67	0.00	644.56	1.762	423.24	2125.457	F
C-A	0.00	0.00	0.00	-	-	-	-	-
A-B	67.00	67.00	0.00	-	-	-	-	-
A-C	170.00	170.00	0.00	-	-	-	-	-

Howes Lane- Bucknell Rd - Scenario 7, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Howes Lane- Bucknell Rd	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
Scenario 7, AM	Scenario 7	AM	2021 baseline, Exemplar, Application 1, HV 500	FLAT	08:00	09:00	60	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	A,B,C	1304.64	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description	Arm Type
Bucknell Rd (South)	A	Bucknell Rd (South)		Major
Howes Lane	B	Howes Lane		Minor
Bucknell Rd (North)	C	Bucknell Rd (North)		Major

Major Arm Geometry

Name	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
Bucknell Rd (North)	6.50		0.00	✓	2.20	140.00	✓	1.00

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

Minor Arm Geometry

Name	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
Howes Lane	One lane plus flare				10.00	7.50	5.50	5.50	5.50		3.00	20	27

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	437.591	0.078	0.197	0.124	0.282
1	B-C	769.271	0.115	0.292	-	-
1	C-B	655.039	0.248	0.248	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (Veh/hr)	Flow Scaling Factor (%)
Bucknell Rd (South)	FLAT	✓	288.00	100.000
Howes Lane	FLAT	✓	843.00	100.000
Bucknell Rd (North)	FLAT	✓	771.00	100.000

Turning Proportions

Turning Counts / Proportions (Veh/hr) - (untitled) (for whole period)

		To		
		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
From	Bucknell Rd (South)	0.000	115.000	173.000
	Howes Lane	45.000	0.000	798.000
	Bucknell Rd (North)	146.000	625.000	0.000

Turning Proportions (Veh) - (untitled) (for whole period)

		To		
		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
From	Bucknell Rd (South)	0.00	0.40	0.60
	Howes Lane	0.05	0.00	0.95
	Bucknell Rd (North)	0.19	0.81	0.00

Vehicle Mix

Average PCU Per Vehicle - (untitled) (for whole period)

		To		
		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
From	Bucknell Rd (South)	1.000	1.100	1.100
	Howes Lane	1.100	1.000	1.100
	Bucknell Rd (North)	1.100	1.100	1.000

Heavy Vehicle Percentages - (untitled) (for whole period)

		To		
From		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
	Bucknell Rd (South)	0.0	10.0	10.0
	Howes Lane	10.0	0.0	10.0
	Bucknell Rd (North)	10.0	10.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	1.73	1820.37	274.51	F
B-A	1.67	2000.33	16.09	F
C-AB	1.28	730.24	130.43	F
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (08:00-08:15)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	798.00	579.21	0.00	589.80	1.353	54.70	183.377	F
B-A	45.00	27.17	0.00	33.26	1.353	4.46	388.568	F
C-AB	771.00	626.18	0.00	601.40	1.282	36.21	150.756	F
C-A	0.00	0.00	0.00	-	-	-	-	-
A-B	115.00	115.00	0.00	-	-	-	-	-
A-C	173.00	173.00	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	798.00	551.68	0.00	551.94	1.446	116.28	592.225	F
B-A	45.00	32.50	0.00	34.11	1.319	7.58	830.842	F
C-AB	771.00	644.50	0.00	601.40	1.282	67.83	357.151	F
C-A	0.00	0.00	0.00	-	-	-	-	-
A-B	115.00	115.00	0.00	-	-	-	-	-
A-C	173.00	173.00	0.00	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	798.00	500.73	0.00	500.79	1.593	190.60	1168.101	F
B-A	45.00	29.26	0.00	29.87	1.507	11.52	1345.896	F
C-AB	771.00	645.62	0.00	601.40	1.282	99.18	543.866	F
C-A	0.00	0.00	0.00	-	-	-	-	-
A-B	115.00	115.00	0.00	-	-	-	-	-
A-C	173.00	173.00	0.00	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	798.00	462.34	0.00	462.36	1.726	274.51	1820.374	F
B-A	45.00	26.72	0.00	26.99	1.668	16.09	2000.330	F
C-AB	771.00	645.97	0.00	601.40	1.282	130.43	730.240	F
C-A	0.00	0.00	0.00	-	-	-	-	-
A-B	115.00	115.00	0.00	-	-	-	-	-
A-C	173.00	173.00	0.00	-	-	-	-	-

Howes Lane- Bucknell Rd - Scenario 7, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Howes Lane- Bucknell Rd	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
Scenario 7, PM	Scenario 7	PM	2021 baseline, Exemplar, Application 1, HV 500	FLAT	17:00	18:00	60	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	A,B,C	3771835409.19	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description	Arm Type
Bucknell Rd (South)	A	Bucknell Rd (South)		Major
Howes Lane	B	Howes Lane		Minor
Bucknell Rd (North)	C	Bucknell Rd (North)		Major

Major Arm Geometry

Name	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
Bucknell Rd (North)	6.50		0.00	✓	2.20	140.00	✓	1.00

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

Minor Arm Geometry

Name	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
Howes Lane	One lane plus flare				10.00	7.50	5.50	5.50	5.50		3.00	20	27

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	443.817	0.079	0.200	0.126	0.286
1	B-C	761.248	0.114	0.289	-	-
1	C-B	655.039	0.248	0.248	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (Veh/hr)	Flow Scaling Factor (%)
Bucknell Rd (South)	FLAT	✓	247.00	100.000
Howes Lane	FLAT	✓	691.00	100.000
Bucknell Rd (North)	FLAT	✓	1141.00	100.000

Turning Proportions

Turning Counts / Proportions (Veh/hr) - (untitled) (for whole period)

		To		
		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
From	Bucknell Rd (South)	0.000	67.000	180.000
	Howes Lane	89.000	0.000	602.000
	Bucknell Rd (North)	286.000	855.000	0.000

Turning Proportions (Veh) - (untitled) (for whole period)

		To		
		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
From	Bucknell Rd (South)	0.00	0.27	0.73
	Howes Lane	0.13	0.00	0.87
	Bucknell Rd (North)	0.25	0.75	0.00

Vehicle Mix

Average PCU Per Vehicle - (untitled) (for whole period)

		To		
		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
From	Bucknell Rd (South)	1.000	1.100	1.100
	Howes Lane	1.100	1.000	1.100
	Bucknell Rd (North)	1.100	1.100	1.000

Heavy Vehicle Percentages - (untitled) (for whole period)

		To		
		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
From	Bucknell Rd (South)	0.0	10.0	10.0
	Howes Lane	10.0	0.0	10.0
	Bucknell Rd (North)	10.0	10.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	9999999999.00	9999999999.00	503.60	F
B-A	9999999999.00	9999999999.00	75.67	F
C-AB	1.78	2165.06	430.05	F
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (17:00-17:15)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	602.00	393.61	0.00	401.17	1.501	52.10	999999999.000	F
B-A	89.00	53.33	0.00	59.31	1.501	8.92	999999999.000	F
C-AB	1141.00	705.48	0.00	642.67	1.775	108.88	361.508	F
C-A	0.00	0.00	0.00	-	-	-	-	-
A-B	67.00	67.00	0.00	-	-	-	-	-
A-C	180.00	180.00	0.00	-	-	-	-	-

Main results: (17:15-17:30)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	602.00	0.00	0.00	0.00	999999999.000	202.60	999999999.000	F
B-A	89.00	0.00	0.00	0.00	999999999.000	31.17	999999999.000	F
C-AB	1141.00	712.70	0.00	642.67	1.775	215.96	967.044	F
C-A	0.00	0.00	0.00	-	-	-	-	-
A-B	67.00	67.00	0.00	-	-	-	-	-
A-C	180.00	180.00	0.00	-	-	-	-	-

Main results: (17:30-17:45)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	602.00	0.00	0.00	0.00	999999999.000	353.10	999999999.000	F
B-A	89.00	0.00	0.00	0.00	999999999.000	53.42	999999999.000	F
C-AB	1141.00	712.79	0.00	642.67	1.775	323.01	1565.845	F
C-A	0.00	0.00	0.00	-	-	-	-	-
A-B	67.00	67.00	0.00	-	-	-	-	-
A-C	180.00	180.00	0.00	-	-	-	-	-

Main results: (17:45-18:00)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	602.00	0.00	0.00	0.00	999999999.000	503.60	999999999.000	F
B-A	89.00	0.00	0.00	0.00	999999999.000	75.67	999999999.000	F
C-AB	1141.00	712.82	0.00	642.67	1.775	430.05	2165.061	F
C-A	0.00	0.00	0.00	-	-	-	-	-
A-B	67.00	67.00	0.00	-	-	-	-	-
A-C	180.00	180.00	0.00	-	-	-	-	-

Howes Lane- Bucknell Rd - Scenario 8, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Howes Lane- Bucknell Rd	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
Scenario 8, AM	Scenario 8	AM	2021 baseline, Exemplar, Application 1, HV 1000	FLAT	08:00	09:00	60	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	A,B,C	1431.42	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description	Arm Type
Bucknell Rd (South)	A	Bucknell Rd (South)		Major
Howes Lane	B	Howes Lane		Minor
Bucknell Rd (North)	C	Bucknell Rd (North)		Major

Major Arm Geometry

Name	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
Bucknell Rd (North)	6.50		0.00	✓	2.20	140.00	✓	1.00

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

Minor Arm Geometry

Name	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
Howes Lane	One lane plus flare				10.00	7.50	5.50	5.50	5.50		3.00	20	27

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	437.591	0.078	0.197	0.124	0.282
1	B-C	769.271	0.115	0.292	-	-
1	C-B	655.039	0.248	0.248	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (Veh/hr)	Flow Scaling Factor (%)
Bucknell Rd (South)	FLAT	✓	288.00	100.000
Howes Lane	FLAT	✓	859.00	100.000
Bucknell Rd (North)	FLAT	✓	779.00	100.000

Turning Proportions

Turning Counts / Proportions (Veh/hr) - (untitled) (for whole period)

		To		
		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
From	Bucknell Rd (South)	0.000	115.000	173.000
	Howes Lane	46.000	0.000	813.000
	Bucknell Rd (North)	146.000	633.000	0.000

Turning Proportions (Veh) - (untitled) (for whole period)

		To		
		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
From	Bucknell Rd (South)	0.00	0.40	0.60
	Howes Lane	0.05	0.00	0.95
	Bucknell Rd (North)	0.19	0.81	0.00

Vehicle Mix

Average PCU Per Vehicle - (untitled) (for whole period)

		To		
		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
From	Bucknell Rd (South)	1.000	1.100	1.100
	Howes Lane	1.100	1.000	1.100
	Bucknell Rd (North)	1.100	1.100	1.000

Heavy Vehicle Percentages - (untitled) (for whole period)

		To		
From		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
	Bucknell Rd (South)	0.0	10.0	10.0
	Howes Lane	10.0	0.0	10.0
	Bucknell Rd (North)	10.0	10.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	1.79	2014.07	297.45	F
B-A	1.74	2193.25	17.42	F
C-AB	1.30	778.35	139.57	F
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (08:00-08:15)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	813.00	578.24	0.00	588.10	1.382	58.69	196.526	F
B-A	46.00	27.39	0.00	33.27	1.382	4.65	399.982	F
C-AB	779.00	625.82	0.00	600.49	1.297	38.30	156.955	F
C-A	0.00	0.00	0.00	-	-	-	-	-
A-B	115.00	115.00	0.00	-	-	-	-	-
A-C	173.00	173.00	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	813.00	546.17	0.00	546.38	1.488	125.40	651.122	F
B-A	46.00	32.28	0.00	33.69	1.365	8.08	892.860	F
C-AB	779.00	643.23	0.00	600.49	1.297	72.24	376.520	F
C-A	0.00	0.00	0.00	-	-	-	-	-
A-B	115.00	115.00	0.00	-	-	-	-	-
A-C	173.00	173.00	0.00	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	813.00	484.30	0.00	484.35	1.679	207.57	1271.067	F
B-A	46.00	28.37	0.00	28.86	1.594	12.49	1486.316	F
C-AB	779.00	644.20	0.00	600.49	1.297	105.94	577.512	F
C-A	0.00	0.00	0.00	-	-	-	-	-
A-B	115.00	115.00	0.00	-	-	-	-	-
A-C	173.00	173.00	0.00	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	813.00	453.51	0.00	453.52	1.793	297.45	2014.066	F
B-A	46.00	26.27	0.00	26.48	1.737	17.42	2193.246	F
C-AB	779.00	644.49	0.00	600.49	1.297	139.57	778.348	F
C-A	0.00	0.00	0.00	-	-	-	-	-
A-B	115.00	115.00	0.00	-	-	-	-	-
A-C	173.00	173.00	0.00	-	-	-	-	-

Howes Lane- Bucknell Rd - Scenario 8, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Howes Lane- Bucknell Rd	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
Scenario 8, PM	Scenario 8	PM	2021 baseline, Exemplar, Application 1, HV 1000	FLAT	17:00	18:00	60	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	A,B,C	3778257593.96	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description	Arm Type
Bucknell Rd (South)	A	Bucknell Rd (South)		Major
Howes Lane	B	Howes Lane		Minor
Bucknell Rd (North)	C	Bucknell Rd (North)		Major

Major Arm Geometry

Name	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
Bucknell Rd (North)	6.50		0.00	✓	2.20	140.00	✓	1.00

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

Minor Arm Geometry

Name	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
Howes Lane	One lane plus flare				10.00	7.50	5.50	5.50	5.50		3.00	20	27

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	443.954	0.079	0.200	0.126	0.286
1	B-C	761.072	0.114	0.288	-	-
1	C-B	655.039	0.248	0.248	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (Veh/hr)	Flow Scaling Factor (%)
Bucknell Rd (South)	FLAT	✓	247.00	100.000
Howes Lane	FLAT	✓	702.00	100.000
Bucknell Rd (North)	FLAT	✓	1156.00	100.000

Turning Proportions

Turning Counts / Proportions (Veh/hr) - (untitled) (for whole period)

		To		
		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
From	Bucknell Rd (South)	0.000	67.000	180.000
	Howes Lane	91.000	0.000	611.000
	Bucknell Rd (North)	286.000	870.000	0.000

Turning Proportions (Veh) - (untitled) (for whole period)

		To		
		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
From	Bucknell Rd (South)	0.00	0.27	0.73
	Howes Lane	0.13	0.00	0.87
	Bucknell Rd (North)	0.25	0.75	0.00

Vehicle Mix

Average PCU Per Vehicle - (untitled) (for whole period)

		To		
		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
From	Bucknell Rd (South)	1.000	1.100	1.100
	Howes Lane	1.100	1.000	1.100
	Bucknell Rd (North)	1.100	1.100	1.000

Heavy Vehicle Percentages - (untitled) (for whole period)

		To		
		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
From	Bucknell Rd (South)	0.0	10.0	10.0
	Howes Lane	10.0	0.0	10.0
	Bucknell Rd (North)	10.0	10.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	9999999999.00	9999999999.00	514.89	F
B-A	9999999999.00	9999999999.00	77.81	F
C-AB	1.80	2258.04	448.03	F
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (17:00-17:15)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	611.00	384.44	0.00	391.23	1.562	56.64	999999999.000	F
B-A	91.00	52.75	0.00	58.27	1.562	9.56	999999999.000	F
C-AB	1156.00	702.78	0.00	640.98	1.803	113.31	373.943	F
C-A	0.00	0.00	0.00	-	-	-	-	-
A-B	67.00	67.00	0.00	-	-	-	-	-
A-C	180.00	180.00	0.00	-	-	-	-	-

Main results: (17:15-17:30)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	611.00	0.00	0.00	0.00	999999999.000	209.39	999999999.000	F
B-A	91.00	0.00	0.00	0.00	999999999.000	32.31	999999999.000	F
C-AB	1156.00	709.63	0.00	640.98	1.803	224.90	1006.066	F
C-A	0.00	0.00	0.00	-	-	-	-	-
A-B	67.00	67.00	0.00	-	-	-	-	-
A-C	180.00	180.00	0.00	-	-	-	-	-

Main results: (17:30-17:45)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	611.00	0.00	0.00	0.00	999999999.000	362.14	999999999.000	F
B-A	91.00	0.00	0.00	0.00	999999999.000	55.06	999999999.000	F
C-AB	1156.00	709.72	0.00	640.98	1.803	336.47	1631.843	F
C-A	0.00	0.00	0.00	-	-	-	-	-
A-B	67.00	67.00	0.00	-	-	-	-	-
A-C	180.00	180.00	0.00	-	-	-	-	-

Main results: (17:45-18:00)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	611.00	0.00	0.00	0.00	999999999.000	514.89	999999999.000	F
B-A	91.00	0.00	0.00	0.00	999999999.000	77.81	999999999.000	F
C-AB	1156.00	709.74	0.00	640.98	1.803	448.03	2258.035	F
C-A	0.00	0.00	0.00	-	-	-	-	-
A-B	67.00	67.00	0.00	-	-	-	-	-
A-C	180.00	180.00	0.00	-	-	-	-	-

Howes Lane- Bucknell Rd - Scenario 9, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Howes Lane- Bucknell Rd	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
Scenario 9, AM	Scenario 9	AM	2021 baseline, Exemplar, Application 1, HV 1700	FLAT	08:00	09:00	60	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	A,B,C	1825.97	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description	Arm Type
Bucknell Rd (South)	A	Bucknell Rd (South)		Major
Howes Lane	B	Howes Lane		Minor
Bucknell Rd (North)	C	Bucknell Rd (North)		Major

Major Arm Geometry

Name	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
Bucknell Rd (North)	6.50		0.00	✓	2.20	140.00	✓	1.00

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

Minor Arm Geometry

Name	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
Howes Lane	One lane plus flare				10.00	7.50	5.50	5.50	5.50		3.00	20	27

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	437.591	0.078	0.197	0.124	0.282
1	B-C	769.271	0.115	0.292	-	-
1	C-B	655.039	0.248	0.248	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (Veh/hr)	Flow Scaling Factor (%)
Bucknell Rd (South)	FLAT	✓	288.00	100.000
Howes Lane	FLAT	✓	892.00	100.000
Bucknell Rd (North)	FLAT	✓	796.00	100.000

Turning Proportions

Turning Counts / Proportions (Veh/hr) - (untitled) (for whole period)

		To		
		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
From	Bucknell Rd (South)	0.000	115.000	173.000
	Howes Lane	48.000	0.000	844.000
	Bucknell Rd (North)	146.000	650.000	0.000

Turning Proportions (Veh) - (untitled) (for whole period)

		To		
		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
From	Bucknell Rd (South)	0.00	0.40	0.60
	Howes Lane	0.05	0.00	0.95
	Bucknell Rd (North)	0.18	0.82	0.00

Vehicle Mix

Average PCU Per Vehicle - (untitled) (for whole period)

		To		
		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
From	Bucknell Rd (South)	1.000	1.100	1.100
	Howes Lane	1.100	1.000	1.100
	Bucknell Rd (North)	1.100	1.100	1.000

Heavy Vehicle Percentages - (untitled) (for whole period)

		To		
From		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
	Bucknell Rd (South)	0.0	10.0	10.0
	Howes Lane	10.0	0.0	10.0
	Bucknell Rd (North)	10.0	10.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	2.11	2658.59	349.89	F
B-A	2.05	2851.72	20.48	F
C-AB	1.33	881.30	159.01	F
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (08:00-08:15)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	844.00	575.86	0.00	584.45	1.444	67.04	225.042	F
B-A	48.00	27.75	0.00	33.24	1.444	5.06	425.508	F
C-AB	796.00	624.81	0.00	598.63	1.330	42.80	170.276	F
C-A	0.00	0.00	0.00	-	-	-	-	-
A-B	115.00	115.00	0.00	-	-	-	-	-
A-C	173.00	173.00	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	844.00	533.08	0.00	533.22	1.583	144.77	776.699	F
B-A	48.00	31.63	0.00	32.72	1.467	9.15	1026.763	F
C-AB	796.00	640.50	0.00	598.63	1.330	81.67	418.223	F
C-A	0.00	0.00	0.00	-	-	-	-	-
A-B	115.00	115.00	0.00	-	-	-	-	-
A-C	173.00	173.00	0.00	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	844.00	467.27	0.00	467.30	1.806	238.95	1586.359	F
B-A	48.00	27.44	0.00	27.79	1.727	14.29	1820.590	F
C-AB	796.00	641.22	0.00	598.63	1.330	120.36	649.698	F
C-A	0.00	0.00	0.00	-	-	-	-	-
A-B	115.00	115.00	0.00	-	-	-	-	-
A-C	173.00	173.00	0.00	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	844.00	400.24	0.00	400.25	2.109	349.89	2658.586	F
B-A	48.00	23.26	0.00	23.39	2.052	20.48	2851.722	F
C-AB	796.00	641.44	0.00	598.63	1.330	159.01	881.302	F
C-A	0.00	0.00	0.00	-	-	-	-	-
A-B	115.00	115.00	0.00	-	-	-	-	-
A-C	173.00	173.00	0.00	-	-	-	-	-

Howes Lane- Bucknell Rd - Scenario 9, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Howes Lane- Bucknell Rd	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
Scenario 9, PM	Scenario 9	PM	2021 baseline, Exemplar, Application 1, HV 1700	FLAT	17:00	18:00	60	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	A,B,C	3787880317.02	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description	Arm Type
Bucknell Rd (South)	A	Bucknell Rd (South)		Major
Howes Lane	B	Howes Lane		Minor
Bucknell Rd (North)	C	Bucknell Rd (North)		Major

Major Arm Geometry

Name	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
Bucknell Rd (North)	6.50		0.00	✓	2.20	140.00	✓	1.00

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

Minor Arm Geometry

Name	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
Howes Lane	One lane plus flare				10.00	7.50	5.50	5.50	5.50		3.00	20	27

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	443.958	0.079	0.200	0.126	0.286
1	B-C	761.066	0.114	0.288	-	-
1	C-B	655.039	0.248	0.248	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (Veh/hr)	Flow Scaling Factor (%)
Bucknell Rd (South)	FLAT	✓	247.00	100.000
Howes Lane	FLAT	✓	725.00	100.000
Bucknell Rd (North)	FLAT	✓	1189.00	100.000

Turning Proportions

Turning Counts / Proportions (Veh/hr) - (untitled) (for whole period)

		To		
		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
From	Bucknell Rd (South)	0.000	67.000	180.000
	Howes Lane	94.000	0.000	631.000
	Bucknell Rd (North)	286.000	903.000	0.000

Turning Proportions (Veh) - (untitled) (for whole period)

		To		
		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
From	Bucknell Rd (South)	0.00	0.27	0.73
	Howes Lane	0.13	0.00	0.87
	Bucknell Rd (North)	0.24	0.76	0.00

Vehicle Mix

Average PCU Per Vehicle - (untitled) (for whole period)

		To		
		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
From	Bucknell Rd (South)	1.000	1.100	1.100
	Howes Lane	1.100	1.000	1.100
	Bucknell Rd (North)	1.100	1.100	1.000

Heavy Vehicle Percentages - (untitled) (for whole period)

		To		
		Bucknell Rd (South)	Howes Lane	Bucknell Rd (North)
From	Bucknell Rd (South)	0.0	10.0	10.0
	Howes Lane	10.0	0.0	10.0
	Bucknell Rd (North)	10.0	10.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	9999999999.00	9999999999.00	540.39	F
B-A	9999999999.00	9999999999.00	81.45	F
C-AB	1.87	2462.15	487.26	F
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (17:00-17:15)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	631.00	362.43	0.00	367.82	1.715	67.14	999999999.000	F
B-A	94.00	50.21	0.00	54.79	1.715	10.95	999999999.000	F
C-AB	1189.00	697.08	0.00	637.44	1.865	122.98	401.348	F
C-A	0.00	0.00	0.00	-	-	-	-	-
A-B	67.00	67.00	0.00	-	-	-	-	-
A-C	180.00	180.00	0.00	-	-	-	-	-

Main results: (17:15-17:30)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	631.00	0.00	0.00	0.00	999999999.000	224.89	999999999.000	F
B-A	94.00	0.00	0.00	0.00	999999999.000	34.45	999999999.000	F
C-AB	1189.00	703.24	0.00	637.44	1.865	244.42	1091.874	F
C-A	0.00	0.00	0.00	-	-	-	-	-
A-B	67.00	67.00	0.00	-	-	-	-	-
A-C	180.00	180.00	0.00	-	-	-	-	-

Main results: (17:30-17:45)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	631.00	0.00	0.00	0.00	999999999.000	382.64	999999999.000	F
B-A	94.00	0.00	0.00	0.00	999999999.000	57.95	999999999.000	F
C-AB	1189.00	703.31	0.00	637.44	1.865	365.84	1776.811	F
C-A	0.00	0.00	0.00	-	-	-	-	-
A-B	67.00	67.00	0.00	-	-	-	-	-
A-C	180.00	180.00	0.00	-	-	-	-	-

Main results: (17:45-18:00)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	631.00	0.00	0.00	0.00	999999999.000	540.39	999999999.000	F
B-A	94.00	0.00	0.00	0.00	999999999.000	81.45	999999999.000	F
C-AB	1189.00	703.33	0.00	637.44	1.865	487.26	2462.153	F
C-A	0.00	0.00	0.00	-	-	-	-	-
A-B	67.00	67.00	0.00	-	-	-	-	-
A-C	180.00	180.00	0.00	-	-	-	-	-

Prepared by Geoff Burrage
Reviewed by Malcolm Turner
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