sanderson associates (consulting engineers) ltd

Highways | Traffic | Transportation | Water

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Prepared on behalf of

Keepmoat Homes Ltd.

Proposed Residential Development
(Phase 3)
School Street, Thurnscoe

Transport Assessment Addendum

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IHE

Acknowledgements:

This report should be read in conjunction with Sanderson Associates Transport Assessment (ref: 10082/001/03) which was submitted in support of the Phase 2/3 hybrid application.

Tempro (v7.2) has been used to calculate future traffic growth factors.

www.Crashmap.co.uk has been used to review local accident history.

Disclaimer

The methodology adopted and the sources of information used by Sanderson Associates (Consulting Engineers) Ltd in providing its services are outlined within this Report.

Any information provided by third parties and referred to herein has not been checked or verified by Sanderson Associates (Consulting Engineers) Ltd, unless otherwise expressly stated within this report.

This report was checked and approved on the 24th June 2019 and the Report is therefore valid on this date, circumstances, regulations and professional standards do change which could subsequently affect the validity of this Report.

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Report Ref:	11057/BL/001/01		June 2019
Author:	Brett Littlewood		
Checked & Approved:	David Colley	**Date:**	24th June 2019

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1 Introduction

1.1 Sanderson Associates (Consulting Engineers) Ltd. has been appointed by Keepmoat Homes Ltd. to advise on the traffic and transportation issues surrounding proposals for residential development at School Street, Thurnscoe.

1.2 The application site forms part of a wider residential development which was granted outline planning consent for 900 dwellings in January 2010, under planning ref: 2009/1408. The wider site was separated into three sections, as shown on the plan included at **Appendix A**.

1.3 The area labelled as Site 1 to the south-east of the site, received full planning consent in April 2010, and is now in a state of completion.

1.4 A subsequent Hybrid application (ref: 2017/1051) was submitted in 2017, which sought full planning consent for the erection of 129 dwellings, associated infrastructure and public open space (Phase 2), and outline consent for the erection of 350 dwellings and associated infrastructure (Phase 3). This application received planning approval in March 2018.

1.5 Phase 2 is currently under construction, and as of 11th June 2019, 30 Nº dwellings were occupied out of 129 units.

1.6 The current reserved matters application seeks approval for Phase 3 of the development, albeit, based on a slightly higher development quantum of 357 dwellings (7 additional units to what was considered in the Transport Assessment to support Phase 2 and 3).

1.7 This report has been prepared as an Addendum to our previous Transport Assessment (ref: 10082-001-03), which was submitted in support of the Phase 2/3 Hybrid application.

1.8 For the benefit of this assessment, the site was visited on Wednesday 19th June 2019, in order to observe the prevailing highway conditions and to identify any changes that may have occurred since our previous visit in July 2017.

2 Review of Non-Technical Matters

2.1 Given the passage of time since our previous Transport Assessment (submitted in November 2017), to ensure that our assessment is reflective of current highway conditions, it is considered appropriate to undertake a review of matters which have the potential to impact travel on the local highway network.

2.2 Local Highway Infrastructure

2.2.1 Since our previous visit, there have been no notable changes (outside of the development site) to the local highway infrastructure which would materially affect how people travel on the local highway network.

2.3 Accident History

2.3.1 The previous assessment considered all recorded incidents in proximity to the site that occurred during the five year period between 1st Jan 2012 and 31st Dec 2016. During that study period, a total of twenty accidents were recorded; of which, sixteen were classified as being 'slight' in severity and four were classified as 'serious'.

2.3.2 In order to identify any incidents that have occurred since then, a review of the Crashmap database has been undertaken. It should be noted that the available data includes all incidents recorded prior to 31st Dec 2018. The number and severity of incidents recorded so far in 2019 are currently unknown.

2.3.3 As illustrated in Figure 2/1 (overleaf), the Crashmap database identifies that in the last two year period, there have been four recorded incidents within the approved study area; two 'slight' and two 'serious'.

Figure 2/1 – Crashmap Extract (2017 & 2018)

2.3.4 A summary of the recorded incidents is provided below:

Serious incident ref: 2017140170467 occurred at 3.30PM on Sunday 26th March 2017, along Houghton Road in proximity to the junction with Whyn View. The conditions at the time of the incident are described as dry and fine without high winds. The incident involved a car proceeding normally along the carriageway, not on a bend, colliding with a stationary vehicle parked in the carriageway.

Serious incident ref: 2017140169160 occurred at 4:30PM on Saturday 25th March 2017, at the Houghton Road / Station Road / Shepherd Lane / John Street mini-roundabout junction. The conditions at the time of the incident are described as dry and fine without high winds. The incident involved a collision between the front and offside of two vehicles, respectively, both of which were described as proceeding normally along the carriageway, not on a bend.

Slight incident ref: 2017140239562 occurred at 6:15PM on Monday 30th October 2017, at the Houghton Road / Station Road / Shepherd Lane / John Street mini-roundabout junction. The conditions at the time of the incident are described as dry and fine without high winds, in darkness, however street lights were present and lit. The incident involved a collision between the nearside of a vehicle proceeding normally along the carriageway, not on a bend, and the offside of a vehicle in the act of turning right.

Slight incident ref: 2017140205856 occurred at 1:29AM on Sunday 15th January 2017, at the private drive / entrance along School Street, approximately 90m north of Houghton Road. The conditions at the time of the incident are described as dry and in darkness, however street lights were present and lit. The incident involved a vehicle in the act of turning right, colliding with a parked vehicle.

2.3.5 It is concluded that there are no significant trends associated with the incidents that have occurred since our previous assessment.

2.3.6 Full copies of the Crashmap incident reports are included to the rear of this report at **Appendix B**.

2.4 Accessibility by Sustainable Travel Modes

2.4.1 This issue of accessibility has already been considered by Barnsley Council as part of the site's outline planning approval. The site is considered to be well located to allow pedestrian and cycle access to local services / facilities and various places of education and employment.

2.4.2 With regards to public transport, since our previous assessment, it is understood that the Nº 216 bus service between Wombwell and Grimethorpe has been discontinued, however, given that this service only provided one bus in each direction, per day, the loss of this service is not considered to have a material adverse impact on the accessibility of the site by bus.

2.4.3 Further to the above, there have been some other slight alterations to some service arrival / departure times. The following table provides a summary of the current bus services accessible from the site.

		Approximate Peak Frequencies (Buses per hour)			
Nº	**Route**	**Mon-Fri Day**	**Mon-Fri Evening**	**Saturday**	**Sunday**
219	Barnsley to Doncaster	60 mins	60 mins	60 mins	60 mins
219a	Barnsley to Doncaster	60 mins	No Service	60 mins	No Service
226	Barnsley to Thurnscoe	30 mins	60 mins	30 mins	60 mins
406 (School Service)	Goldthorpe to Thurnscoe	1457	No Service	No Service	No Service
449 (School Service)	Wombwell to Thurnscoe	1504	No Service	No Service	No Service
665 (School Service)	Wath-upon-Dearne to Thurnscoe	1557	No Service	No Service	No Service
668	Thurnscoe to Wath-upon-Dearne	0831	No Service	No Service	No Service

Table 2/1 – Summary of existing bus services

2.4.4 In conclusion, the site remains to be accessible by both bus and rail services.

3 Development Proposals

3.1 The current application comprises a development of 357 dwellings: 7 dwellings more than included in the Transport Assessment prepared to support the site's outline planning consent.

3.2 The site will be accessed via an extension of School Street, at its northern extent.

3.3 The internal layout will be designed to provide loop roads, and servicing will be undertaken directly from these estate roads. Where cul-de-sac are provided, they will be designed to accommodate the swept path of a refuse vehicle, or provide a collection point within an appropriate carry distance.

3.4 Car parking will be provided in accordance with the maximum standards for residential developments set out within Barnsley Council's Supplementary Planning Document on car parking (Adopted March 2012), a summary of which is provided below;

- Dwellings with 1-2 bedrooms – 1 space per dwelling
- Dwellings with 3 or more bedrooms - 2 spaces per dwelling.

4 Traffic Impact Assessment

4.1 The following assessment is provided in order to identify the net cumulative impact of the proposed additional 7 dwellings on the operation of the local highway network.

4.2 Using the approved trip rates from our previous Transport Assessment (LPA ref: 2017/1051), the additional 7 dwellings could be expected to generate the following number of vehicle movements during peak periods.

Time Period	Rates		Generations		
	Arr	Dep	Arr	Dep	Two-way
AM (0800-0900)	0.147	0.411	1	3	4
PM (1700-1800)	0.382	0.229	3	2	5

Table 4/1 – Vehicle trip generations – 7 dwellings

4.3 The TRICS data identifies that the development is likely to generate in the order of 4 additional vehicle movements (two-way) in the AM peak period and 5 additional vehicle movements (two-way) in the PM peak period. This equates to around 1 additional movement every 12 – 15 minutes during peak times.

4.4 In reality, once distributed on to the local highway network, this level of traffic generation is unlikely to be perceivable amongst typical daily fluctuations in traffic flow.

4.5 Notwithstanding the above, with the proposed increase of 7 dwellings, the total number of dwellings to be provided over Phases 1, 2 and 3 equals 646 dwellings. This quantum of development remains substantially below the original outline consent (2009/1408) for 900 dwellings.

4.6 Nevertheless, for robustness, the junction capacity assessments undertaken as part of the Phase 2/3 application have been revisited, and updated to reflect the current situation.

5 Junction Capacity Assessments

5.1 Base Traffic Flows

5.1.1 Fully classified peak period traffic counts have been undertaken by Traffic Data Collection Ltd at the following junctions:

- B6411 / Station Rd / Shepherd Ln / John St;
- B6411 Houghton Rd / School St;
- B6411 Houghton Rd / Lorne Rd / Merrill Rd;
- Barnsley road / Nicholas Ln / Highgate Ln staggered crossroads, and
- A635 / Barnsley Road roundabout.

5.1.2 The counts were undertaken between 0730-0930hrs and 1500-1800hrs on Tuesday 27th June 2017. A copy of the traffic data is included at **Appendix C**.

5.1.3 Following analysis of the traffic count data, the network peak periods were identified as being 08:00 – 09:00 in the AM, and 17:00 – 18:00 in the PM.

5.2 Committed Development Traffic Flows

5.2.1 In addition to the existing network traffic flows, it is also appropriate to consider any traffic flows which are already committed to be introduced to the local highway network. For the purpose of this assessment, it is considered that only the approved Phase 2/3 development traffic generations are likely to have a material impact.

5.2.2 The peak hour traffic flows associated with the approved 479 dwellings (Phase 2/3) are shown on **Figure 1** at **Appendix D**.

5.2.3 As noted in the original Transport Assessment, the approved traffic generations are considered highly robust as they are based wholly on private housing and do not making any allowance for the affordable housing provision, which would typically generate less traffic, whilst they also make no allowance for the traffic generated by the previous housing accommodated on the site.

5.3 Future Year Assessment

5.3.1 An assessment year of 2024 has been considered, 5 years from the year of application. This is consistent with the Transport Assessment for the Phase 2/3 proposals.

5.3.2 To establish the likely growth of base traffic flows from the 2017 traffic surveys to 2024, growth factors have been calculated utilising Tempro (V.7.2). The calculated growth factors have been refined to be representative of the local area (Barnsley 014), the extent of which is illustrated below:

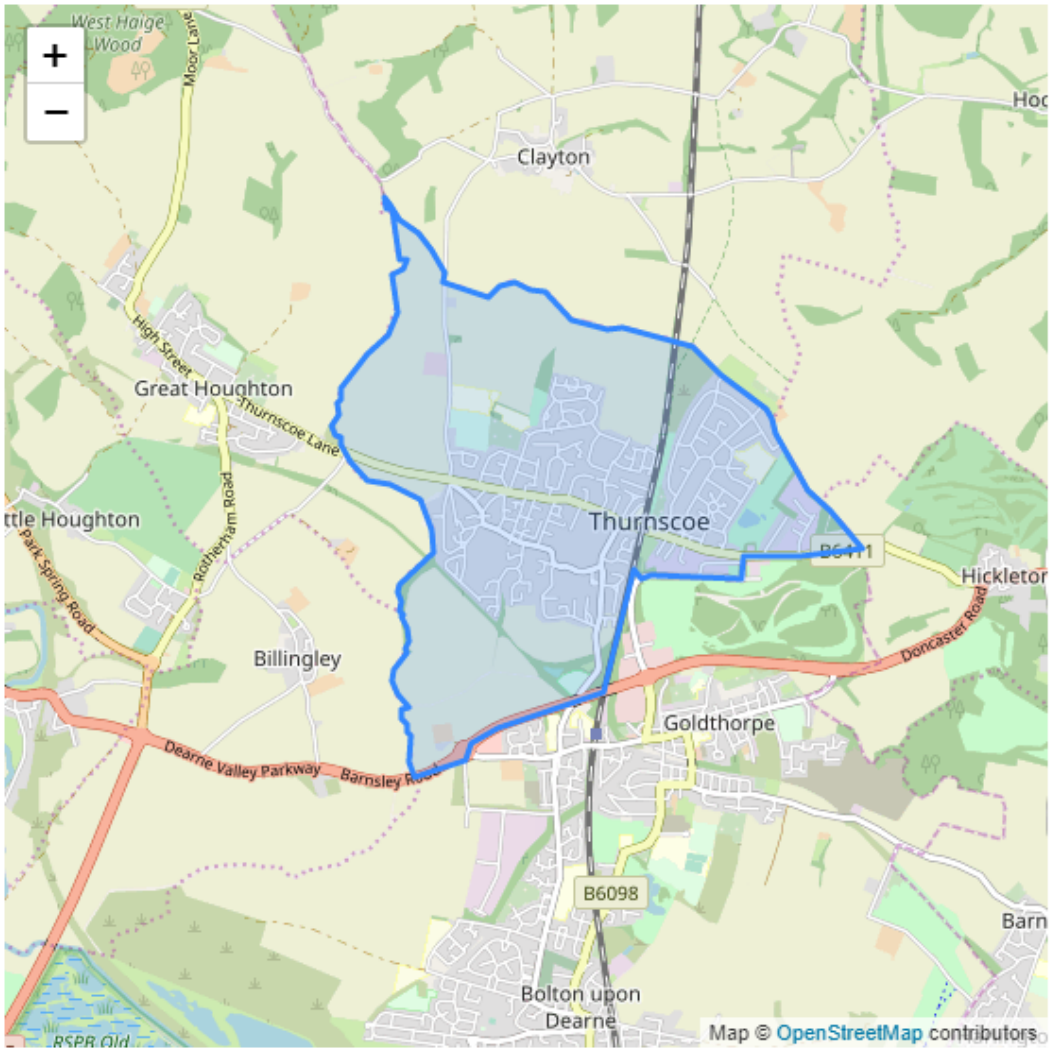


Figure 5/1 – 'Barnsley 014' Middle Super Output Area

5.3.3 As the approved Phase 2/3 development is likely to account for almost all of the residential related traffic growth on the local highway network, 'alternative assumptions' have been applied to the Tempro growth factors so as to avoid the double counting of approved traffic generations.

5.3.4 To achieve this, the forecast number of dwellings has been reduced to the baseline figure, as shown below:

Table 5/2 – Alternative Assumptions extract from Tempro

5.3.5 No alternative assumptions have been applied to the forecast growth in employment.

5.3.6 The resulting peak period growth factors are summarised below, with the resulting 2024 base traffic flows shown on **Figure 2** at **Appendix D**.

AM Peak: 1.0873

PM Peak: 1.0806

5.4 Proposed Development Traffic

5.4.1 The traffic generations associated with the additional 7 units (reiterated below) have been distributed on to the local highway network in line with the distribution principles set out in the approved Phase 2/3 Transport Assessment.

Time Period	Rates		Generations		
	Arr	Dep	Arr	Dep	Two-way
AM (0800-0900)	0.147	0.411	1	3	4
PM (1700-1800)	0.382	0.229	3	2	5

Table 5/1 – Vehicle trip generations – 7 dwellings

5.4.2 The resulting additional development traffic flows are shown on **Figure 3** at **Appendix D**.

5.5 Junction Modelling

Houghton Road / School Street

5.5.1 PICADY has been used to assess the capacity of the junction; the results outputs are included at **Appendix E** and are summarised in the table below;

Arm A = Houghton Road (E)
Arm B = School Street
Arm C = Houghton Road (W)

	AM Peak Hour 0800-0900hrs				PM Peak Hour 1700-1800hrs			
	2024 Base + Committed		2024 Base + Committed + Proposed		2024 Base + Committed		2024 Base + Committed + Proposed	
	RFC	Queue	RFC	Queue	RFC	Queue	RFC	Queue
B – C	0.434	0.76	0.436	0.76	0.215	0.27	0.217	0.28
B - A	0.347	0.52	0.351	0.53	0.276	0.38	0.280	0.38
C – AB	0.175	0.21	0.177	0.21	0.259	0.35	0.261	0.35

Table 5/2 – PICADY Results – Houghton Road / School Street

5.5.2 The assessment shows that the junction would operate comfortably within its practical capacity, with no material queuing on any arm of the junction.

Houghton Road / John Street / Station Road / Shepherd Lane

5.5.3 ARCADY has been used to assess the capacity of the mini-roundabout junction; the result outputs are included at **Appendix F** and are summarised in the table below;

Arm A = John Street
Arm B = Station Road
Arm C = Shepherd Lane
Arm D = Houghton Road

	AM Peak Hour 0800-0900hrs				PM Peak Hour 1700-1800hrs			
	2024 Base + Committed		2024 Base + Committed + Proposed		2024 Base + Committed		2024 Base + Committed + Proposed	
	RFC	Queue	RFC	Queue	RFC	Queue	RFC	Queue
A	0.078	0.1	0.078	0.1	0.023	0.0	0.023	0.0
B	0.407	0.7	0.407	0.7	0.820	4.3	0.822	4.3
C	0.514	1.0	0.516	1.1	0.714	2.4	0.717	2.4
D	0.663	1.9	0.665	1.9	0.515	1.1	0.516	1.1

Table 5/3 – ARCADY Results John St / Station Rd / Shepherd Ln / Houghton Rd

5.5.4 The assessment shows that the junction would operate within its practical capacity, generally accepted as being represented by a ratio of flow to capacity of 0.850 without significant queuing on any arm of the junction.

6 Summary

6.1 Sanderson Associates (Consulting Engineers) Ltd. has been appointed by Keepmoat Homes Ltd. to advise on the traffic and transportation issues surrounding proposals for residential development at School Street, Thurnscoe.

6.2 The application site forms part of a wider residential development which was granted outline planning consent for 900 dwellings in January 2010, under planning ref: 2009/1408.

6.3 The current reserved matters application seeks approval for Phase 3 of the development, albeit, based on a slightly higher development quantum of 357 dwellings (7 additional units to the Phase 3 outline consent for 350 dwellings considered in the Transport Assessment).

6.4 Since the previous assessment undertaken in 2017, there have been no material changes to the local highway network. No apparent accident trends have emerged on the local highway network, and no significant changes have occurred which affect the site's accessibility by sustainable travel modes.

6.5 The site will be designed in accordance with local residential highway design guidance and will provide parking in line with the Council's residential parking standards.

6.6 The impact of the proposed additional 7 dwellings will be negligible and is unlikely to have any discernible impact on the operation or safety of the local highway network. Furthermore, the total number of dwellings to be delivered over all three phases of the wider development (646 dwellings) is significantly below the quantum of development (900 dwellings) which received outline planning approval in 2010.

6.7 Junction capacity assessments have been undertaken at the School Street / Houghton Road priority junction and Houghton Road / John Street / Station Road / Shepherd Lane roundabout junction; both of which are predicted to operate with reserve capacity at a design year of 2024 with committed and proposed development.

6.8 With reference to the National Planning Policy Framework paragraph 109, the cumulative residual impact of the development is not severe and therefore should not be prevented on transport grounds.

APPENDIX A

Development Masterplan – 3835-OLP-003 (Oct 2009)

SITE 3

SITE 2

SITE 1

BRIDGE

KEY

- Green Space
- LEAP Play Area
- Equipped Play Area
- Application Boundary
- Site Boundaries
- FRONTS / REARS — Proposed New Development
- Mews court
- Parking courts
- Pavement
- Road
- Visitor Parking
- Soft Landscape
- Trees

Scale: 1:1250 @ A1

keepmoat HOMES · BARNSLEY Metropolitan Borough Council · SLR · WATSON BATTY

Thurnscoe - Development Masterplan
Drg No. 3835 - OLP - 003 - (Oct -2009)

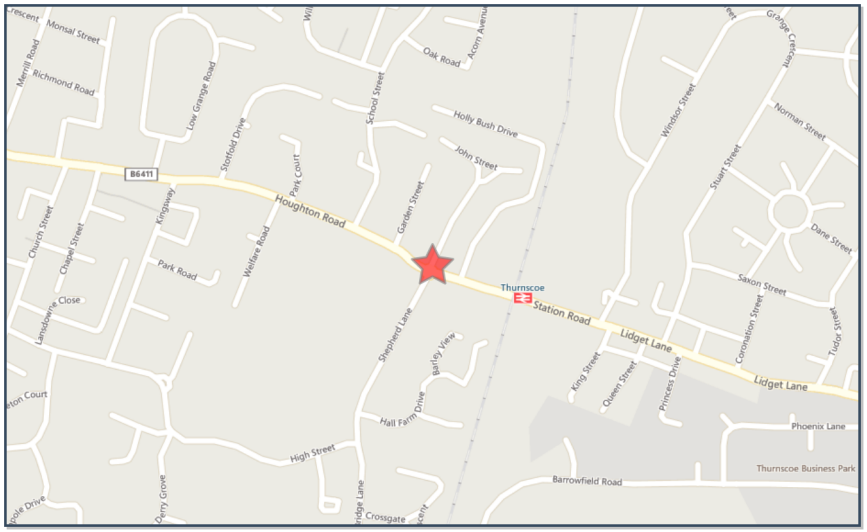
APPENDIX B

Crashmap data

crashmap.co.uk

Crash Date:	Saturday, March 25, 2017	**Time of Crash:**	4:30:00 PM	**Crash Reference:**	**2017140169160**

Highest Injury Severity:	Serious	**Road Number:**	B6411	**Number of Casualties:**	1
Highway Authority:	Barnsley			**Number of Vehicles:**	2
Local Authority:	Barnsley Metropolitan Borough			**OS Grid Reference:**	445778 405620
Weather Description:	Fine without high winds				
Road Surface Description:	Dry				
Speed Limit:	30				
Light Conditions:	Daylight: regardless of presence of streetlights				
Carriageway Hazards:	None				
Junction Detail:	Mini roundabout				
Junction Pedestrian Crossing:	No physical crossing facility within 50 metres				
Road Type:	Roundabout				
Junction Control:	Give way or uncontrolled				



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Vehicles involved

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Maneouvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
2	Car (excluding private hire)	3	Male	46 - 55	Vehicle proceeding normally along the carriageway, not on a bend	Offside	Other	None	None
1	Car (excluding private hire)	4	Male	16 - 20	Vehicle proceeding normally along the carriageway, not on a bend	Front	Other	None	None

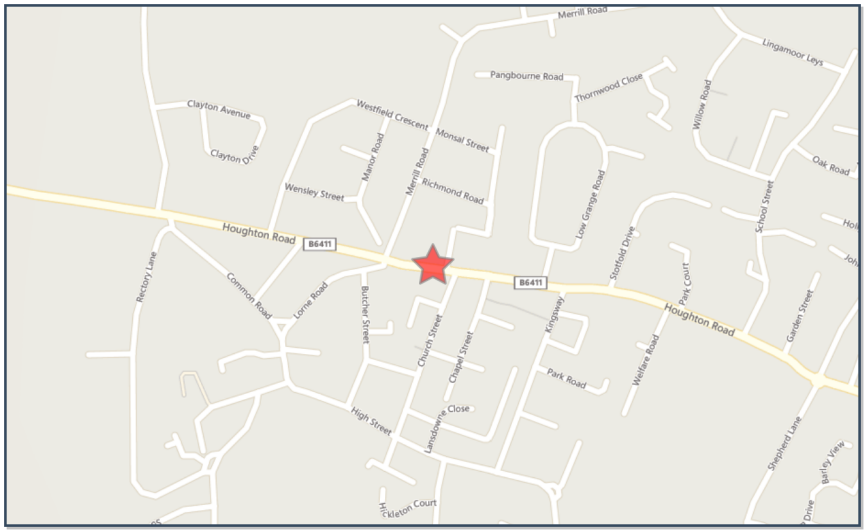
Casualties

Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
1	1	Serious	Driver or rider	Male	16 - 20	Unknown or other	Unknown or other

crashmap.co.uk

Crash Date:	Sunday, March 26, 2017	**Time of Crash:**	3:30:00 PM	**Crash Reference:**	**2017140170467**

Highest Injury Severity:	Serious	**Road Number:**	B6411	**Number of Casualties:**	1
Highway Authority:	Barnsley			**Number of Vehicles:**	2
Local Authority:	Barnsley Metropolitan Borough			**OS Grid Reference:**	445174 405787
Weather Description:	Fine without high winds				
Road Surface Description:	Dry				
Speed Limit:	30				
Light Conditions:	Daylight: regardless of presence of streetlights				
Carriageway Hazards:	None				
Junction Detail:	T or staggered junction				
Junction Pedestrian Crossing:	No physical crossing facility within 50 metres				
Road Type:	Single carriageway				
Junction Control:	Give way or uncontrolled				



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Vehicles involved

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Maneouvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
2	Car (excluding private hire)	14	Unknown	Unknown	Vehicle is parked in the carriageway	Front	Other	None	None
1	Car (excluding private hire)	5	Male	66 - 75	Vehicle proceeding normally along the carriageway, not on a bend	Front	Other	Parked vehicle	Wall or fence

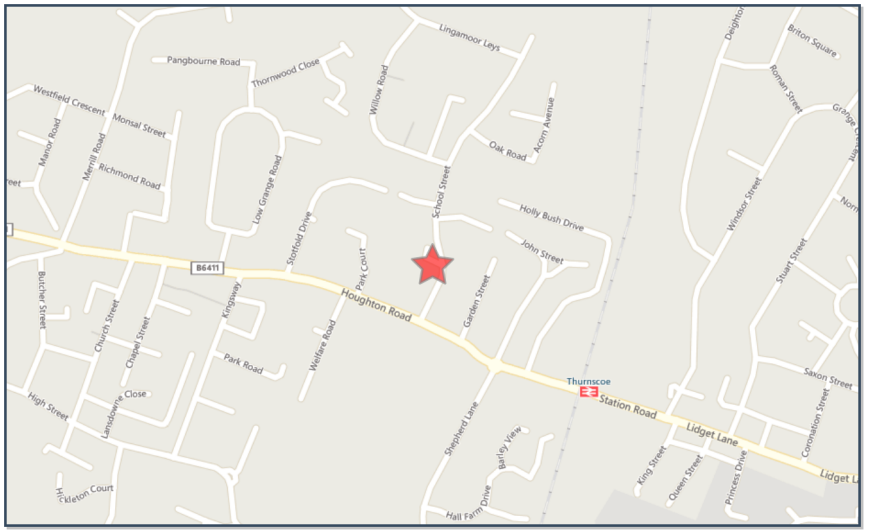
Casualties

Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
1	1	Serious	Driver or rider	Male	66 - 75	Unknown or other	Unknown or other

crashmap.co.uk

Crash Date:	Sunday, January 15, 2017	**Time of Crash:**	1:29:00 AM	**Crash Reference:**	**2017140205856**

Highest Injury Severity:	Slight	**Road Number:**	U0	**Number of Casualties:**	1
Highway Authority:	Barnsley			**Number of Vehicles:**	3
Local Authority:	Barnsley Metropolitan Borough			**OS Grid Reference:**	445674 405772
Weather Description:	Unknown				
Road Surface Description:	Dry				
Speed Limit:	30				
Light Conditions:	Darkness: street lights present and lit				
Carriageway Hazards:	None				
Junction Detail:	Using private drive or entrance				
Junction Pedestrian Crossing:	No physical crossing facility within 50 metres				
Road Type:	Single carriageway				
Junction Control:	Give way or uncontrolled				



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Vehicles involved

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Maneouvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
3	Car (excluding private hire)	4	Male	21 - 25	Vehicle is parked in the carriageway	Did not impact	Journey as part of work	None	None
1	Car (excluding private hire)	19	Male	21 - 25	Vehicle is in the act of turning right	Front	Other	None	Other permanent object
2	Car (excluding private hire)	-1	Female	66 - 75	Vehicle is parked in the carriageway	Back	Other	None	None

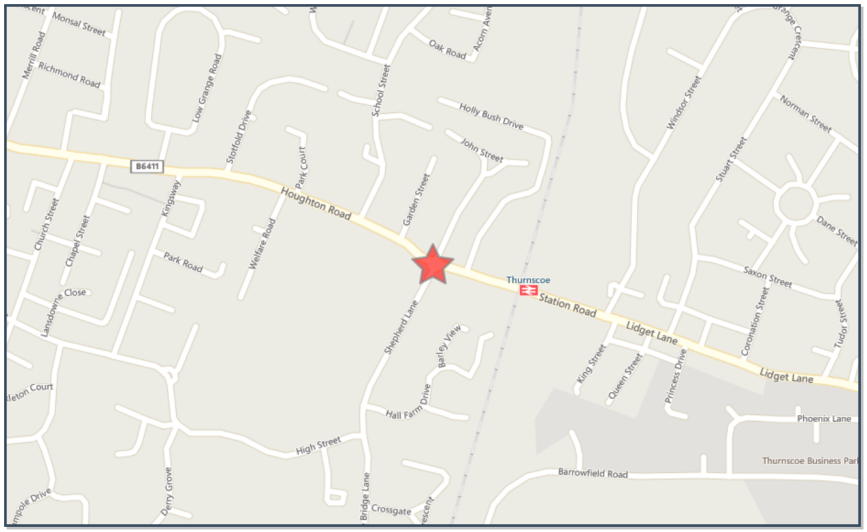
Casualties

Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
1	1	Slight	Driver or rider	Male	21 - 25	Unknown or other	Unknown or other

crashmap.co.uk

Crash Date:	Monday, October 30, 2017	**Time of Crash:**	6:15:00 PM	**Crash Reference:**	**2017140239562**

Highest Injury Severity:	Slight	**Road Number:**	U0	**Number of Casualties:**	1
Highway Authority:	Barnsley			**Number of Vehicles:**	2
Local Authority:	Barnsley Metropolitan Borough			**OS Grid Reference:**	445770 405617
Weather Description:	Fine without high winds				
Road Surface Description:	Dry				
Speed Limit:	20				
Light Conditions:	Darkness: street lights present and lit				
Carriageway Hazards:	None				
Junction Detail:	Not at or within 20 metres of junction				
Junction Pedestrian Crossing:	No physical crossing facility within 50 metres				
Road Type:	Roundabout				
Junction Control:	Not Applicable				



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Vehicles involved

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Maneouvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
2	Car (excluding private hire)	12	Male	26 - 35	Vehicle proceeding normally along the carriageway, not on a bend	Nearside	Other	None	None
1	Car (excluding private hire)	13	Male	16 - 20	Vehicle is in the act of turning right	Offside	Other	None	None

Casualties

Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
1	1	Slight	Driver or rider	Male	16 - 20	Unknown or other	Unknown or other

APPENDIX C

Traffic Count Data

REF: Thurnscoe

SITE: J1

A = Merrill Road
B = Houghton Road (East)
C = Lorne Road
D = Houghton Road (West)

DAY: Tue 27th June 2017

	A => B								**A => C**								**A => D**							
TIME	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**
07:30	0	0	6	5	0	0	11	11	0	0	0	0	0	0	0	0	0	0	2	3	0	0	5	5
07:45	0	0	13	3	0	1	17	18	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	3
H/TOT	0	0	19	8	0	1	28	29	0	0	0	0	0	0	0	0	0	0	5	3	0	0	8	8
08:00	0	0	14	2	1	0	17	18.3	0	0	0	0	0	0	0	0	0	0	2	1	0	0	3	3
08:15	0	0	5	2	0	0	7	7	0	0	2	0	0	0	2	2	0	0	3	1	1	0	5	6.3
08:30	0	0	11	1	0	0	12	12	0	0	0	0	0	0	0	0	0	0	5	0	0	1	6	7
08:45	0	0	12	4	0	0	16	16	0	0	0	0	0	0	0	0	0	0	5	0	0	0	5	5
H/TOT	0	0	42	9	1	0	52	53.3	0	0	2	0	0	0	2	2	0	0	15	2	1	1	19	21.3
09:00	0	0	20	2	0	0	22	22	0	0	3	0	0	0	3	3	0	0	10	0	0	0	10	10
09:15	0	0	21	0	0	0	21	21	0	0	2	0	0	0	2	2	0	0	7	0	0	0	7	7
H/TOT	0	0	41	2	0	0	43	43	0	0	5	0	0	0	5	5	0	0	17	0	0	0	17	17
AM TOT	0	0	102	19	1	1	123	125	0	0	7	0	0	0	7	7	0	0	37	5	1	1	44	46.3
15:00	0	0	7	2	0	0	9	9	0	0	1	0	0	0	1	1	0	0	6	0	0	0	6	6
15:15	0	0	7	1	0	0	8	8	0	0	1	0	0	0	1	1	0	0	5	0	0	0	5	5
15:30	0	0	8	1	0	0	9	9	0	0	2	1	0	0	3	3	0	0	3	1	0	1	5	6
15:45	0	0	10	3	0	0	13	13	0	0	1	2	0	0	3	3	0	0	6	1	0	0	7	7
H/TOT	0	0	32	7	0	0	39	39	0	0	5	3	0	0	8	8	0	0	20	2	0	1	23	24
16:00	0	0	20	1	0	0	21	21	0	0	1	0	0	0	1	1	0	0	1	0	0	0	1	1
16:15	0	0	12	3	0	0	15	15	0	0	0	0	0	0	0	0	0	0	7	0	0	0	7	7
16:30	0	0	17	2	0	0	19	19	0	0	0	1	0	0	1	1	0	0	5	1	0	0	6	6
16:45	0	0	13	2	0	0	15	15	0	0	2	0	0	0	2	2	0	0	3	0	0	1	4	5
H/TOT	0	0	62	8	0	0	70	70	0	0	3	1	0	0	4	4	0	0	16	1	0	1	18	19
17:00	0	0	10	2	0	0	12	12	0	0	1	0	0	0	1	1	0	0	6	0	0	0	6	6
17:15	0	0	17	0	0	0	17	17	0	0	1	1	0	0	2	2	0	0	5	0	0	0	5	5
17:30	0	0	16	0	0	0	16	16	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	4
17:45	0	0	11	1	0	0	12	12	0	0	1	0	0	0	1	1	0	0	3	1	0	0	4	4
H/TOT	0	0	54	3	0	0	57	57	0	0	3	1	0	0	4	4	0	0	18	1	0	0	19	19
PM TOT	0	0	148	18	0	0	166	166	0	0	11	5	0	0	16	16	0	0	54	4	0	2	60	62
TOTAL	0	0	250	37	1	1	289	291	0	0	18	5	0	0	23	23	0	0	91	9	1	3	104	108

	B => A								**B => C**								**B => D**							
TIME	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**
07:30	0	0	1	3	0	1	5	6	0	0	3	0	0	0	3	3	0	0	14	4	0	1	19	20
07:45	0	0	6	0	0	2	8	10	0	0	2	0	0	0	2	2	0	0	23	1	1	1	26	28.3
H/TOT	0	0	7	3	0	3	13	16	0	0	5	0	0	0	5	5	0	0	37	5	1	2	45	48.3
08:00	0	0	10	2	1	0	13	14.3	0	0	3	0	0	0	3	3	0	0	31	3	1	1	36	38.3
08:15	0	0	10	2	0	0	12	12	0	0	3	0	0	1	4	5	0	0	31	9	1	0	41	42.3
08:30	0	0	10	2	0	1	13	14	0	0	3	1	0	0	4	4	0	0	40	6	1	0	47	48.3
08:45	0	0	25	2	0	1	28	29	0	0	5	0	0	0	5	5	0	0	50	6	2	1	59	62.6
H/TOT	0	0	55	8	1	2	66	69.3	0	0	14	1	0	1	16	17	0	0	152	24	5	2	183	192
09:00	0	0	9	0	0	0	9	9	0	0	4	0	0	0	4	4	0	0	38	4	2	1	45	48.6
09:15	0	0	11	2	0	1	14	15	0	0	2	0	0	0	2	2	0	0	38	12	0	1	51	52
H/TOT	0	0	20	2	0	1	23	24	0	0	6	0	0	0	6	6	0	0	76	16	2	2	96	101
AM TOT	0	0	82	13	1	6	102	109	0	0	25	1	0	1	27	28	0	0	265	45	8	6	324	340
15:00	0	0	7	1	0	0	8	8	0	0	5	0	0	0	5	5	0	0	45	5	0	1	51	52
15:15	0	0	5	0	0	0	5	5	0	0	4	1	0	0	5	5	0	0	55	5	0	1	61	62
15:30	0	0	9	1	0	1	11	12	0	0	6	1	0	0	7	7	0	0	61	6	0	1	68	69
15:45	0	0	16	1	0	0	17	17	0	0	5	1	0	0	6	6	0	0	60	8	0	0	68	68
H/TOT	0	0	37	3	0	1	41	42	0	0	20	3	0	0	23	23	0	0	221	24	0	3	248	251
16:00	0	0	18	3	0	1	22	23	0	0	8	1	0	1	10	11	0	0	70	10	1	1	82	84.3
16:15	0	0	24	3	0	0	27	27	0	0	9	2	0	0	11	11	0	0	52	8	0	0	60	60
16:30	0	0	16	6	0	0	22	22	0	0	10	0	0	0	10	10	0	0	58	13	0	0	71	71
16:45	0	0	14	3	0	0	17	17	0	0	7	2	0	0	9	9	0	0	59	12	0	0	71	71
H/TOT	0	0	72	15	0	1	88	89	0	0	34	5	0	1	40	41	0	0	239	43	1	1	284	286
17:00	0	0	16	2	0	1	19	20	0	0	14	1	0	0	15	15	0	0	69	7	0	1	77	78
17:15	0	0	13	2	0	0	15	15	0	0	10	1	0	0	11	11	0	0	83	10	1	1	95	97.3
17:30	0	0	15	0	0	0	15	15	0	0	11	0	0	0	11	11	0	0	95	11	0	1	107	108
17:45	0	0	11	1	0	0	12	12	0	0	9	1	0	1	11	12	0	0	72	11	1	1	85	87.3
H/TOT	0	0	55	5	0	1	61	62	0	0	44	3	0	1	48	49	0	0	319	39	2	4	364	371
PM TOT	0	0	164	23	0	3	190	193	0	0	98	11	0	2	111	113	0	0	779	106	3	8	896	908
TOTAL	0	0	246	36	1	9	292	302	0	0	123	12	0	3	138	141	0	0	1044	151	11	14	1220	1248

	C => A								**C => B**								**C => D**							
TIME	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**
07:30	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	3	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	2	0	0	2	0	0	0	2	2
H/TOT	0	0	0	0	0	0	0	0	0	0	5	0	0	0	5	5	0	0	2	0	0	0	2	2
08:00	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	4	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0	0	0	2	1	0	1	4	5	0	0	2	0	0	0	2	2
08:30	0	0	0	1	0	0	1	1	0	0	7	0	0	0	7	7	0	0	1	0	0	0	1	1
08:45	0	0	10	1	0	0	11	11	0	0	3	0	0	0	3	3	0	0	1	0	0	0	1	1
H/TOT	0	0	10	2	0	0	12	12	0	0	16	1	0	1	18	19	0	0	4	0	0	0	4	4
09:00	0	0	0	0	0	0	0	0	0	0	14	0	0	0	14	14	0	0	0	0	0	0	0	0
09:15	0	0	1	0	0	0	1	1	0	0	12	0	0	0	12	12	0	0	0	0	0	0	0	0
H/TOT	0	0	1	0	0	0	1	1	0	0	26	0	0	0	26	26	0	0	0	0	0	0	0	0
AM TOT	0	0	11	2	0	0	13	13	0	0	47	1	0	1	49	50	0	0	6	0	0	0	6	6
15:00	0	0	1	0	0	0	1	1	0	0	4	0	0	0	4	4	0	0	1	0	0	0	1	1
15:15	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	3	0	0	0	0	0	0	0	0
15:30	0	0	0	0	0	0	0	0	0	0	5	1	0	0	6	6	0	0	1	0	0	0	1	1
15:45	0	0	0	0	0	0	0	0	0	0	6	0	0	0	6	6	0	0	0	0	0	0	0	0
H/TOT	0	0	1	0	0	0	1	1	0	0	18	1	0	0	19	19	0	0	2	0	0	0	2	2
16:00	0	0	0	0	0	0	0	0	0	0	12	0	0	0	12	12	0	0	2	0	0	0	2	2
16:15	0	0	0	0	0	0	0	0	0	0	7	1	0	0	8	8	0	0	3	0	0	0	3	3
16:30	0	0	2	0	0	0	2	2	0	0	4	1	0	0	5	5	0	0	0	0	0	0	0	0
16:45	0	0	3	0	0	0	3	3	0	0	4	0	0	0	4	4	0	0	0	0	0	0	0	0
H/TOT	0	0	5	0	0	0	5	5	0	0	27	2	0	0	29	29	0	0	5	0	0	0	5	5
17:00	0	0	4	0	0	0	4	4	0	0	5	1	0	0	6	6	0	0	1	0	0	0	1	1
17:15	0	0	0	0	0	0	0	0	0	0	7	2	0	0	9	9	0	0	2	0	0	0	2	2
17:30	0	0	1	0	0	0	1	1	0	0	3	0	0	0	3	3	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	6	0	0	0	6	6	0	0	1	0	0	0	1	1
H/TOT	0	0	5	0	0	0	5	5	0	0	21	3	0	0	24	24	0	0	4	0	0	0	4	4
PM TOT	0	0	11	0	0	0	11	11	0	0	66	6	0	0	72	72	0	0	11	0	0	0	11	11
TOTAL	0	0	22	2	0	0	24	24	0	0	113	7	0	1	121	122	0	0	17	0	0	0	17	17

	D => A								**D=> B**								**D => C**							
TIME	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**
07:30	0	0	1	1	0	1	3	4	0	0	62	7	0	0	69	69	0	0	0	1	0	0	1	1
07:45	0	0	0	0	0	0	0	0	0	0	51	10	0	1	62	63	0	0	3	0	0	0	3	3
H/TOT	0	0	1	1	0	1	3	4	0	0	113	17	0	1	131	132	0	0	3	1	0	0	4	4
08:00	0	0	8	1	0	0	9	9	0	0	60	5	0	0	65	65	0	0	0	0	0	0	0	0
08:15	0	0	10	1	0	0	11	11	0	0	54	7	1	0	62	63.3	0	0	0	0	0	0	0	0
08:30	0	0	3	0	0	1	4	5	0	0	65	6	2	0	73	75.6	0	0	2	0	0	0	2	2
08:45	0	0	2	0	0	0	2	2	0	0	46	8	1	1	56	58.3	0	0	1	0	0	0	1	1
H/TOT	0	0	23	2	0	1	26	27	0	0	225	26	4	1	256	262	0	0	3	0	0	0	3	3
09:00	0	0	6	0	0	0	6	6	0	0	56	7	0	1	64	65	0	0	1	0	0	0	1	1
09:15	0	0	7	0	0	0	7	7	0	0	57	0	0	0	57	57	0	0	0	0	0	0	0	0
H/TOT	0	0	13	0	0	0	13	13	0	0	113	7	0	1	121	122	0	0	1	0	0	0	1	1
AM TOT	0	0	37	3	0	2	42	44	0	0	451	50	4	3	508	516	0	0	7	1	0	0	8	8
15:00	0	0	4	0	0	0	4	4	0	0	45	1	0	0	46	46	0	0	0	0	0	0	0	0
15:15	0	0	4	0	0	0	4	4	0	0	42	3	0	2	47	49	0	0	0	0	0	0	0	0
15:30	0	0	5	0	0	0	5	5	0	0	49	2	0	1	52	53	0	0	2	1	0	0	3	3
15:45	0	0	4	0	0	0	4	4	0	0	57	6	0	0	63	63	0	0	0	0	0	0	0	0
H/TOT	0	0	17	0	0	0	17	17	0	0	193	12	0	3	208	211	0	0	2	1	0	0	3	3
16:00	0	0	7	0	0	0	7	7	0	0	51	18	0	1	70	71	0	0	1	0	0	0	1	1
16:15	0	0	2	0	0	0	2	2	0	0	50	12	1	0	63	64.3	0	0	0	1	0	0	1	1
16:30	0	0	7	0	0	1	8	9	0	0	100	14	1	0	115	116	0	0	1	1	0	0	2	2
16:45	0	0	5	0	0	0	5	5	0	0	79	7	0	0	86	86	0	0	5	1	0	0	6	6
H/TOT	0	0	21	0	0	1	22	23	0	0	280	51	2	1	334	338	0	0	7	3	0	0	10	10
17:00	0	0	11	0	0	0	11	11	0	0	64	9	0	1	74	75	0	0	5	0	0	0	5	5
17:15	0	0	12	0	0	0	12	12	0	0	72	9	0	0	81	81	0	0	4	0	0	0	4	4
17:30	0	0	10	0	0	0	10	10	0	0	75	5	0	0	80	80	0	0	3	0	0	0	3	3
17:45	0	0	11	1	0	0	12	12	0	0	72	4	0	1	77	78	0	0	3	0	0	0	3	3
H/TOT	0	0	44	1	0	0	45	45	0	0	283	27	0	2	312	314	0	0	15	0	0	0	15	15
PM TOT	0	0	82	1	0	1	84	85	0	0	756	90	2	6	854	863	0	0	24	4	0	0	28	28
TOTAL	0	0	119	4	0	3	126	129	0	0	1207	140	6	9	1362	1379	0	0	31	5	0	0	36	36

REF: Thurnscoe

SITE: J2

A = School Road
B = Houghton Road (East)
C = Houghton Road (West)

DAY: Tue 27th June 2017

	A => B								A => C								B => A								B => C								C => A								C => B							
TIME	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**
07:30	0	0	19	2	0	2	23	25	0	0	1	0	0	0	1	1	0	0	3	0	0	0	3	3	0	0	23	4	1	3	31	35.3	0	0	2	0	0	0	2	2	0	0	65	12	0	1	78	79
07:45	0	0	17	3	0	2	22	24	0	0	4	1	0	0	5	5	0	0	6	1	0	0	7	7	0	0	25	5	1	3	34	38.3	0	0	2	0	0	0	2	2	0	0	67	12	0	1	80	81
H/TOT	0	0	36	5	0	4	45	49	0	0	5	1	0	0	6	6	0	0	9	1	0	0	10	10	0	0	48	9	2	6	65	73.6	0	0	4	0	0	0	4	4	0	0	132	24	0	2	158	160
08:00	0	0	20	0	0	1	21	22	0	0	3	0	0	0	3	3	0	0	9	0	0	0	9	9	0	0	45	5	1	1	52	54.3	0	0	3	0	0	0	3	3	0	0	72	12	1	1	86	88.3
08:15	0	0	27	1	0	0	28	28	0	0	5	0	0	0	5	5	0	0	9	0	0	0	9	9	0	0	35	11	2	1	49	52.6	0	0	4	0	0	0	4	4	0	0	65	11	1	1	78	80.3
08:30	0	0	31	4	0	2	37	39	0	0	7	1	0	0	8	8	0	0	20	3	0	1	24	25	0	0	42	7	2	1	52	55.6	0	0	1	0	0	0	1	1	0	0	81	12	2	1	96	99.6
08:45	0	0	21	0	0	0	21	21	0	0	4	0	0	0	4	4	0	0	15	0	0	0	15	15	0	0	65	7	1	2	75	78.3	0	0	1	0	0	0	1	1	0	0	72	12	1	1	86	88.3
H/TOT	0	0	99	5	0	3	107	110	0	0	19	1	0	0	20	20	0	0	53	3	0	1	57	58	0	0	187	30	6	5	228	241	0	0	9	0	0	0	9	9	0	0	290	47	5	4	346	357
09:00	0	0	15	2	0	1	18	19	0	0	4	0	0	0	4	4	0	0	12	2	0	0	14	14	0	0	55	5	1	2	63	66.3	0	0	3	0	0	0	3	3	0	0	85	12	0	1	98	99
09:15	0	0	16	1	0	1	18	19	0	0	5	0	0	0	5	5	0	0	11	1	0	0	12	12	0	0	52	11	1	2	66	69.3	0	0	2	0	0	0	2	2	0	0	84	9	0	1	94	95
H/TOT	0	0	31	3	0	2	36	38	0	0	9	0	0	0	9	9	0	0	23	3	0	0	26	26	0	0	107	16	2	4	129	136	0	0	5	0	0	0	5	5	0	0	169	21	0	2	192	194
AM TOT	0	0	166	13	0	9	188	197	0	0	33	2	0	0	35	35	0	0	85	7	0	1	93	94	0	0	342	55	10	15	422	450	0	0	18	0	0	0	18	18	0	0	591	92	5	8	696	711
15:00	0	0	11	1	0	1	13	14	0	0	2	0	0	0	2	2	0	0	11	2	0	1	14	15	0	0	55	7	1	1	64	66.3	0	0	3	0	0	0	3	3	0	0	55	3	0	0	58	58
15:15	0	0	12	1	0	1	14	15	0	0	2	0	0	0	2	2	0	0	12	2	0	0	14	14	0	0	65	5	0	1	71	72	0	0	3	0	0	0	3	3	0	0	47	4	0	2	53	55
15:30	0	0	15	1	0	1	17	18	0	0	2	0	0	0	2	2	0	0	17	1	0	1	19	20	0	0	75	10	0	2	87	89	0	0	4	0	0	0	4	4	0	0	57	4	0	1	62	63
15:45	0	0	11	1	0	1	13	14	0	0	3	0	0	0	3	3	0	0	12	2	0	0	14	14	0	0	79	11	0	0	90	90	0	0	3	0	0	0	3	3	0	0	72	9	0	0	81	81
H/TOT	0	0	49	4	0	4	57	61	0	0	9	0	0	0	9	9	0	0	52	7	0	2	61	63	0	0	274	33	1	4	312	317	0	0	13	0	0	0	13	13	0	0	231	20	0	3	254	257
16:00	0	0	16	2	0	1	19	20	0	0	3	0	0	0	3	3	0	0	21	2	0	0	23	23	0	0	95	15	1	2	113	116	0	0	5	0	0	0	5	5	0	0	74	19	0	1	94	95
16:15	0	0	17	1	0	0	18	18	0	0	3	0	0	0	3	3	0	0	16	0	0	0	16	16	0	0	85	15	0	1	101	102	0	0	4	0	0	0	4	4	0	0	69	16	1	0	86	87.3
16:30	0	0	9	0	0	1	10	11	0	0	2	0	0	0	2	2	0	0	19	2	0	1	22	23	0	0	86	18	0	0	104	104	0	0	6	0	0	0	6	6	0	0	112	17	1	0	130	131
16:45	0	0	13	0	0	1	14	15	0	0	10	0	0	0	10	10	0	0	16	0	0	0	16	16	0	0	72	15	0	0	87	87	0	0	10	0	0	0	10	10	0	0	89	9	0	0	98	98
H/TOT	0	0	55	3	0	3	61	64	0	0	18	0	0	0	18	18	0	0	72	4	0	1	77	78	0	0	338	63	1	3	405	409	0	0	25	0	0	0	25	25	0	0	344	61	2	1	408	412
17:00	0	0	11	1	0	1	13	14	0	0	7	1	0	0	8	8	0	0	14	2	0	0	16	16	0	0	95	10	1	2	108	111	0	0	8	1	0	0	9	9	0	0	71	11	0	1	83	84
17:15	0	0	10	1	0	0	11	11	0	0	6	1	0	0	7	7	0	0	12	0	0	0	12	12	0	0	102	12	1	1	116	118	0	0	12	2	0	0	14	14	0	0	84	9	0	0	93	93
17:30	0	0	11	0	0	0	11	11	0	0	5	0	0	0	5	5	0	0	11	0	0	0	11	11	0	0	118	13	0	1	132	133	0	0	11	1	0	0	12	12	0	0	83	4	0	1	88	89
17:45	0	0	12	0	0	1	13	14	0	0	5	0	0	0	5	5	0	0	10	1	0	0	11	11	0	0	92	11	1	2	106	109	0	0	10	1	0	0	11	11	0	0	72	4	0	0	76	76
H/TOT	0	0	44	2	0	2	48	50	0	0	23	2	0	0	25	25	0	0	47	3	0	0	50	50	0	0	407	46	3	6	462	472	0	0	41	5	0	0	46	46	0	0	310	28	0	2	340	342
PM TOT	0	0	148	9	0	9	166	175	0	0	50	2	0	0	52	52	0	0	171	14	0	3	188	191	0	0	1019	142	5	13	1179	1199	0	0	79	5	0	0	84	84	0	0	885	109	2	6	1002	1011
TOTAL	0	0	314	22	0	18	354	372	0	0	83	4	0	0	87	87	0	0	256	21	0	4	281	285	0	0	1361	197	15	28	1601	1649	0	0	97	5	0	0	102	102	0	0	1476	201	7	14	1698	1721

REF: Thurnscoe

SITE: J3

A = John Street
B = Station Road
C = Shepherd Lane
D = Houghton Road (West)

DAY: Tue 27th June 2017

	A => B								A => C								A => D							
TIME	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**
07:30	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	3	0	0	0	0	0	0	0	0
07:45	0	0	2	0	0	0	2	2	0	0	3	0	0	0	3	3	0	0	0	0	0	0	0	0
H/TOT	0	0	2	0	0	0	2	2	0	0	6	0	0	0	6	6	0	0	0	0	0	0	0	0
08:00	0	0	1	1	0	0	2	2	0	0	3	0	0	0	3	3	0	0	2	0	0	0	2	2
08:15	0	0	1	3	0	0	4	4	0	0	3	0	0	0	3	3	0	0	1	0	0	0	1	1
08:30	0	0	1	0	0	0	1	1	0	0	3	0	0	0	3	3	0	0	0	0	0	0	0	0
08:45	0	0	2	0	0	0	2	2	0	0	1	0	0	0	1	1	0	0	2	0	0	0	2	2
H/TOT	0	0	5	4	0	0	9	9	0	0	10	0	0	0	10	10	0	0	5	0	0	0	5	5
09:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15	0	0	1	0	0	0	1	1	0	0	2	0	0	0	2	2	0	0	2	0	0	0	2	2
H/TOT	0	0	1	0	0	0	1	1	0	0	2	0	0	0	2	2	0	0	2	0	0	0	2	2
AM TOT	0	0	8	4	0	0	12	12	0	0	18	0	0	0	18	18	0	0	7	0	0	0	7	7
15:00	0	0	1	0	0	0	1	1	0	0	1	0	0	0	1	1	0	0	1	0	0	0	1	1
15:15	0	0	1	0	0	0	1	1	0	0	1	0	0	0	1	1	0	0	1	0	0	0	1	1
15:30	0	0	1	0	0	0	1	1	0	0	0	1	0	0	1	1	0	0	2	0	0	0	2	2
15:45	0	0	2	0	0	0	2	2	0	0	1	0	0	0	1	1	0	0	2	0	0	0	2	2
H/TOT	0	0	5	0	0	0	5	5	0	0	3	1	0	0	4	4	0	0	6	0	0	0	6	6
16:00	0	0	1	0	0	0	1	1	0	0	1	1	0	0	2	2	0	0	1	0	0	0	1	1
16:15	0	0	2	0	0	0	2	2	0	0	2	0	0	0	2	2	0	0	0	0	0	0	0	0
16:30	0	0	1	0	0	0	1	1	0	0	4	0	0	0	4	4	0	0	1	0	0	0	1	1
16:45	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	5	0	0	0	5	5	0	0	7	1	0	0	8	8	0	0	2	0	0	0	2	2
17:00	0	0	1	0	0	0	1	1	0	0	1	0	0	0	1	1	0	0	1	0	0	0	1	1
17:15	0	0	1	0	0	0	1	1	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0
17:30	0	0	1	0	0	0	1	1	0	0	1	0	0	0	1	1	0	0	1	0	0	0	1	1
17:45	0	0	1	0	0	0	1	1	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0
H/TOT	0	0	4	0	0	0	4	4	0	0	4	0	0	0	4	4	0	0	2	0	0	0	2	2
PM TOT	0	0	14	0	0	0	14	14	0	0	14	2	0	0	16	16	0	0	10	0	0	0	10	10
TOTAL	0	0	22	4	0	0	26	26	0	0	32	2	0	0	34	34	0	0	17	0	0	0	17	17

	B => A								B => C								B => D							
TIME	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**
07:30	0	0	0	0	0	0	0	0	0	0	30	8	0	0	38	38	0	0	11	4	1	1	17	19.3
07:45	0	0	2	0	0	0	2	2	0	0	19	2	0	2	23	25	0	0	15	5	1	1	22	24.3
H/TOT	0	0	2	0	0	0	2	2	0	0	49	10	0	2	61	63	0	0	26	9	2	2	39	43.6
08:00	0	0	0	0	0	0	0	0	0	0	35	7	0	1	43	44	0	0	24	3	1	1	29	31.3
08:15	0	0	0	1	0	0	1	1	0	0	26	4	0	0	30	30	0	0	11	8	1	0	20	21.3
08:30	0	0	0	0	0	0	0	0	0	0	29	1	0	1	31	32	0	0	32	5	2	2	41	45.6
08:45	0	0	1	0	0	0	1	1	0	0	26	6	0	0	32	32	0	0	44	5	2	2	53	57.6
H/TOT	0	0	1	1	0	0	2	2	0	0	116	18	0	2	136	138	0	0	111	21	6	5	143	156
09:00	0	0	1	0	0	0	1	1	0	0	39	5	0	0	44	44	0	0	35	7	1	2	45	48.3
09:15	0	0	1	0	0	0	1	1	0	0	35	4	0	0	39	39	0	0	30	12	1	2	45	48.3
H/TOT	0	0	2	0	0	0	2	2	0	0	74	9	0	0	83	83	0	0	65	19	2	4	90	96.6
AM TOT	0	0	5	1	0	0	6	6	0	0	239	37	0	4	280	284	0	0	202	49	10	11	272	296
15:00	0	0	1	0	0	0	1	1	0	0	29	3	0	1	33	34	0	0	35	7	1	2	45	48.3
15:15	0	0	1	0	0	0	1	1	0	0	25	3	0	0	28	28	0	0	45	5	0	1	51	52
15:30	0	0	1	0	0	0	1	1	0	0	30	3	0	1	34	35	0	0	55	10	0	3	68	71
15:45	0	0	2	0	0	0	2	2	0	0	31	3	0	0	34	34	0	0	52	12	0	0	64	64
H/TOT	0	0	5	0	0	0	5	5	0	0	115	12	0	2	129	131	0	0	187	34	1	6	228	235
16:00	0	0	2	1	0	0	3	3	0	0	25	3	0	0	28	28	0	0	79	14	1	2	96	99.3
16:15	0	0	1	0	0	0	1	1	0	0	38	8	0	1	47	48	0	0	70	15	0	1	86	87
16:30	0	0	2	0	0	0	2	2	0	0	40	8	1	0	49	50.3	0	0	72	15	0	1	88	89
16:45	0	0	2	1	0	0	3	3	0	0	35	6	0	1	42	43	0	0	56	12	0	0	68	68
H/TOT	0	0	7	2	0	0	9	9	0	0	138	25	1	2	166	169	0	0	277	56	1	4	338	343
17:00	0	0	2	1	0	0	3	3	0	0	47	9	0	0	56	56	0	0	65	9	1	2	77	80.3
17:15	0	0	2	0	0	0	2	2	0	0	55	6	0	1	62	63	0	0	75	10	1	1	87	89.3
17:30	0	0	1	0	0	0	1	1	0	0	45	7	0	1	53	54	0	0	92	12	0	1	105	106
17:45	0	0	1	0	0	0	1	1	0	0	52	7	0	1	60	61	0	0	71	11	1	2	85	88.3
H/TOT	0	0	6	1	0	0	7	7	0	0	199	29	0	3	231	234	0	0	303	42	3	6	354	364
PM TOT	0	0	18	3	0	0	21	21	0	0	452	66	1	7	526	534	0	0	767	132	5	16	920	943
TOTAL	0	0	23	4	0	0	27	27	0	0	691	103	1	11	806	818	0	0	969	181	15	27	1192	1239

	C => A								C => B								C => D							
TIME	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**
07:30	0	0	0	0	0	0	0	0	0	0	23	4	0	0	27	27	0	0	14	5	0	2	21	23
07:45	0	0	1	0	0	0	1	1	0	0	21	11	0	0	32	32	0	0	16	0	0	2	18	20
H/TOT	0	0	1	0	0	0	1	1	0	0	44	15	0	0	59	59	0	0	30	5	0	4	39	43
08:00	0	0	1	0	0	0	1	1	0	0	28	7	0	0	35	35	0	0	24	2	0	0	26	26
08:15	0	0	3	0	0	0	3	3	0	0	37	0	0	0	37	37	0	0	36	3	1	1	41	43.3
08:30	0	0	4	0	0	0	4	4	0	0	35	8	0	0	43	43	0	0	31	2	0	0	33	33
08:45	0	0	5	0	0	0	5	5	0	0	33	6	0	0	39	39	0	0	30	2	0	0	32	32
H/TOT	0	0	13	0	0	0	13	13	0	0	133	21	0	0	154	154	0	0	121	9	1	1	132	134
09:00	0	0	0	0	0	0	0	0	0	0	34	2	0	0	36	36	0	0	35	0	0	0	35	35
09:15	0	0	3	0	0	0	3	3	0	0	40	3	0	0	43	43	0	0	32	0	0	0	32	32
H/TOT	0	0	3	0	0	0	3	3	0	0	74	5	0	0	79	79	0	0	67	0	0	0	67	67
AM TOT	0	0	17	0	0	0	17	17	0	0	251	41	0	0	292	292	0	0	218	14	1	5	238	244
15:00	0	0	2	0	0	0	2	2	0	0	39	3	0	0	42	42	0	0	28	2	0	0	30	30
15:15	0	0	0	0	0	0	0	0	0	0	38	2	0	0	40	40	0	0	30	2	0	0	32	32
15:30	0	0	3	0	0	0	3	3	0	0	44	2	0	0	46	46	0	0	33	3	0	0	36	36
15:45	0	0	0	0	0	0	0	0	0	0	43	2	0	0	45	45	0	0	31	1	0	0	32	32
H/TOT	0	0	5	0	0	0	5	5	0	0	164	9	0	0	173	173	0	0	122	8	0	0	130	130
16:00	0	0	2	0	0	0	2	2	0	0	50	2	0	0	52	52	0	0	34	3	0	0	37	37
16:15	0	0	0	0	0	0	0	0	0	0	34	4	0	0	38	38	0	0	34	0	0	0	34	34
16:30	0	0	4	0	0	0	4	4	0	0	30	2	0	0	32	32	0	0	35	4	0	0	39	39
16:45	0	0	1	0	0	0	1	1	0	0	41	0	0	0	41	41	0	0	33	3	0	0	36	36
H/TOT	0	0	7	0	0	0	7	7	0	0	155	8	0	0	163	163	0	0	136	10	0	0	146	146
17:00	0	0	1	0	0	0	1	1	0	0	34	4	0	0	38	38	0	0	41	4	0	0	45	45
17:15	0	0	1	0	0	0	1	1	0	0	30	2	0	0	32	32	0	0	40	2	0	0	42	42
17:30	0	0	0	0	0	0	0	0	0	0	28	2	0	0	30	30	0	0	35	2	0	0	37	37
17:45	0	0	1	0	0	0	1	1	0	0	29	2	0	0	31	31	0	0	33	2	0	0	35	35
H/TOT	0	0	3	0	0	0	3	3	0	0	121	10	0	0	131	131	0	0	149	10	0	0	159	159
PM TOT	0	0	15	0	0	0	15	15	0	0	440	27	0	0	467	467	0	0	407	28	0	0	435	435
TOTAL	0	0	32	0	0	0	32	32	0	0	691	68	0	0	759	759	0	0	625	42	1	5	673	679

	D => A								D=> B								D => C							
TIME	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**
07:30	0	0	0	0	0	0	0	0	0	0	26	10	0	3	39	42	0	0	58	4	0	0	62	62
07:45	0	0	1	0	0	0	1	1	0	0	43	11	0	2	56	58	0	0	40	4	0	1	45	46
H/TOT	0	0	1	0	0	0	1	1	0	0	69	21	0	5	95	100	0	0	98	8	0	1	107	108
08:00	0	0	0	1	0	0	1	1	0	0	52	7	1	2	62	65.3	0	0	40	4	0	0	44	44
08:15	0	0	3	0	0	0	3	3	0	0	54	9	0	1	64	65	0	0	35	3	1	0	39	40.3
08:30	0	0	4	0	0	0	4	4	0	0	73	15	2	3	93	98.6	0	0	35	1	0	0	36	36
08:45	0	0	0	0	0	0	0	0	0	0	71	10	1	1	83	85.3	0	0	22	2	0	0	24	24
H/TOT	0	0	7	1	0	0	8	8	0	0	250	41	4	7	302	314	0	0	132	10	1	0	143	144
09:00	0	0	2	0	0	0	2	2	0	0	77	13	0	2	92	94	0	0	21	1	0	0	22	22
09:15	0	0	1	0	0	0	1	1	0	0	65	7	0	2	74	76	0	0	34	3	0	0	37	37
H/TOT	0	0	3	0	0	0	3	3	0	0	142	20	0	4	166	170	0	0	55	4	0	0	59	59
AM TOT	0	0	11	1	0	0	12	12	0	0	461	82	4	16	563	584	0	0	285	22	1	1	309	311
15:00	0	0	3	0	0	0	3	3	0	0	30	1	0	1	32	33	0	0	33	3	0	0	36	36
15:15	0	0	3	0	0	0	3	3	0	0	21	2	0	3	26	29	0	0	35	3	0	0	38	38
15:30	0	0	4	0	0	0	4	4	0	0	30	1	0	2	33	35	0	0	38	4	0	0	42	42
15:45	0	0	1	0	0	0	1	1	0	0	50	7	0	1	58	59	0	0	32	3	0	0	35	35
H/TOT	0	0	11	0	0	0	11	11	0	0	131	11	0	7	149	156	0	0	138	13	0	0	151	151
16:00	0	0	1	0	0	0	1	1	0	0	57	19	0	2	78	80	0	0	32	2	0	0	34	34
16:15	0	0	1	0	0	0	1	1	0	0	54	16	1	0	71	72.3	0	0	31	1	0	0	32	32
16:30	0	0	1	0	0	0	1	1	0	0	86	15	1	1	103	105	0	0	34	2	0	0	36	36
16:45	0	0	2	0	0	0	2	2	0	0	70	6	0	1	77	78	0	0	30	3	0	0	33	33
H/TOT	0	0	5	0	0	0	5	5	0	0	267	56	2	4	329	336	0	0	127	8	0	0	135	135
17:00	0	0	1	0	0	0	1	1	0	0	47	11	0	2	60	62	0	0	34	1	0	0	35	35
17:15	0	0	1	0	0	0	1	1	0	0	58	7	0	0	65	65	0	0	35	3	0	0	38	38
17:30	0	0	1	0	0	0	1	1	0	0	55	1	0	1	57	58	0	0	38	3	0	0	41	41
17:45	0	0	1	0	0	0	1	1	0	0	54	1	0	1	56	57	0	0	29	3	0	0	32	32
H/TOT	0	0	4	0	0	0	4	4	0	0	214	20	0	4	238	242	0	0	136	10	0	0	146	146
PM TOT	0	0	20	0	0	0	20	20	0	0	612	87	2	15	716	734	0	0	401	31	0	0	432	432
TOTAL	0	0	31	1	0	0	32	32	0	0	1073	169	6	31	1279	1318	0	0	686	53	1	1	741	743

REF: Thurnscoe

SITE: J4

A = **Nicholas Lane**
B = **Barnsley Road (East)**
C = **Highgate Lane**
D = **Barnsley Road (West)**

DAY: Tue 27th June 2017

Pedestrians can be found to the right of the junction movements

	A => B								A => C								A => D							
TIME	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU
07:30	0	0	18	2	0	1	21	22	0	0	115	4	0	0	119	119	0	0	32	4	0	0	36	36
07:45	0	0	26	2	1	2	31	34.3	0	0	86	8	0	0	94	94	0	0	28	4	0	0	32	32
H/TOT	0	0	44	4	1	3	52	56.3	0	0	201	12	0	0	213	213	0	0	60	8	0	0	68	68
08:00	0	0	35	2	0	1	38	39	0	0	80	8	0	0	88	88	0	0	20	1	0	0	21	21
08:15	0	0	31	0	0	1	32	33	0	0	92	8	0	0	100	100	0	0	26	0	0	0	26	26
08:30	0	0	35	3	1	1	40	42.3	0	0	75	5	1	0	81	82.3	0	0	25	1	0	0	26	26
08:45	0	0	45	2	0	1	48	49	0	0	85	5	0	0	90	90	0	0	23	2	0	0	25	25
H/TOT	0	0	146	7	1	4	158	163	0	0	332	26	1	0	359	360	0	0	94	4	0	0	98	98
09:00	0	0	38	2	0	1	41	42	0	0	84	6	1	0	91	92.3	0	0	22	0	0	0	22	22
09:15	0	0	32	2	0	1	35	36	0	0	82	5	0	0	87	87	0	0	19	2	0	0	21	21
H/TOT	0	0	70	4	0	2	76	78	0	0	166	11	1	0	178	179	0	0	41	2	0	0	43	43
AM TOT	0	0	260	15	2	9	286	298	0	0	699	49	2	0	750	753	0	0	195	14	0	0	209	209
15:00	0	0	25	1	1	1	28	30.3	0	0	77	0	0	0	77	77	0	0	26	0	1	0	27	28.3
15:15	0	0	42	8	0	3	53	56	0	0	65	5	0	0	70	70	0	0	22	5	0	0	27	27
15:30	0	0	24	1	0	2	27	29	0	0	85	5	0	0	90	90	0	0	35	5	0	0	40	40
15:45	0	0	28	3	0	2	33	35	0	0	64	3	0	0	67	67	0	0	37	6	0	0	43	43
H/TOT	0	0	119	13	1	8	141	150	0	0	291	13	0	0	304	304	0	0	120	16	1	0	137	138
16:00	0	0	32	4	0	2	38	40	0	0	82	3	0	0	85	85	0	0	45	3	0	0	48	48
16:15	0	0	52	4	2	1	59	62.6	0	0	61	3	0	0	64	64	0	0	42	5	1	0	48	49.3
16:30	0	0	66	5	1	1	73	75.3	0	0	62	2	0	0	64	64	0	0	38	1	0	0	39	39
16:45	0	0	48	6	0	1	55	56	0	0	63	1	0	0	64	64	0	0	32	4	0	0	36	36
H/TOT	0	0	198	19	3	5	225	234	0	0	268	9	0	0	277	277	0	0	157	13	1	0	171	172
17:00	0	0	62	7	0	2	71	73	0	0	55	4	0	0	59	59	0	0	55	2	0	0	57	57
17:15	0	0	72	7	1	1	81	83.3	0	0	59	4	0	0	63	63	0	0	45	2	0	0	47	47
17:30	0	0	75	8	0	1	84	85	0	0	91	2	0	0	93	93	0	0	38	3	0	0	41	41
17:45	0	0	82	9	0	1	92	93	0	0	92	3	0	0	95	95	0	0	39	2	0	0	41	41
H/TOT	0	0	291	31	1	5	328	334	0	0	297	13	0	0	310	310	0	0	177	9	0	0	186	186
PM TOT	0	0	608	63	5	18	694	719	0	0	856	35	0	0	891	891	0	0	454	38	2	0	494	497
TOTAL	0	0	868	78	7	27	980	1016	0	0	1555	84	2	0	1641	1644	0	0	649	52	2	0	703	706

	B => A								B => C								B => D							
TIME	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU
07:30	0	0	7	1	0	0	8	8	0	0	24	4	1	0	29	30.3	0	0	40	5	1	1	47	49.3
07:45	0	0	10	1	1	1	13	15.3	0	0	23	3	1	0	27	28.3	0	0	36	2	1	1	40	42.3
H/TOT	0	0	17	2	1	1	21	23.3	0	0	47	7	2	0	56	58.6	0	0	76	7	2	2	87	91.6
08:00	0	0	18	0	0	0	18	18	0	0	28	1	1	0	30	31.3	0	0	39	4	1	2	46	49.3
08:15	0	0	21	1	1	0	23	24.3	0	0	16	0	1	0	17	18.3	0	0	26	4	1	2	33	36.3
08:30	0	0	22	0	0	0	22	22	0	0	15	1	0	0	16	16	0	0	26	4	0	1	31	32
08:45	0	0	15	0	0	1	16	17	0	0	19	0	0	0	19	19	0	0	35	3	0	1	39	40
H/TOT	0	0	76	1	1	1	79	81.3	0	0	78	2	2	0	82	84.6	0	0	126	15	2	6	149	158
09:00	0	0	22	0	0	1	23	24	0	0	11	0	0	0	11	11	0	0	32	3	0	1	36	37
09:15	0	0	16	1	0	1	18	19	0	0	12	1	0	1	14	15	0	0	36	2	1	1	40	42.3
H/TOT	0	0	38	1	0	2	41	43	0	0	23	1	0	1	25	26	0	0	68	5	1	2	76	79.3
AM TOT	0	0	131	4	2	4	141	148	0	0	148	10	4	1	163	169	0	0	270	27	5	10	312	329
15:00	0	0	12	1	0	1	14	15	0	0	14	1	0	0	15	15	0	0	45	3	0	2	50	52
15:15	0	0	11	0	0	2	13	15	0	0	17	0	0	1	18	19	0	0	55	3	0	3	61	64
15:30	0	0	17	2	0	1	20	21	0	0	18	1	0	0	19	19	0	0	65	3	0	1	69	70
15:45	0	0	16	0	0	1	17	18	0	0	22	0	0	0	22	22	0	0	72	5	0	4	81	85
H/TOT	0	0	56	3	0	5	64	69	0	0	71	2	0	1	74	75	0	0	237	14	0	10	261	271
16:00	0	0	21	1	0	3	25	28	0	0	23	1	0	0	24	24	0	0	55	5	0	2	62	64
16:15	0	0	22	1	0	2	25	27	0	0	21	1	0	1	23	24	0	0	58	5	0	3	66	69
16:30	0	0	35	0	1	1	37	39.3	0	0	15	0	0	0	15	15	0	0	54	3	0	2	59	61
16:45	0	0	21	0	0	1	22	23	0	0	7	0	0	0	7	7	0	0	53	4	0	2	59	61
H/TOT	0	0	99	2	1	7	109	117	0	0	66	2	0	1	69	70	0	0	220	17	0	9	246	255
17:00	0	0	22	2	0	1	25	26	0	0	11	0	0	0	11	11	0	0	55	4	0	1	60	61
17:15	0	0	26	1	0	1	28	29	0	0	22	1	0	1	24	25	0	0	52	4	0	2	58	60
17:30	0	0	23	1	0	1	25	26	0	0	23	0	0	0	23	23	0	0	53	5	0	2	60	62
17:45	0	0	22	0	0	1	23	24	0	0	30	1	0	0	31	31	0	0	56	3	0	2	61	63
H/TOT	0	0	93	4	0	4	101	105	0	0	86	2	0	1	89	90	0	0	216	16	0	7	239	246
PM TOT	0	0	248	9	1	16	274	291	0	0	223	6	0	3	232	235	0	0	673	47	0	26	746	772
TOTAL	0	0	379	13	3	20	415	439	0	0	371	16	4	4	395	404	0	0	943	74	5	36	1058	1101

	C => A								C => B								C => D							
TIME	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU
07:30	0	0	11	4	0	1	16	17	0	0	19	4	0	0	23	23	0	0	3	0	0	0	3	3
07:45	0	0	35	1	0	0	36	36	0	0	31	5	0	0	36	36	0	0	14	1	0	0	15	15
H/TOT	0	0	46	5	0	1	52	53	0	0	50	9	0	0	59	59	0	0	17	1	0	0	18	18
08:00	0	0	42	0	0	0	42	42	0	0	50	7	0	0	57	57	0	0	14	3	0	0	17	17
08:15	0	0	43	2	0	0	45	45	0	0	36	5	0	0	41	41	0	0	11	3	0	0	14	14
08:30	0	0	45	1	0	1	47	48	0	0	45	4	1	0	50	51.3	0	0	12	1	0	0	13	13
08:45	0	0	35	1	0	0	36	36	0	0	47	5	0	0	52	52	0	0	11	2	0	0	13	13
H/TOT	0	0	165	4	0	1	170	171	0	0	178	21	1	0	200	201	0	0	48	9	0	0	57	57
09:00	0	0	22	2	0	1	25	26	0	0	42	5	0	0	47	47	0	0	12	0	0	0	12	12
09:15	0	0	29	2	0	0	31	31	0	0	41	3	0	0	44	44	0	0	12	3	0	0	15	15
H/TOT	0	0	51	4	0	1	56	57	0	0	83	8	0	0	91	91	0	0	24	3	0	0	27	27
AM TOT	0	0	262	13	0	3	278	281	0	0	311	38	1	0	350	351	0	0	89	13	0	0	102	102
15:00	0	0	26	3	0	0	29	29	0	0	36	1	0	0	37	37	0	0	11	0	0	0	11	11
15:15	0	0	35	0	0	1	36	37	0	0	45	1	1	0	47	48.3	0	0	9	1	0	0	10	10
15:30	0	0	32	3	0	0	35	35	0	0	52	5	0	0	57	57	0	0	11	1	0	0	12	12
15:45	0	0	39	0	0	0	39	39	0	0	38	0	0	0	38	38	0	0	15	0	0	0	15	15
H/TOT	0	0	132	6	0	1	139	140	0	0	171	7	1	0	179	180	0	0	46	2	0	0	48	48
16:00	0	0	45	0	0	0	45	45	0	0	22	6	0	0	28	28	0	0	16	1	0	0	17	17
16:15	0	0	55	5	0	1	61	62	0	0	39	1	0	0	40	40	0	0	12	2	0	0	14	14
16:30	0	0	52	5	0	0	57	57	0	0	65	5	0	0	70	70	0	0	18	0	0	0	18	18
16:45	0	0	38	3	0	0	41	41	0	0	52	3	0	0	55	55	0	0	11	0	0	0	11	11
H/TOT	0	0	190	13	0	1	204	205	0	0	178	15	0	0	193	193	0	0	57	3	0	0	60	60
17:00	0	0	42	2	0	0	44	44	0	0	38	3	0	0	41	41	0	0	12	3	0	0	15	15
17:15	0	0	48	1	0	1	50	51	0	0	35	1	0	0	36	36	0	0	9	0	0	0	9	9
17:30	0	0	41	5	0	0	46	46	0	0	51	5	0	0	56	56	0	0	14	0	0	0	14	14
17:45	0	0	52	3	0	0	55	55	0	0	50	3	0	0	53	53	0	0	11	1	0	0	12	12
H/TOT	0	0	183	11	0	1	195	196	0	0	174	12	0	0	186	186	0	0	46	4	0	0	50	50
PM TOT	0	0	505	30	0	3	538	541	0	0	523	34	1	0	558	559	0	0	149	9	0	0	158	158
TOTAL	0	0	767	43	0	6	816	822	0	0	834	72	2	0	908	911	0	0	238	22	0	0	260	260

	D => A								D=> B								D => C							
TIME	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU
07:30	0	0	8	2	1	1	12	14.3	0	0	19	5	2	3	29	34.6	0	0	32	1	0	0	33	33
07:45	0	0	7	2	0	0	9	9	0	0	32	4	0	0	36	36	0	0	18	4	0	0	22	22
H/TOT	0	0	15	4	1	1	21	23.3	0	0	51	9	2	3	65	70.6	0	0	50	5	0	0	55	55
08:00	0	0	8	1	0	0	9	9	0	0	32	5	2	3	42	47.6	0	0	27	0	1	0	28	29.3
08:15	0	0	17	2	0	0	19	19	0	0	45	5	2	2	54	58.6	0	0	23	2	0	0	25	25
08:30	0	0	15	0	0	0	15	15	0	0	41	2	2	1	46	49.6	0	0	25	0	0	0	25	25
08:45	0	0	11	1	0	1	13	14	0	0	38	3	0	0	41	41	0	0	22	2	0	0	24	24
H/TOT	0	0	51	4	0	1	56	57	0	0	156	15	6	6	183	197	0	0	97	4	1	0	102	103
09:00	0	0	12	1	0	1	14	15	0	0	36	3	0	1	40	41	0	0	21	2	0	0	23	23
09:15	0	0	21	0	0	0	21	21	0	0	32	2	1	1	36	38.3	0	0	25	3	0	0	28	28
H/TOT	0	0	33	1	0	1	35	36	0	0	68	5	1	2	76	79.3	0	0	46	5	0	0	51	51
AM TOT	0	0	99	9	1	3	112	116	0	0	275	29	9	11	324	347	0	0	193	14	1	0	208	209
15:00	0	0	16	0	0	0	16	16	0	0	45	0	0	0	45	45	0	0	18	0	0	0	18	18
15:15	0	0	14	1	0	1	16	17	0	0	48	1	1	0	50	51.3	0	0	22	1	0	0	23	23
15:30	0	0	15	1	0	0	16	16	0	0	55	2	0	1	58	59	0	0	23	1	0	0	24	24
15:45	0	0	11	0	0	0	11	11	0	0	52	4	0	0	56	56	0	0	22	0	0	0	22	22
H/TOT	0	0	56	2	0	1	59	60	0	0	200	7	1	1	209	211	0	0	85	2	0	0	87	87
16:00	0	0	12	0	0	0	12	12	0	0	65	4	0	0	69	69	0	0	21	0	0	0	21	21
16:15	0	0	9	1	0	0	10	10	0	0	62	2	2	1	67	70.6	0	0	35	1	0	0	36	36
16:30	0	0	14	1	0	1	16	17	0	0	55	3	1	0	59	60.3	0	0	42	2	0	0	44	44
16:45	0	0	13	0	0	0	13	13	0	0	58	3	0	0	61	61	0	0	38	0	0	0	38	38
H/TOT	0	0	48	2	0	1	51	52	0	0	240	12	3	1	256	261	0	0	136	3	0	0	139	139
17:00	0	0	12	0	0	1	13	14	0	0	55	0	0	0	55	55	0	0	22	0	0	0	22	22
17:15	0	0	11	0	0	0	11	11	0	0	52	2	1	0	55	56.3	0	0	21	0	0	0	21	21
17:30	0	0	14	2	0	0	16	16	0	0	48	1	1	1	51	53.3	0	0	26	2	0	0	28	28
17:45	0	0	15	1	0	0	16	16	0	0	48	9	0	0	57	57	0	0	22	1	0	0	23	23
H/TOT	0	0	52	3	0	1	56	57	0	0	203	12	2	1	218	222	0	0	91	3	0	0	94	94
PM TOT	0	0	156	7	0	3	166	169	0	0	643	31	6	3	683	694	0	0	312	8	0	0	320	320
TOTAL	0	0	255	16	1	6	278	285	0	0	918	60	15	14	1007	1041	0	0	505	22	1	0	528	529

	Crossing at A		Crossing at B		Crossing at C		Crossing at D	
TIME	Eastbound	Westbound	Northbound	Southbound	Eastbound	Westbound	Northbound	Southbound
07:30	1	0	0	1	1	1	0	0
07:45	2	3	2	1	1	0	2	2
H/TOT	3	3	2	2	2	1	2	2
08:00	2	1	0	0	0	0	0	0
08:15	2	0	1	3	0	0	5	0
08:30	2	5	2	3	0	1	2	4
08:45	4	11	3	3	2	1	4	9
H/TOT	10	17	6	9	2	2	11	13
09:00	4	4	1	1	2	1	4	4
09:15	3	3	2	2	2	2	3	4
H/TOT	7	7	3	3	4	3	7	8
AM TOT	20	27	11	14	8	6	20	23
15:00	2	2	1	1	2	2	2	2
15:15	2	2	1	1	0	0	2	2
15:30	1	3	0	3	0	0	2	1
15:45	3	3	0	1	0	0	2	1
H/TOT	8	10	2	6	2	2	8	6
16:00	6	0	0	0	0	0	0	0
16:15	1	4	1	1	0	0	0	2
16:30	1	1	5	0	0	1	0	1
16:45	3	3	0	0	0	0	1	1
H/TOT	11	8	6	1	0	1	1	4
17:00	4	2	3	1	1	5	2	1
17:15	2	0	2	0	3	0	2	1
17:30	2	0	0	0	1	1	2	1
17:45	2	1	1	0	1	1	2	1
H/TOT	10	3	6	1	6	7	8	4
PM TOT	29	21	14	8	8	10	17	14
TOTAL	49	48	25	22	16	16	37	37

REF: Thurnscoe

SITE: J5

A = A635 (North East)
B = Barnsley Road (East)
C = Dudley Drive
D = A635 (West)

DAY: Tue 27th June 2017

	A => B								**A => C**								**A => D**							
TIME	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**
07:30	0	0	1	0	0	0	1	1	0	0	11	0	7	0	18	27.1	0	0	123	0	18	2	143	168
07:45	0	0	2	0	0	0	2	2	0	0	3	0	10	0	13	26	0	0	131	15	19	2	167	194
H/TOT	0	0	3	0	0	0	3	3	0	0	14	0	17	0	31	53.1	0	0	254	15	37	4	310	362
08:00	0	0	2	0	0	0	2	2	0	0	10	0	6	0	16	23.8	0	0	124	14	16	0	154	175
08:15	0	0	1	0	0	0	1	1	0	0	28	0	11	0	39	53.3	0	0	131	21	18	0	170	193
08:30	0	0	8	1	0	0	9	9	0	0	26	0	6	0	32	39.8	0	0	97	18	17	0	132	154
08:45	0	0	9	0	0	0	9	9	0	0	27	0	2	0	29	31.6	0	0	99	12	17	0	128	150
H/TOT	0	0	20	1	0	0	21	21	0	0	91	0	25	0	116	149	0	0	451	65	68	0	584	672
09:00	0	0	11	0	0	0	11	11	0	0	22	2	8	0	32	42.4	0	0	88	11	12	0	111	127
09:15	0	0	12	0	0	0	12	12	0	0	21	2	8	0	31	41.4	0	0	82	12	12	0	106	122
H/TOT	0	0	23	0	0	0	23	23	0	0	43	4	16	0	63	83.8	0	0	170	23	24	0	217	248
AM TOT	0	0	46	1	0	0	47	47	0	0	148	4	58	0	210	285	0	0	875	103	129	4	1111	1283
15:00	0	0	9	0	0	0	9	9	0	0	11	0	2	0	13	15.6	0	0	75	9	1	0	85	86.3
15:15	0	0	7	1	0	0	8	8	0	0	2	0	2	0	4	6.6	0	0	65	9	5	1	80	87.5
15:30	0	0	5	0	0	0	5	5	0	0	6	1	2	0	9	11.6	0	0	72	18	2	0	92	94.6
15:45	0	0	5	0	0	0	5	5	0	0	5	0	2	0	7	9.6	0	0	84	11	5	0	100	107
H/TOT	0	0	26	1	0	0	27	27	0	0	24	1	8	0	33	43.4	0	0	296	47	13	1	357	375
16:00	0	0	5	0	0	0	5	5	0	0	5	0	2	0	7	9.6	0	0	89	12	6	0	107	115
16:15	0	0	4	1	0	0	5	5	0	0	6	1	1	0	8	9.3	0	0	92	13	5	1	111	119
16:30	0	0	7	0	0	0	7	7	0	0	11	2	2	0	15	17.6	0	0	82	14	7	1	104	114
16:45	0	0	7	0	0	0	7	7	0	0	12	0	3	0	15	18.9	0	0	102	12	8	0	122	132
H/TOT	0	0	23	1	0	0	24	24	0	0	34	3	8	0	45	55.4	0	0	365	51	26	2	444	480
17:00	0	0	8	0	0	0	8	8	0	0	12	0	2	0	14	16.6	0	0	103	12	8	0	123	133
17:15	0	0	1	0	0	0	1	1	0	0	11	2	4	0	17	22.2	0	0	103	12	7	0	122	131
17:30	0	0	7	0	0	0	7	7	0	0	12	0	3	0	15	18.9	0	0	107	11	11	0	129	143
17:45	0	0	7	0	0	0	7	7	0	0	12	1	4	0	17	22.2	0	0	122	12	5	1	140	148
H/TOT	0	0	23	0	0	0	23	23	0	0	47	3	13	0	63	79.9	0	0	435	47	31	1	514	555
PM TOT	0	0	72	2	0	0	74	74	0	0	105	7	29	0	141	179	0	0	1096	145	70	4	1315	1410
TOTAL	0	0	118	3	0	0	121	121	0	0	253	11	87	0	351	464	0	0	1971	248	199	8	2426	2693

	B => A								**B => C**								**B => D**							
TIME	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**
07:30	0	0	3	0	0	0	3	3	0	0	2	0	0	1	3	4	0	0	71	9	1	1	82	84.3
07:45	0	0	1	2	0	0	3	3	0	0	2	0	0	0	2	2	0	0	74	5	1	0	80	81.3
H/TOT	0	0	4	2	0	0	6	6	0	0	4	0	0	1	5	6	0	0	145	14	2	1	162	166
08:00	0	0	3	0	0	0	3	3	0	0	1	0	0	1	2	3	0	0	65	8	1	1	75	77.3
08:15	0	0	4	0	1	0	5	6.3	0	0	3	0	0	0	3	3	0	0	52	5	1	2	60	63.3
08:30	0	0	3	0	1	0	4	5.3	0	0	0	0	0	0	0	0	0	0	62	6	0	1	69	70
08:45	0	0	7	0	0	0	7	7	0	0	3	0	1	0	4	5.3	0	0	61	7	0	1	69	70
H/TOT	0	0	17	0	2	0	19	21.6	0	0	7	0	1	1	9	11.3	0	0	240	26	2	5	273	281
09:00	0	0	10	0	0	0	10	10	0	0	2	0	0	0	2	2	0	0	55	3	1	1	60	62.3
09:15	0	0	5	0	0	0	5	5	0	0	2	0	0	0	2	2	0	0	60	7	1	1	69	71.3
H/TOT	0	0	15	0	0	0	15	15	0	0	4	0	0	0	4	4	0	0	115	10	2	2	129	134
AM TOT	0	0	36	2	2	0	40	42.6	0	0	15	0	1	2	18	21.3	0	0	500	50	6	8	564	580
15:00	0	0	10	0	0	0	10	10	0	0	1	0	0	0	1	1	0	0	72	3	1	2	78	81.3
15:15	0	0	4	1	0	0	5	5	0	0	2	0	0	0	2	2	0	0	88	8	1	3	100	104
15:30	0	0	5	0	0	0	5	5	0	0	2	0	0	1	3	4	0	0	100	8	0	1	109	110
15:45	0	0	4	0	0	0	4	4	0	0	1	0	0	0	1	1	0	0	117	12	0	3	132	135
H/TOT	0	0	23	1	0	0	24	24	0	0	6	0	0	1	7	8	0	0	377	31	2	9	419	431
16:00	0	0	4	0	0	0	4	4	0	0	1	0	0	0	1	1	0	0	113	10	0	2	125	127
16:15	0	0	3	0	0	0	3	3	0	0	3	0	0	1	4	5	0	0	105	11	1	2	119	122
16:30	0	0	4	0	0	0	4	4	0	0	2	0	0	0	2	2	0	0	102	4	0	2	108	110
16:45	0	0	4	0	0	0	4	4	0	0	2	0	0	0	2	2	0	0	92	8	1	2	103	106
H/TOT	0	0	15	0	0	0	15	15	0	0	8	0	0	1	9	10	0	0	412	33	2	8	455	466
17:00	0	0	3	0	0	0	3	3	0	0	2	0	0	0	2	2	0	0	117	8	0	1	126	127
17:15	0	0	4	0	0	0	4	4	0	0	2	0	0	0	2	2	0	0	100	8	0	2	110	112
17:30	0	0	4	0	0	0	4	4	0	0	2	1	0	1	4	5	0	0	98	7	0	1	106	107
17:45	0	0	4	0	0	0	4	4	0	0	2	0	0	0	2	2	0	0	102	6	0	2	110	112
H/TOT	0	0	15	0	0	0	15	15	0	0	8	1	0	1	10	11	0	0	417	29	0	6	452	458
PM TOT	0	0	53	1	0	0	54	54	0	0	22	1	0	3	26	29	0	0	1206	93	4	23	1326	1354
TOTAL	0	0	89	3	2	0	94	96.6	0	0	37	1	1	5	44	50.3	0	0	1706	143	10	31	1890	1934

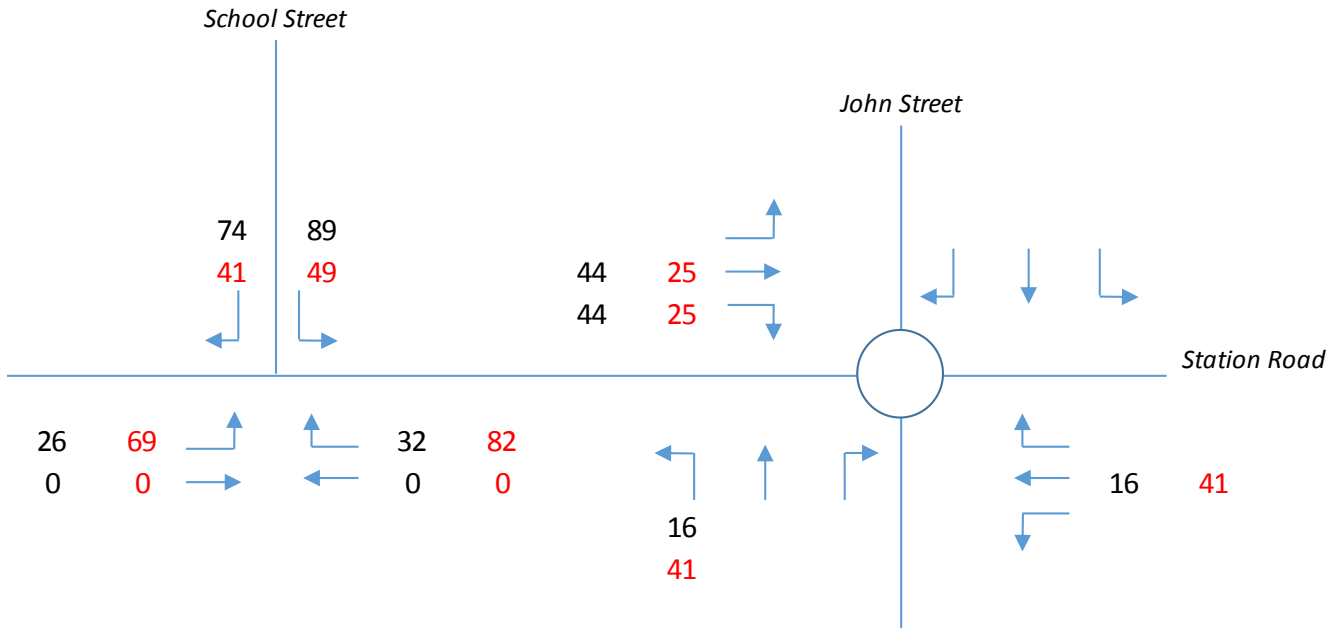
	C => A								**C => B**								**C => D**							
TIME	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**
07:30	0	0	2	0	0	4	6	10	0	0	1	0	0	0	1	1	0	0	20	1	0	1	22	23
07:45	0	0	3	0	0	3	6	9	0	0	1	0	0	1	2	3	0	0	33	4	0	0	37	37
H/TOT	0	0	5	0	0	7	12	19	0	0	2	0	0	1	3	4	0	0	53	5	0	1	59	60
08:00	0	0	5	0	0	2	7	9	0	0	0	0	0	0	0	0	0	0	32	1	0	4	37	41
08:15	0	0	1	0	0	1	2	3	0	0	1	0	0	0	1	1	0	0	22	1	0	3	26	29
08:30	0	0	4	0	0	3	7	10	0	0	0	0	0	0	0	0	0	0	34	2	0	3	39	42
08:45	0	0	4	0	0	0	4	4	0	0	1	0	0	0	1	1	0	0	32	0	0	2	34	36
H/TOT	0	0	14	0	0	6	20	26	0	0	2	0	0	0	2	2	0	0	120	4	0	12	136	148
09:00	0	0	3	0	0	1	4	5	0	0	1	0	0	0	1	1	0	0	22	1	0	2	25	27
09:15	0	0	3	0	0	1	4	5	0	0	2	0	0	0	2	2	0	0	23	1	0	2	26	28
H/TOT	0	0	6	0	0	2	8	10	0	0	3	0	0	0	3	3	0	0	45	2	0	4	51	55
AM TOT	0	0	25	0	0	15	40	55	0	0	7	0	0	1	8	9	0	0	218	11	0	17	246	263
15:00	0	0	4	0	2	2	8	12.6	0	0	1	0	0	0	1	1	0	0	22	0	0	1	23	24
15:15	0	0	4	0	2	3	9	14.6	0	0	2	1	0	0	3	3	0	0	35	1	0	0	36	36
15:30	0	0	4	0	2	2	8	12.6	0	0	1	1	0	0	2	2	0	0	21	1	0	2	24	26
15:45	0	0	5	0	0	2	7	9	0	0	1	0	0	0	1	1	0	0	11	1	1	1	14	16.3
H/TOT	0	0	17	0	6	9	32	48.8	0	0	5	2	0	0	7	7	0	0	89	3	1	4	97	102
16:00	0	0	2	0	2	7	11	20.6	0	0	1	0	0	0	1	1	0	0	17	2	0	3	22	25
16:15	0	0	7	0	3	5	15	23.9	0	0	2	0	0	0	2	2	0	0	35	1	0	3	39	42
16:30	0	0	10	0	2	6	18	26.6	0	0	1	0	0	0	1	1	0	0	61	2	0	2	65	67
16:45	0	0	8	0	1	2	11	14.3	0	0	1	0	0	0	1	1	0	0	51	0	0	1	52	53
H/TOT	0	0	27	0	8	20	55	85.4	0	0	5	0	0	0	5	5	0	0	164	5	0	9	178	187
17:00	0	0	12	0	0	3	15	18	0	0	1	0	0	0	1	1	0	0	68	0	0	0	68	68
17:15	0	0	12	0	2	3	17	22.6	0	0	2	0	0	0	2	2	0	0	64	2	0	1	67	68
17:30	0	0	11	0	2	1	14	17.6	0	0	1	0	1	1	3	5.3	0	0	55	3	0	0	58	58
17:45	0	0	10	0	2	1	13	16.6	0	0	1	2	0	0	3	3	0	0	52	1	0	0	53	53
H/TOT	0	0	45	0	6	8	59	74.8	0	0	5	2	1	1	9	11.3	0	0	239	6	0	1	246	247
PM TOT	0	0	89	0	20	37	146	209	0	0	15	4	1	1	21	23.3	0	0	492	14	1	14	521	536
TOTAL	0	0	114	0	20	52	186	264	0	0	22	4	1	2	29	32.3	0	0	710	25	1	31	767	799

	D => A								**D=> B**								**D => C**							
TIME	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**
07:30	0	0	75	9	5	0	89	95.5	0	0	67	11	2	1	81	84.6	0	0	22	2	0	1	25	26
07:45	0	0	85	19	5	0	109	116	0	0	65	6	3	1	75	79.9	0	0	23	2	0	2	27	29
H/TOT	0	0	160	28	10	0	198	211	0	0	132	17	5	2	156	165	0	0	45	4	0	3	52	55
08:00	0	0	82	18	9	0	109	121	0	0	82	6	2	2	92	96.6	0	0	25	2	0	3	30	33
08:15	0	0	94	22	12	1	129	146	0	0	62	6	3	2	73	78.9	0	0	27	2	0	2	31	33
08:30	0	0	92	17	3	1	113	118	0	0	55	4	1	1	61	63.3	0	0	35	2	0	2	39	41
08:45	0	0	87	15	5	0	107	114	0	0	58	3	1	2	64	67.3	0	0	32	3	0	2	37	39
H/TOT	0	0	355	72	29	2	458	498	0	0	257	19	7	7	290	306	0	0	119	9	0	9	137	146
09:00	0	0	85	13	5	1	104	112	0	0	52	3	0	2	57	59	0	0	35	3	0	2	40	42
09:15	0	0	83	12	5	0	100	107	0	0	51	4	1	3	59	63.3	0	0	35	2	0	2	39	41
H/TOT	0	0	168	25	10	1	204	218	0	0	103	7	1	5	116	122	0	0	70	5	0	4	79	83
AM TOT	0	0	683	125	49	3	860	927	0	0	492	43	13	14	562	593	0	0	234	18	0	16	268	284
15:00	0	0	93	9	0	0	102	102	0	0	61	4	0	4	69	73	0	0	22	5	1	3	31	35.3
15:15	0	0	75	0	1	0	76	77.3	0	0	75	2	0	5	82	87	0	0	26	0	1	2	29	32.3
15:30	0	0	82	8	5	0	95	102	0	0	85	5	0	3	93	96	0	0	22	2	0	4	28	32
15:45	0	0	100	12	5	1	118	126	0	0	102	5	0	5	112	117	0	0	29	2	0	2	33	35
H/TOT	0	0	350	29	11	1	391	406	0	0	323	16	0	17	356	373	0	0	99	9	2	11	121	135
16:00	0	0	93	12	10	1	116	130	0	0	92	7	0	5	104	109	0	0	35	1	0	2	38	40
16:15	0	0	88	11	8	1	108	119	0	0	94	6	0	5	105	110	0	0	22	1	0	4	27	31
16:30	0	0	84	9	7	0	100	109	0	0	97	3	1	3	104	108	0	0	32	2	0	3	37	40
16:45	0	0	72	3	7	0	82	91.1	0	0	75	4	0	3	82	85	0	0	35	3	0	3	41	44
H/TOT	0	0	337	35	32	2	406	450	0	0	358	20	1	16	395	412	0	0	124	7	0	12	143	155
17:00	0	0	122	11	6	0	139	147	0	0	78	5	0	2	85	87	0	0	35	3	0	2	40	42
17:15	0	0	123	12	5	0	140	147	0	0	94	4	0	4	102	106	0	0	20	4	0	2	26	28
17:30	0	0	109	14	5	1	129	137	0	0	91	5	1	2	99	102	0	0	40	1	0	2	43	45
17:45	0	0	94	18	4	0	116	121	0	0	99	2	0	3	104	107	0	0	26	3	1	2	32	35.3
H/TOT	0	0	448	55	20	1	524	551	0	0	362	16	1	11	390	402	0	0	121	11	1	8	141	150
PM TOT	0	0	1135	119	63	4	1321	1407	0	0	1043	52	2	44	1141	1188	0	0	344	27	3	31	405	440
TOTAL	0	0	1818	244	112	7	2181	2334	0	0	1535	95	15	58	1703	1781	0	0	578	45	3	47	673	724

APPENDIX D

Traffic Figures

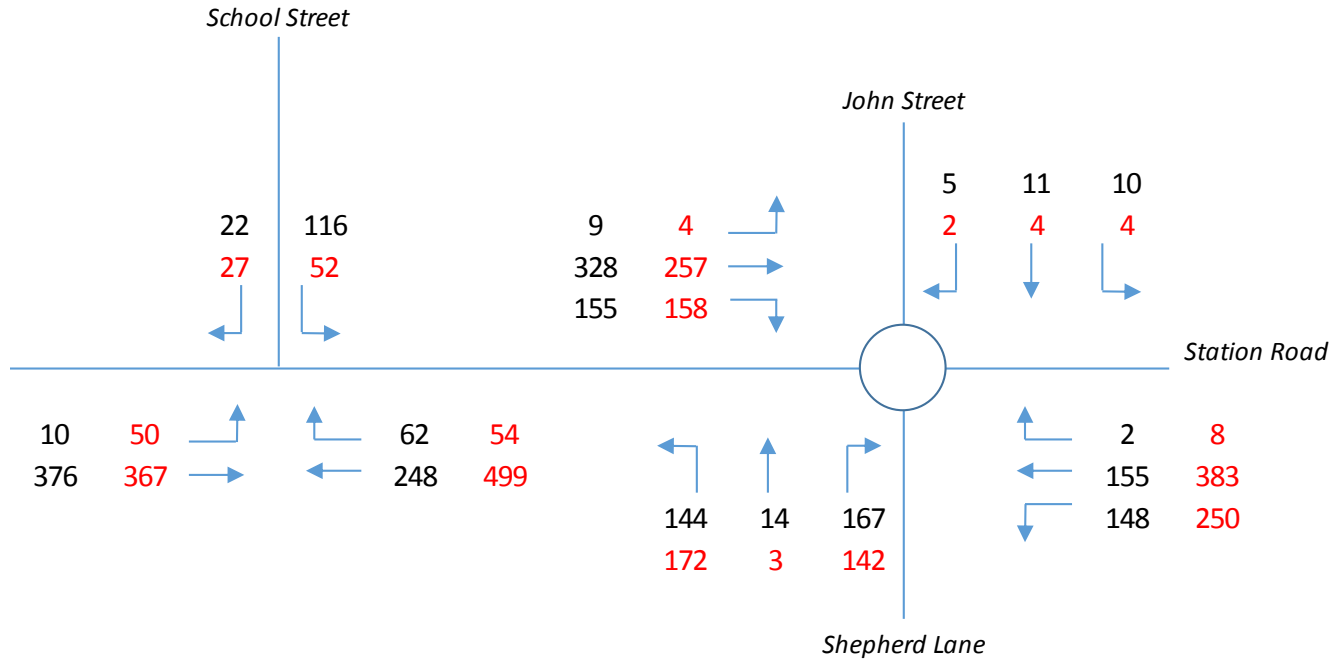
AM
PM



sanderson associates (consulting engineers) ltd Highways | Traffic | Transportation | Water T 01924 844080 mail@sandersonassociates.co.uk F 01924 844081 www.sandersonassociates.co.uk	School Street, Thurnscoe (Phase 3)						Scale NTS	Draw by BL
							Drawing Size A3	Checked by DJC
							Date June 2019	Approved by DJC
	Approved Phase 2 / 3 Traffic Flows	Rev	Amendment	Drawn	Date	Checked	Drawing Number FIGURE 1	Rev.

AM 1.0873

PM 1.0806



sanderson associates (consulting engineers) ltd
Highways | Traffic | Transportation | Water
T 01924 844080 mail@sandersonassociates.co.uk
F 01924 844081 www.sandersonassociates.co.uk

School Street, Thurnscoe (Phase 3)

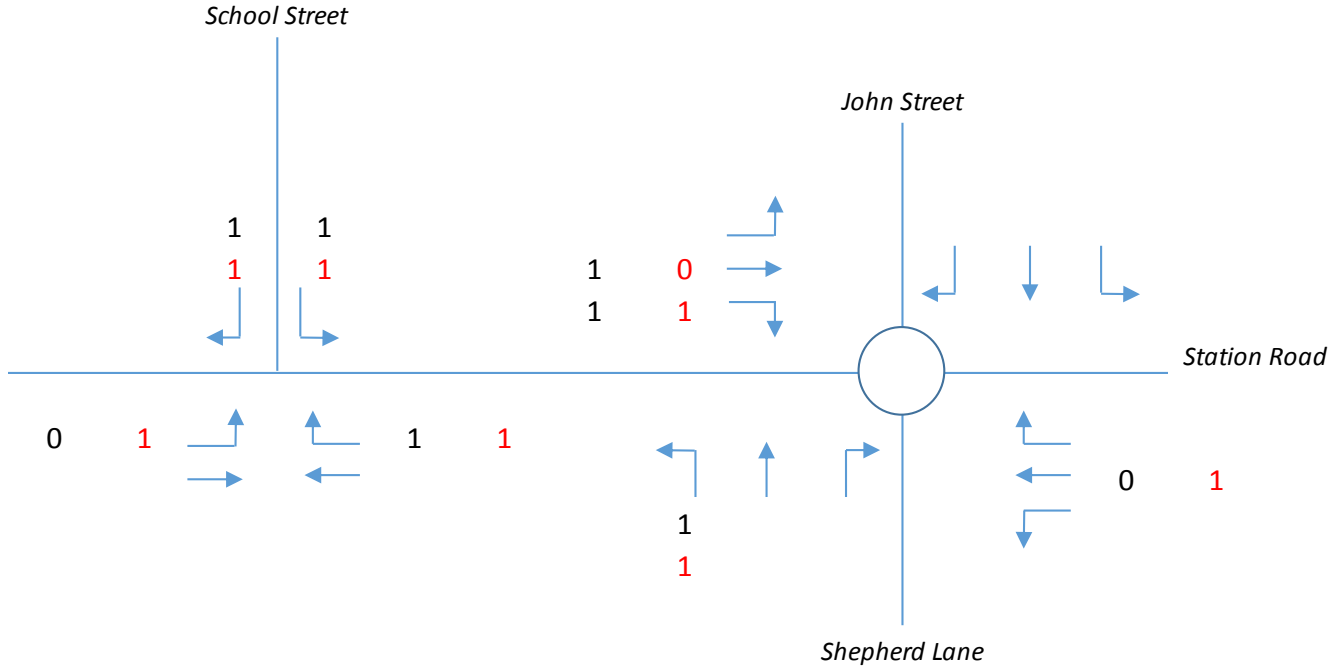
2024 Base Flows

Rev	Amendment	Drawn	Date	Checked

Scale: NTS	Draw by: BL
Drawing Size: A3	Checked by: DJC
Date: June 2019	Approved by: DJC
Drawing Number: FIGURE 2	Rev.

AM 1.0873

PM 1.0806



sanderson associates (consulting engineers) ltd Highways | Traffic | Transportation | Water T 01924 844080 mail@sandersonassociates.co.uk F 01924 844081 www.sandersonassociates.co.uk	**School Street, Thurnscoe (Phase 3)** **Proposed Additional Development Flows (7 dwellings)**						Scale: NTS	Draw by: BL
							Drawing Size: A3	Checked by: DJC
							Date: June 2019	Approved by: DJC
		Rev	Amendment	Drawn	Date	Checked	Drawing Number: FIGURE 3	Rev.

APPENDIX E

PICADY output

TRL LIMITED

CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 5.0 (JUNE 2010)

FOR SALES AND DISTRIBUTION INFORMATION,
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TRL SOFTWARE SALES
TEL: CROWTHORNE (01344) 770758, FAX: 770356
EMAIL: software@trl.co.uk

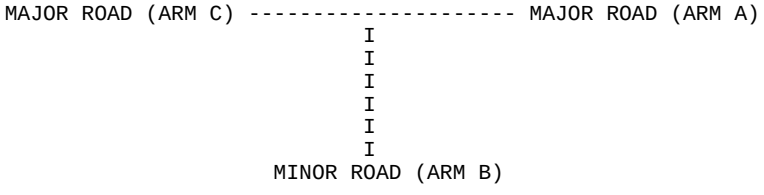
Run with file:-
"J:\11000\11000\11057_SchoolStreetThurnsco\engineering\Traffic_Programs\Picady\School Street\
School Street - Houghton Road .vpi"
(drive-on-the-left) at 09:27:46 on Tuesday, 18 June 2019

RUN INFORMATION

RUN TITLE	: School Street - Houghton Road
LOCATION	: School Street, Thurnscoe
DATE	: 25/07/17
CLIENT	: Keepmoat Homes Ltd
ENUMERATOR	: brett.littlewood [PC137]
JOB NUMBER	: 10082
STATUS	: Preliminary
DESCRIPTION	:

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA



ARM A IS Houghton Road (W)
ARM B IS School Street
ARM C IS Houghton Road (E)

STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B
STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C
ETC.

GEOMETRIC DATA

DATA ITEM	MINOR ROAD B
TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	(W) 7.70 M.
CENTRAL RESERVE WIDTH	(WCR) 0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B) 2.40 M.
- VISIBILITY	(VC-B)220.00 M.
- BLOCKS TRAFFIC (SPACES)	YES (4)
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 20.0 M.
- VISIBILITY TO RIGHT	(VB-A) 15.0 M.
- LANE 1 WIDTH	(WB-C) -
- LANE 2 WIDTH	(WB-A) -
WIDTH AT 0 M FROM JUNCTION	7.00 M.
WIDTH AT 5 M FROM JUNCTION	3.65 M.
WIDTH AT 10 M FROM JUNCTION	3.65 M.
WIDTH AT 15 M FROM JUNCTION	3.65 M.
WIDTH AT 20 M FROM JUNCTION	3.65 M.
- LENGTH OF FLARED SECTION	DERIVED: 0 PCU

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

Intercept For STREAM B-C	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
0.00	0.00	0.00

* Due to the presence of a flare, data is not available

Intercept For STREAM B-A	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B
0.00	0.00	0.00	0.00	0.00

* Due to the presence of a flare, data is not available

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
716.63	0.26	0.26

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

ARM	FLOW SCALE(%)
A	100
B	100
C	100

Demand set: 2024 AM Base

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	TOP OF PEAK IS REACHED	FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK
ARM A	15.00	45.00	75.00	4.82	7.24	4.82
ARM B	15.00	45.00	75.00	1.73	2.59	1.73
ARM C	15.00	45.00	75.00	3.88	5.81	3.88

Demand set: AM Phase 2 Development

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	TOP OF PEAK IS REACHED	FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK
ARM A	15.00	45.00	75.00	0.13	0.19	0.13
ARM B	15.00	45.00	75.00	0.66	0.99	0.66
ARM C	15.00	45.00	75.00	0.11	0.17	0.11

Demand set: AM Phase 3 Development

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	TOP OF PEAK IS REACHED	FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK
ARM A	15.00	45.00	75.00	0.20	0.30	0.20
ARM B	15.00	45.00	75.00	1.38	2.06	1.38
ARM C	15.00	45.00	75.00	0.29	0.43	0.29

Demand set: 2024 AM Base

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TIME	FROM/TO	ARM A	ARM B	ARM C
07.45 - 09.15	ARM A	0.000	0.026	0.974
		0.0	10.0	376.0
		(0.0)%	(0.0)%	(2.6)%
	ARM B	0.159	0.000	0.841
		22.0	0.0	116.0
		(0.0)%	(0.0)%	(2.8)%
	ARM C	0.800	0.200	0.000
		248.0	62.0	0.0
		(4.8)%	(1.8)%	(0.0)%

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

Demand set: AM Phase 2 Development

TIME	FROM/TO	ARM A	ARM B	ARM C
07.45 - 09.15				
	ARM A	0.000	1.000	0.000
		0.0	10.0	0.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.547	0.000	0.453
		29.0	0.0	24.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.000	1.000	0.000
		0.0	9.0	0.0
		(0.0)	(0.0)	(0.0)

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

Demand set: AM Phase 3 Development

TIME	FROM/TO	ARM A	ARM B	ARM C
07.45 - 09.15				
	ARM A	0.000	1.000	0.000
		0.0	16.0	0.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.409	0.000	0.591
		45.0	0.0	65.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.000	1.000	0.000
		0.0	23.0	0.0
		(0.0)	(0.0)	(0.0)

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00									
B-C	2.57	9.56	0.269		0.00	0.36	5.2		0.14
B-A	1.20	5.86	0.205		0.00	0.25	3.6		0.21
C-AB	1.18	10.46	0.113		0.00	0.13	1.9		0.11
A-B	0.45								
A-C	4.72								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15									
B-C	3.07	9.20	0.334		0.36	0.49	7.2		0.16
B-A	1.44	5.53	0.260		0.25	0.34	5.0		0.24
C-AB	1.41	10.20	0.138		0.13	0.16	2.4		0.11
A-B	0.54								
A-C	5.63								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.15-08.30									
B-C	3.76	8.68	0.433		0.49	0.75	10.7		0.20
B-A	1.76	5.08	0.347		0.34	0.52	7.4		0.30
C-AB	1.72	9.84	0.175		0.16	0.21	3.2		0.12
A-B	0.66								
A-C	6.90								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45									
B-C	3.76	8.67	0.434		0.75	0.76	11.3		0.20
B-A	1.76	5.08	0.347		0.52	0.52	7.8		0.30
C-AB	1.72	9.84	0.175		0.21	0.21	3.2		0.12
A-B	0.66								
A-C	6.90								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.45-09.00									
B-C	3.07	9.19	0.334		0.76	0.51	8.0		0.16
B-A	1.44	5.53	0.260		0.52	0.36	5.6		0.25
C-AB	1.41	10.20	0.138		0.21	0.16	2.4		0.11
A-B	0.54								
A-C	5.63								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
09.00-09.15									
B-C	2.57	9.55	0.269		0.51	0.37	5.8		0.14
B-A	1.20	5.86	0.206		0.36	0.26	4.1		0.22
C-AB	1.18	10.46	0.113		0.16	0.13	1.9		0.11
A-B	0.45								
A-C	4.72								

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.4	
08.15	0.5	
08.30	0.7	*
08.45	0.8	*
09.00	0.5	*
09.15	0.4	

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.3	
08.15	0.3	
08.30	0.5	*
08.45	0.5	*
09.00	0.4	
09.15	0.3	

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.1
08.15	0.2
08.30	0.2
08.45	0.2
09.00	0.2
09.15	0.1

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND (VEH)	TOTAL DEMAND (VEH/H)	* QUEUEING * DELAY * (MIN)	* QUEUEING * DELAY * (MIN/VEH)	* INCLUSIVE QUEUEING * DELAY * (MIN)	* INCLUSIVE QUEUEING * DELAY * (MIN/VEH)
B-C	282.2	188.1	48.1	0.17	48.2	0.17
B-A	132.1	88.1	33.5	0.25	33.5	0.25
C-AB	129.4	86.3	15.0	0.12	15.0	0.12
A-B	49.6	33.0				
A-C	517.5	345.0				
ALL	1452.1	968.1	96.6	0.07	96.6	0.07

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*******END OF RUN*******

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

Intercept For STREAM B-C	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
0.00	0.00	0.00

* Due to the presence of a flare, data is not available

Intercept For STREAM B-A	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B
0.00	0.00	0.00	0.00	0.00

* Due to the presence of a flare, data is not available

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
716.63	0.26	0.26

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

ARM	FLOW SCALE(%)
A	100
B	100
C	100

Demand set: 2024 PM Base

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN: FLOW STARTS TO RISE	TOP OF PEAK IS REACHED	FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN): BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK
ARM A	15.00	45.00	75.00	5.21	7.82	5.21
ARM B	15.00	45.00	75.00	0.99	1.48	0.99
ARM C	15.00	45.00	75.00	6.91	10.37	6.91

Demand set: PM Phase 2 Development

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN: FLOW STARTS TO RISE	TOP OF PEAK IS REACHED	FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN): BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK
ARM A	15.00	45.00	75.00	0.34	0.51	0.34
ARM B	15.00	45.00	75.00	0.36	0.54	0.36
ARM C	15.00	45.00	75.00	0.28	0.41	0.28

Demand set: PM Phase 3 Development

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN: FLOW STARTS TO RISE	TOP OF PEAK IS REACHED	FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN): BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK
ARM A	15.00	45.00	75.00	0.51	0.77	0.51
ARM B	15.00	45.00	75.00	0.76	1.14	0.76
ARM C	15.00	45.00	75.00	0.75	1.13	0.75

Demand set: 2024 PM Base

TIME	FROM/TO	TURNING PROPORTIONS / TURNING COUNTS (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C
16.45 - 18.15	ARM A	0.000	0.120	0.880
		0.0	50.0	367.0
		(0.0)	(0.0)	(0.6)
	ARM B	0.342	0.000	0.658
		27.0	0.0	52.0
		(0.0)	(0.0)	(4.2)
	ARM C	0.902	0.098	0.000
		499.0	54.0	0.0
		(1.9)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

Demand set: PM Phase 2 Development

TIME	FROM/TO	TURNING PROPORTIONS / TURNING COUNTS (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C
16.45 - 18.15	ARM A	0.000	1.000	0.000
		0.0	27.0	0.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.552	0.000	0.448
		16.0	0.0	13.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.000	1.000	0.000
		0.0	22.0	0.0
		(0.0)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

Demand set: PM Phase 3 Development

TIME	FROM/TO	TURNING PROPORTIONS / TURNING COUNTS (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C
16.45 - 18.15	ARM A	0.000	1.000	0.000
		0.0	41.0	0.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.410	0.000	0.590
		25.0	0.0	36.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.000	1.000	0.000
		0.0	60.0	0.0
		(0.0)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 2

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
B-C	1.27	9.49	0.133		0.00	0.15	2.2		0.12
B-A	0.85	5.64	0.151		0.00	0.18	2.5		0.21
C-AB	1.71	10.37	0.165		0.00	0.20	2.9		0.12
A-B	1.48								
A-C	4.60								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
B-C	1.51	9.15	0.165		0.15	0.20	2.9		0.13
B-A	1.02	5.17	0.197		0.18	0.24	3.5		0.24
C-AB	2.04	10.07	0.202		0.20	0.25	3.8		0.12
A-B	1.77								
A-C	5.50								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
B-C	1.85	8.64	0.214		0.20	0.27	3.9		0.15
B-A	1.25	4.53	0.276		0.24	0.37	5.3		0.30
C-AB	2.50	9.65	0.259		0.25	0.35	5.2		0.14
A-B	2.17								
A-C	6.73								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
B-C	1.85	8.64	0.215		0.27	0.27	4.1		0.15
B-A	1.25	4.52	0.276		0.37	0.38	5.6		0.31
C-AB	2.50	9.65	0.259		0.35	0.35	5.3		0.14
A-B	2.17								
A-C	6.73								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
B-C	1.51	9.14	0.166		0.27	0.20	3.1		0.13
B-A	1.02	5.17	0.197		0.38	0.25	3.9		0.24
C-AB	2.04	10.07	0.202		0.35	0.26	3.9		0.12
A-B	1.77								
A-C	5.50								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
B-C	1.27	9.49	0.134		0.20	0.16	2.4		0.12
B-A	0.85	5.64	0.151		0.25	0.18	2.8		0.21
C-AB	1.71	10.37	0.165		0.26	0.20	3.0		0.12
A-B	1.48								
A-C	4.60								

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.2
17.15	0.2
17.30	0.3
17.45	0.3
18.00	0.2
18.15	0.2

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.2
17.15	0.2
17.30	0.4
17.45	0.4
18.00	0.3
18.15	0.2

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.2
17.15	0.3
17.30	0.3
17.45	0.3
18.00	0.3
18.15	0.2

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-C	139.0	92.7	18.6	0.13	18.6	0.13
B-A	93.6	62.4	23.6	0.25	23.6	0.25
C-AB	187.2	124.8	24.0	0.13	24.0	0.13
A-B	162.4	108.3				
A-C	505.1	336.8				
ALL	1774.2	1182.8	66.1	0.04	66.2	0.04

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*******END OF RUN*******

========== end of file ==========

Printed at 09:27:54 on 18/06/2019]

TRL LIMITED

CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 5.0 (JUNE 2010)

FOR SALES AND DISTRIBUTION INFORMATION,
PROGRAM ADVICE AND MAINTENANCE CONTACT:
TRL SOFTWARE SALES
TEL: CROWTHORNE (01344) 770758, FAX: 770356
EMAIL: software@trl.co.uk

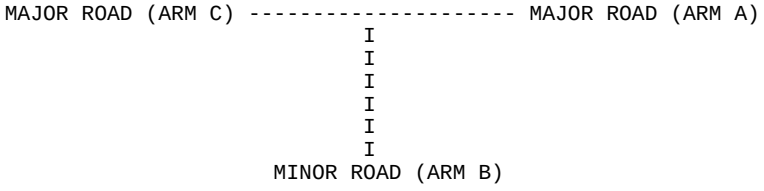
Run with file:-
"J:\11000\11000\11057_SchoolStreetThurnsco\engineering\Traffic_Programs\Picady\School Street\
School Street - Houghton Road .vpi"
(drive-on-the-left) at 09:28:20 on Tuesday, 18 June 2019

RUN INFORMATION

RUN TITLE	: School Street - Houghton Road
LOCATION	: School Street, Thurnscoe
DATE	: 25/07/17
CLIENT	: Keepmoat Homes Ltd
ENUMERATOR	: brett.littlewood [PC137]
JOB NUMBER	: 10082
STATUS	: Preliminary
DESCRIPTION	:

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA



ARM A IS Houghton Road (W)
ARM B IS School Street
ARM C IS Houghton Road (E)

STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B
STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C
ETC.

GEOMETRIC DATA

DATA ITEM	MINOR ROAD B
TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	(W) 7.70 M.
CENTRAL RESERVE WIDTH	(WCR) 0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B) 2.40 M.
- VISIBILITY	(VC-B)220.00 M.
- BLOCKS TRAFFIC (SPACES)	YES (4)
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 20.0 M.
- VISIBILITY TO RIGHT	(VB-A) 15.0 M.
- LANE 1 WIDTH	(WB-C) -
- LANE 2 WIDTH	(WB-A) -
WIDTH AT 0 M FROM JUNCTION	7.00 M.
WIDTH AT 5 M FROM JUNCTION	3.65 M.
WIDTH AT 10 M FROM JUNCTION	3.65 M.
WIDTH AT 15 M FROM JUNCTION	3.65 M.
WIDTH AT 20 M FROM JUNCTION	3.65 M.
- LENGTH OF FLARED SECTION	DERIVED: 0 PCU

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

Intercept For STREAM B-C	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
0.00	0.00	0.00

* Due to the presence of a flare, data is not available

Intercept For STREAM B-A	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B
0.00	0.00	0.00	0.00	0.00

* Due to the presence of a flare, data is not available

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
716.63	0.26	0.26

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

ARM	FLOW SCALE(%)
A	100
B	100
C	100

Demand set: 2024 AM Base

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	TOP OF PEAK IS REACHED	FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK
ARM A	15.00	45.00	75.00	4.82	7.24	4.82
ARM B	15.00	45.00	75.00	1.73	2.59	1.73
ARM C	15.00	45.00	75.00	3.88	5.81	3.88

Demand set: AM Phase 2 Development

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	TOP OF PEAK IS REACHED	FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK
ARM A	15.00	45.00	75.00	0.13	0.19	0.13
ARM B	15.00	45.00	75.00	0.66	0.99	0.66
ARM C	15.00	45.00	75.00	0.11	0.17	0.11

Demand set: AM Phase 3 Development

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	TOP OF PEAK IS REACHED	FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK
ARM A	15.00	45.00	75.00	0.20	0.30	0.20
ARM B	15.00	45.00	75.00	1.38	2.06	1.38
ARM C	15.00	45.00	75.00	0.29	0.43	0.29

Demand set: AM Phase 3 Additional Development

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	TOP OF PEAK IS REACHED	FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK
ARM A	15.00	45.00	75.00	0.00	0.00	0.00
ARM B	15.00	45.00	75.00	0.03	0.04	0.03
ARM C	15.00	45.00	75.00	0.01	0.02	0.01

Demand set: 2024 AM Base

TIME	FROM/TO	TURNING PROPORTIONS / TURNING COUNTS (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C
07.45 - 09.15	ARM A	0.000	0.026	0.974
		0.0	10.0	376.0
		(0.0)	(0.0)	(2.6)
	ARM B	0.159	0.000	0.841
		22.0	0.0	116.0
		(0.0)	(0.0)	(2.8)
	ARM C	0.800	0.200	0.000
		248.0	62.0	0.0
		(4.8)	(1.8)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

Demand set: AM Phase 2 Development

TIME	FROM/TO	TURNING PROPORTIONS / TURNING COUNTS (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C
07.45 - 09.15	ARM A	0.000	1.000	0.000
		0.0	10.0	0.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.547	0.000	0.453
		29.0	0.0	24.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.000	1.000	0.000
		0.0	9.0	0.0
		(0.0)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

Demand set: AM Phase 3 Development

TIME	FROM/TO	TURNING PROPORTIONS / TURNING COUNTS (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C
07.45 - 09.15	ARM A	0.000	1.000	0.000
		0.0	16.0	0.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.409	0.000	0.591
		45.0	0.0	65.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.000	1.000	0.000
		0.0	23.0	0.0
		(0.0)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

Demand set: AM Phase 3 Additional Development

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TIME	FROM/TO	ARM A	ARM B	ARM C
07.45 - 09.15	ARM A	0.000 0.0 (0.0)	0.000 0.0 (0.0)	0.000 0.0 (0.0)
	ARM B	0.500 1.0 (0.0)	0.000 0.0 (0.0)	0.500 1.0 (0.0)
	ARM C	0.000 0.0 (0.0)	1.000 0.0 (0.0)	0.000 0.0 (0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00									
B-C	2.58	9.56	0.270		0.00	0.37	5.3		0.14
B-A	1.22	5.87	0.207		0.00	0.26	3.6		0.21
C-AB	1.19	10.46	0.114		0.00	0.13	1.9		0.11
A-B	0.45								
A-C	4.72								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15									
B-C	3.09	9.19	0.336		0.37	0.50	7.2		0.16
B-A	1.45	5.53	0.263		0.26	0.35	5.0		0.24
C-AB	1.42	10.20	0.140		0.13	0.16	2.4		0.11
A-B	0.54								
A-C	5.63								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.15-08.30									
B-C	3.78	8.67	0.436		0.50	0.76	10.8		0.20
B-A	1.78	5.08	0.351		0.35	0.52	7.5		0.30
C-AB	1.74	9.84	0.177		0.16	0.21	3.2		0.12
A-B	0.66								
A-C	6.90								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45									
B-C	3.78	8.66	0.436		0.76	0.76	11.4		0.20
B-A	1.78	5.07	0.351		0.52	0.53	7.9		0.30
C-AB	1.74	9.84	0.177		0.21	0.21	3.2		0.12
A-B	0.66								
A-C	6.90								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.45-09.00									
B-C	3.09	9.18	0.336		0.76	0.51	8.0		0.16
B-A	1.45	5.53	0.263		0.53	0.36	5.7		0.25
C-AB	1.42	10.20	0.140		0.21	0.16	2.5		0.11
A-B	0.54								
A-C	5.63								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
09.00-09.15									
B-C	2.58	9.55	0.271		0.51	0.38	5.8		0.14
B-A	1.22	5.86	0.208		0.36	0.27	4.1		0.22
C-AB	1.19	10.46	0.114		0.16	0.13	1.9		0.11
A-B	0.45								
A-C	4.72								

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.4	
08.15	0.5	
08.30	0.8	*
08.45	0.8	*
09.00	0.5	*
09.15	0.4	

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.3	
08.15	0.3	
08.30	0.5	*
08.45	0.5	*
09.00	0.4	
09.15	0.3	

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.1	
08.15	0.2	
08.30	0.2	
08.45	0.2	
09.00	0.2	
09.15	0.1	

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND (VEH)	TOTAL DEMAND (VEH/H)	* QUEUEING * DELAY * (MIN)	* QUEUEING * DELAY * (MIN/VEH)	* INCLUSIVE QUEUEING * DELAY * (MIN)	* INCLUSIVE QUEUEING * DELAY * (MIN/VEH)
B-C	283.5	189.0	48.6	0.17	48.6	0.17
B-A	133.5	89.0	34.0	0.25	34.0	0.25
C-AB	130.8	87.2	15.1	0.12	15.1	0.12
A-B	49.6	33.0				
A-C	517.5	345.0				
ALL	1456.3	970.8	97.7	0.07	97.7	0.07

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*******END OF RUN*******

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

Intercept For STREAM B-C	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
0.00	0.00	0.00

* Due to the presence of a flare, data is not available

Intercept For STREAM B-A	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B
0.00	0.00	0.00	0.00	0.00

* Due to the presence of a flare, data is not available

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
716.63	0.26	0.26

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

ARM	FLOW SCALE(%)
A	100
B	100
C	100

Demand set: 2024 PM Base

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	FLOW STARTS TO RISE	NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED	FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK
ARM A	15.00	45.00	75.00	5.21	7.82	5.21
ARM B	15.00	45.00	75.00	0.99	1.48	0.99
ARM C	15.00	45.00	75.00	6.91	10.37	6.91

Demand set: PM Phase 2 Development

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	FLOW STARTS TO RISE	NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED	FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK
ARM A	15.00	45.00	75.00	0.34	0.51	0.34
ARM B	15.00	45.00	75.00	0.36	0.54	0.36
ARM C	15.00	45.00	75.00	0.28	0.41	0.28

Demand set: PM Phase 3 Development

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	FLOW STARTS TO RISE	NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED	FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK
ARM A	15.00	45.00	75.00	0.51	0.77	0.51
ARM B	15.00	45.00	75.00	0.76	1.14	0.76
ARM C	15.00	45.00	75.00	0.75	1.13	0.75

Demand set: PM Phase 3 Additional Development

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	FLOW STARTS TO RISE	NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED	FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK
ARM A	15.00	45.00	75.00	0.01	0.02	0.01
ARM B	15.00	45.00	75.00	0.03	0.04	0.03
ARM C	15.00	45.00	75.00	0.01	0.02	0.01

Demand set: 2024 PM Base

TIME	FROM/TO	ARM A	ARM B	ARM C
16.45 - 18.15		TURNING PROPORTIONS (PERCENTAGE OF H.V.S)		
	ARM A	0.000	0.120	0.880
		0.0	50.0	367.0
		(0.0)	(0.0)	(0.6)
	ARM B	0.342	0.000	0.658
		27.0	0.0	52.0
		(0.0)	(0.0)	(4.2)
	ARM C	0.902	0.098	0.000
		499.0	54.0	0.0
		(1.9)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

Demand set: PM Phase 2 Development

TIME	FROM/TO	ARM A	ARM B	ARM C
16.45 - 18.15		TURNING PROPORTIONS (PERCENTAGE OF H.V.S)		
	ARM A	0.000	1.000	0.000
		0.0	27.0	0.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.552	0.000	0.448
		16.0	0.0	13.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.000	1.000	0.000
		0.0	22.0	0.0
		(0.0)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

Demand set: PM Phase 3 Development

TIME	FROM/TO	ARM A	ARM B	ARM C
16.45 - 18.15		TURNING PROPORTIONS (PERCENTAGE OF H.V.S)		
	ARM A	0.000	1.000	0.000
		0.0	41.0	0.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.410	0.000	0.590
		25.0	0.0	36.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.000	1.000	0.000
		0.0	60.0	0.0
		(0.0)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

Demand set: PM Phase 3 Additional Development

TIME	FROM/TO	ARM A	ARM B	ARM C
16.45 - 18.15				
	ARM A	0.000	1.000	0.000
		0.0	0.0	0.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.500	0.000	0.500
		1.0	0.0	1.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.000	1.000	0.000
		0.0	0.0	0.0
		(0.0)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 2

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
B-C	1.28	9.49	0.135		0.00	0.15	2.2		0.12
B-A	0.87	5.64	0.153		0.00	0.18	2.5		0.21
C-AB	1.72	10.37	0.166		0.00	0.20	2.9		0.12
A-B	1.49								
A-C	4.60								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
B-C	1.53	9.14	0.167		0.15	0.20	2.9		0.13
B-A	1.03	5.17	0.200		0.18	0.25	3.5		0.24
C-AB	2.05	10.06	0.204		0.20	0.25	3.8		0.12
A-B	1.78								
A-C	5.50								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
B-C	1.87	8.63	0.217		0.20	0.27	4.0		0.15
B-A	1.27	4.52	0.280		0.25	0.38	5.4		0.31
C-AB	2.51	9.64	0.261		0.25	0.35	5.3		0.14
A-B	2.18								
A-C	6.73								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
B-C	1.87	8.62	0.217		0.27	0.28	4.1		0.15
B-A	1.27	4.52	0.280		0.38	0.38	5.7		0.31
C-AB	2.51	9.64	0.261		0.35	0.35	5.3		0.14
A-B	2.18								
A-C	6.73								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
B-C	1.53	9.13	0.167		0.28	0.20	3.1		0.13
B-A	1.03	5.17	0.200		0.38	0.26	4.0		0.24
C-AB	2.05	10.06	0.204		0.35	0.26	3.9		0.13
A-B	1.78								
A-C	5.50								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
B-C	1.28	9.48	0.135		0.20	0.16	2.4		0.12
B-A	0.87	5.64	0.154		0.26	0.18	2.9		0.21
C-AB	1.72	10.37	0.166		0.26	0.20	3.0		0.12
A-B	1.49								
A-C	4.60								

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.2
17.15	0.2
17.30	0.3
17.45	0.3
18.00	0.2
18.15	0.2

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.2
17.15	0.2
17.30	0.4
17.45	0.4
18.00	0.3
18.15	0.2

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.2
17.15	0.3
17.30	0.4
17.45	0.4
18.00	0.3
18.15	0.2

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-C	140.4	93.6	18.8	0.13	18.8	0.13
B-A	95.0	63.3	24.1	0.25	24.1	0.25
C-AB	188.6	125.7	24.2	0.13	24.2	0.13
A-B	163.8	109.2				
A-C	505.1	336.8				
ALL	1779.7	1186.5	67.1	0.04	67.1	0.04

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*******END OF RUN*******

========== end of file ==========

Printed at 09:28:27 on 18/06/2019]

APPENDIX F

ARCADY output

_____ A R C A D Y 6 _____

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 7.0 (FEBRUARY 2010)

_____

For sales and distribution information,
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TRL Limited Tel: +44 (0) 1344 770758
Crowthorne House Fax: +44 (0) 1344 770356
Nine Mile Ride Email: software@trl.co.uk
Wokingham, Berks. Web: www.trlsoftware.co.uk
RG40 3GA,UK

Run with file:-
"j:\11000\11000\11057_SchoolStreetThurnsco\engineering\Traffic_Programs\Arcady\2024 AM.vai"
(drive-on-the-left) at 09:26:20 on Tuesday, 18 June 2019

FILE PROPERTIES

RUN TITLE: Houghton Road-John Street-Station Road-Shepherd Lane
LOCATION: Thurnscoe
DATE: 27/07/17
CLIENT: Keepmoat Homes Ltd
ENUMERATOR: mark.devenish [PC119]
JOB NUMBER: 10082
STATUS: Preliminary
DESCRIPTION:

INPUT DATA

ARM A - John Street
ARM B - Station Road
ARM C - Shepherd Lane
ARM D - Houghton Road

MINI-ROUNDABOUT GEOMETRIC DATA

JUNCTION IN LONDON
LIGHTING CONDITIONS : NORMAL
ROAD SURFACE CONDITION: NORMAL

T5

ARM	V (M)	E (M)	Lm(M)	Vm(M)	A (M)	K (M)	G (%)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	4.15	4.45	1.00	4.15	12.00	4.00	4.00	0.770	16.750
ARM B	3.50	4.50	6.00	3.50	15.00	6.00	-6.00	0.863	18.536
ARM C	3.50	4.45	1.00	3.50	15.00	6.00	2.00	0.641	14.485
ARM D	3.60	4.55	7.00	3.60	14.00	9.50	5.00	0.821	19.169

V = approach half-width Lm = effective flare length A = distance between arms
E = entry width Vm = minimum approach half-width K= entry corner kerb line G=gradient over 50 m

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

T13

IARM	I FLOW SCALE(%) I
I A	I 100 I
I B	I 100 I
I C	I 100 I
I D	I 100 I

TIME PERIOD BEGINS(07.45)AND ENDS(09.15)

LENGTH OF TIME PERIOD -(90) MINUTES

LENGTH OF TIME SEGMENT - (15) MINUTES

DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: 2024 AM Base

T15

I ARM I	NUMBER OF MINUTES FROM START WHEN I FLOW STARTS I TO RISE	I TOP OF PEAK I IS REACHED	I FLOW STOPS I FALLING	I RATE OF FLOW (VEH/MIN) I BEFORE I PEAK	I AT TOP I OF PEAK	I AFTER I PEAK
I ARM A I	15.00	45.00	75.00	0.32	0.49	0.32
I ARM B I	15.00	45.00	75.00	3.81	5.72	3.81
I ARM C I	15.00	45.00	75.00	4.06	6.09	4.06
I ARM D I	15.00	45.00	75.00	6.15	9.23	6.15

DEMAND SET TITLE: Phase 2 Development AM

T15

I ARM I	NUMBER OF MINUTES FROM START WHEN I FLOW STARTS I TO RISE	I TOP OF PEAK I IS REACHED	I FLOW STOPS I FALLING	I RATE OF FLOW (VEH/MIN) I BEFORE I PEAK	I AT TOP I OF PEAK	I AFTER I PEAK
I ARM A I	15.00	45.00	75.00	0.00	0.00	0.00
I ARM B I	15.00	45.00	75.00	0.05	0.08	0.05
I ARM C I	15.00	45.00	75.00	0.05	0.08	0.05
I ARM D I	15.00	45.00	75.00	0.30	0.45	0.30

DEMAND SET TITLE: Phase 3 Development AM

T15

I ARM I	NUMBER OF MINUTES FROM START WHEN I FLOW STARTS I TO RISE	I TOP OF PEAK I IS REACHED	I FLOW STOPS I FALLING	I RATE OF FLOW (VEH/MIN) I BEFORE I PEAK	I AT TOP I OF PEAK	I AFTER I PEAK
I ARM A I	15.00	45.00	75.00	0.00	0.00	0.00
I ARM B I	15.00	45.00	75.00	0.15	0.23	0.15
I ARM C I	15.00	45.00	75.00	0.15	0.23	0.15
I ARM D I	15.00	45.00	75.00	0.80	1.20	0.80

DEMAND SET TITLE: 2024 AM Base

T33

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TIME	FROM/T	ARM A	ARM B	ARM C	ARM D
07.45 - 09.15	ARM A	0.000	0.385	0.423	0.192
		0.0	10.0	11.0	5.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM B	0.007	0.000	0.485	0.508
		2.0	0.0	148.0	155.0
		(0.0)	(0.0)	(1.5)	(7.7)
	ARM C	0.043	0.514	0.000	0.443
		14.0	167.0	0.0	144.0
		(0.0)	(0.0)	(0.0)	(1.5)
	ARM D	0.018	0.667	0.315	0.000
		9.0	328.0	155.0	0.0
		(0.0)	(3.6)	(0.7)	(0.0)

DEMAND SET TITLE: Phase 2 Development AM

T33

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TIME	FROM/T	ARM A	ARM B	ARM C	ARM D
07.45 - 09.15	ARM A	0.000	0.000	0.000	0.000
		0.0	0.0	0.0	0.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM B	0.000	0.000	0.000	1.000
		0.0	0.0	0.0	4.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM C	0.000	0.000	0.000	1.000
		0.0	0.0	0.0	4.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM D	0.000	0.500	0.500	0.000
		0.0	12.0	12.0	0.0
		(0.0)	(0.0)	(0.0)	(0.0)

DEMAND SET TITLE: Phase 3 Development AM

T33

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TIME	FROM/T	ARM A	ARM B	ARM C	ARM D
07.45 - 09.15	ARM A	0.000	0.000	0.000	0.000
		0.0	0.0	0.0	0.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM B	0.000	0.000	0.000	1.000
		0.0	0.0	0.0	12.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM C	0.000	0.000	0.000	1.000
		0.0	0.0	0.0	12.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM D	0.000	0.500	0.500	0.000
		0.0	32.0	32.0	0.0
		(0.0)	(0.0)	(0.0)	(0.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00								
ARM A	0.33	9.55	0.034	- - -	0.0	0.0	0.5	0.108
ARM B	4.03	15.53	0.259	- - -	0.0	0.3	5.1	0.087
ARM C	4.28	12.88	0.332	- - -	0.0	0.5	7.1	0.115
ARM D	7.28	16.92	0.430	- - -	0.0	0.7	10.7	0.103
08.00-08.15								
ARM A	0.39	8.11	0.048	- - -	0.0	0.0	0.7	0.129
ARM B	4.81	15.09	0.319	- - -	0.3	0.5	6.8	0.097
ARM C	5.11	12.58	0.406	- - -	0.5	0.7	9.8	0.133
ARM D	8.69	16.56	0.525	- - -	0.7	1.1	15.7	0.126
08.15-08.30								
ARM A	0.48	6.20	0.077	- - -	0.0	0.1	1.2	0.174
ARM B	5.89	14.49	0.406	- - -	0.5	0.7	9.8	0.116
ARM C	6.26	12.18	0.514	- - -	0.7	1.0	14.8	0.168
ARM D	10.64	16.07	0.662	- - -	1.1	1.9	26.7	0.181
08.30-08.45								
ARM A	0.48	6.15	0.078	- - -	0.1	0.1	1.2	0.176
ARM B	5.89	14.48	0.407	- - -	0.7	0.7	10.2	0.116
ARM C	6.26	12.17	0.514	- - -	1.0	1.0	15.6	0.169
ARM D	10.64	16.06	0.663	- - -	1.9	1.9	28.8	0.184
08.45-09.00								
ARM A	0.39	8.04	0.048	- - -	0.1	0.1	0.8	0.131
ARM B	4.81	15.06	0.319	- - -	0.7	0.5	7.3	0.098
ARM C	5.11	12.57	0.406	- - -	1.0	0.7	10.8	0.135
ARM D	8.69	16.54	0.525	- - -	1.9	1.1	17.7	0.129
09.00-09.15								
ARM A	0.33	9.47	0.034	- - -	0.1	0.0	0.6	0.109
ARM B	4.03	15.51	0.260	- - -	0.5	0.4	5.4	0.087
ARM C	4.28	12.87	0.332	- - -	0.7	0.5	7.8	0.117
ARM D	7.28	16.90	0.431	- - -	1.1	0.8	11.8	0.104

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.0	
08.15	0.0	
08.30	0.1	
08.45	0.1	
09.00	0.1	
09.15	0.0	

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.3	
08.15	0.5	
08.30	0.7	*
08.45	0.7	*
09.00	0.5	
09.15	0.4	

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.5	
08.15	0.7	*
08.30	1.0	*
08.45	1.0	*
09.00	0.7	*
09.15	0.5	*

QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.7	*
08.15	1.1	*
08.30	1.9	**
08.45	1.9	**
09.00	1.1	*
09.15	0.8	*

TRL TRL Viewer 3.2 AG j:\11000\11000\11057_SchoolStreetThurnsco\engineering\Traffic_Programs\Arcady\2024 AM.vao

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

T75

ARM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
A	35.8	23.9	5.0	0.14	5.0	0.14
B	441.8	294.6	44.6	0.10	44.6	0.10
C	469.4	312.9	65.9	0.14	65.9	0.14
D	798.3	532.2	111.5	0.14	111.5	0.14
ALL	1745.3	1163.5	227.0	0.13	227.1	0.13

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

========== end of file ==========

Printed at 09:26:46 on 18/06/2019]

ARCADY 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 7.0 (FEBRUARY 2010)

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RG40 3GA,UK

Run with file:-
"j:\11000\11000\11057_SchoolStreetThurnsco\engineering\Traffic_Programs\Arcady\2024 PM.vai"
(drive-on-the-left) at 09:29:18 on Tuesday, 18 June 2019

FILE PROPERTIES

RUN TITLE: Houghton Road-John Street-Station Road-Shepherd Lane
LOCATION: Thurnscoe
DATE: 27/07/17
CLIENT: Keepmoat Homes Ltd
ENUMERATOR: mark.devenish [PC119]
JOB NUMBER: 10082
STATUS: Preliminary
DESCRIPTION:

INPUT DATA

ARM A - John Street
ARM B - Station Road
ARM C - Shepherd Lane
ARM D - Houghton Road

MINI-ROUNDABOUT GEOMETRIC DATA

JUNCTION IN LONDON
LIGHTING CONDITIONS : NORMAL
ROAD SURFACE CONDITION: NORMAL

T5

ARM	V (M)	E (M)	Lm(M)	Vm(M)	A (M)	K (M)	G (%)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	4.15	4.45	1.00	4.15	12.00	4.00	4.00	0.770	16.750
ARM B	3.50	4.50	6.00	3.50	15.00	6.00	-6.00	0.863	18.536
ARM C	3.50	4.45	1.00	3.50	15.00	6.00	2.00	0.641	14.485
ARM D	3.60	4.55	7.00	3.60	14.00	9.50	5.00	0.821	19.169

V = approach half-width Lm = effective flare length A = distance between arms
E = entry width Vm = minimum approach half-width K= entry corner kerb line G=gradient over 50 m

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

T13

IARM	I FLOW SCALE(%) I
I A	I 100 I
I B	I 100 I
I C	I 100 I
I D	I 100 I

TIME PERIOD BEGINS(07.45)AND ENDS(09.15)

LENGTH OF TIME PERIOD -(90) MINUTES

LENGTH OF TIME SEGMENT - (15) MINUTES

DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: 2024 PM Base

T15

I ARM I	NUMBER OF MINUTES FROM START WHEN I FLOW STARTS I	I TOP OF PEAK I	I FLOW STOPS I	RATE OF FLOW (VEH/MIN) I BEFORE I	I AT TOP I	I AFTER I
	I TO RISE I	I IS REACHED I	I FALLING I	I PEAK I	I OF PEAK I	I PEAK I
I ARM A I	15.00 I	45.00 I	75.00 I	0.13 I	0.19 I	0.13 I
I ARM B I	15.00 I	45.00 I	75.00 I	8.01 I	12.02 I	8.01 I
I ARM C I	15.00 I	45.00 I	75.00 I	3.96 I	5.94 I	3.96 I
I ARM D I	15.00 I	45.00 I	75.00 I	5.24 I	7.86 I	5.24 I

DEMAND SET TITLE: Phase 2 Development PM

T15

I ARM I	NUMBER OF MINUTES FROM START WHEN I FLOW STARTS I	I TOP OF PEAK I	I FLOW STOPS I	RATE OF FLOW (VEH/MIN) I BEFORE I	I AT TOP I	I AFTER I
	I TO RISE I	I IS REACHED I	I FALLING I	I PEAK I	I OF PEAK I	I PEAK I
I ARM A I	15.00 I	45.00 I	75.00 I	0.00 I	0.00 I	0.00 I
I ARM B I	15.00 I	45.00 I	75.00 I	0.14 I	0.21 I	0.14 I
I ARM C I	15.00 I	45.00 I	75.00 I	0.14 I	0.21 I	0.14 I
I ARM D I	15.00 I	45.00 I	75.00 I	0.17 I	0.26 I	0.17 I

DEMAND SET TITLE: Phase 3 Development PM

T15

I ARM I	NUMBER OF MINUTES FROM START WHEN I FLOW STARTS I	I TOP OF PEAK I	I FLOW STOPS I	RATE OF FLOW (VEH/MIN) I BEFORE I	I AT TOP I	I AFTER I
	I TO RISE I	I IS REACHED I	I FALLING I	I PEAK I	I OF PEAK I	I PEAK I
I ARM A I	15.00 I	45.00 I	75.00 I	0.00 I	0.00 I	0.00 I
I ARM B I	15.00 I	45.00 I	75.00 I	0.38 I	0.56 I	0.38 I
I ARM C I	15.00 I	45.00 I	75.00 I	0.38 I	0.56 I	0.38 I
I ARM D I	15.00 I	45.00 I	75.00 I	0.45 I	0.67 I	0.45 I

DEMAND SET TITLE: 2024 PM Base

T33

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TIME	FROM/T	ARM A	ARM B	ARM C	ARM D
07.45 - 09.15	ARM A	0.000	0.400	0.400	0.200
		0.0	4.0	4.0	2.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM B	0.012	0.000	0.390	0.598
		8.0	0.0	250.0	383.0
		(0.0)	(0.0)	(1.3)	(2.5)
	ARM C	0.009	0.448	0.000	0.543
		3.0	142.0	0.0	172.0
		(0.0)	(0.0)	(0.0)	(1.5)
	ARM D	0.010	0.613	0.377	0.000
		4.0	257.0	158.0	0.0
		(0.0)	(1.7)	(0.0)	(0.0)

DEMAND SET TITLE: Phase 2 Development PM

T33

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TIME	FROM/T	ARM A	ARM B	ARM C	ARM D
07.45 - 09.15	ARM A	0.000	0.000	0.000	0.000
		0.0	0.0	0.0	0.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM B	0.000	0.000	0.000	1.000
		0.0	0.0	0.0	11.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM C	0.000	0.000	0.000	1.000
		0.0	0.0	0.0	11.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM D	0.000	0.500	0.500	0.000
		0.0	7.0	7.0	0.0
		(0.0)	(0.0)	(0.0)	(0.0)

DEMAND SET TITLE: Phase 3 Development PM

T33

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TIME	FROM/T	ARM A	ARM B	ARM C	ARM D
07.45 - 09.15	ARM A	0.000	0.000	0.000	0.000
		0.0	0.0	0.0	0.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM B	0.000	0.000	0.000	1.000
		0.0	0.0	0.0	30.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM C	0.000	0.000	0.000	1.000
		0.0	0.0	0.0	30.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM D	0.000	0.500	0.500	0.000
		0.0	18.0	18.0	0.0
		(0.0)	(0.0)	(0.0)	(0.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)		AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00									
ARM A	0.13	10.89	0.012	- - -	0.0	0.0	0.2	-	0.093
ARM B	8.56	16.20	0.528	- - -	0.0	1.1	15.6	-	0.128
ARM C	4.49	10.87	0.413	- - -	0.0	0.7	9.8	-	0.155
ARM D	5.88	17.45	0.337	- - -	0.0	0.5	7.3	-	0.086
08.00-08.15									
ARM A	0.15	9.72	0.015	- - -	0.0	0.0	0.2	-	0.104
ARM B	10.22	15.80	0.647	- - -	1.1	1.8	25.1	-	0.176
ARM C	5.36	10.17	0.528	- - -	0.7	1.1	15.5	-	0.206
ARM D	7.03	17.14	0.410	- - -	0.5	0.7	10.0	-	0.099
08.15-08.30									
ARM A	0.18	8.16	0.022	- - -	0.0	0.0	0.3	-	0.125
ARM B	12.51	15.27	0.820	- - -	1.8	4.1	53.5	-	0.329
ARM C	6.57	9.26	0.709	- - -	1.1	2.3	30.6	-	0.351
ARM D	8.61	16.74	0.514	- - -	0.7	1.0	15.1	-	0.122
08.30-08.45									
ARM A	0.18	8.12	0.023	- - -	0.0	0.0	0.3	-	0.126
ARM B	12.51	15.26	0.820	- - -	4.1	4.3	63.0	-	0.358
ARM C	6.57	9.20	0.714	- - -	2.3	2.4	35.1	-	0.377
ARM D	8.61	16.71	0.515	- - -	1.0	1.1	15.7	-	0.123
08.45-09.00									
ARM A	0.15	9.66	0.016	- - -	0.0	0.0	0.2	-	0.105
ARM B	10.22	15.79	0.647	- - -	4.3	1.9	30.9	-	0.190
ARM C	5.36	10.08	0.532	- - -	2.4	1.2	18.8	-	0.219
ARM D	7.03	17.10	0.411	- - -	1.1	0.7	10.9	-	0.100
09.00-09.15									
ARM A	0.13	10.83	0.012	- - -	0.0	0.0	0.2	-	0.093
ARM B	8.56	16.18	0.529	- - -	1.9	1.1	17.9	-	0.133
ARM C	4.49	10.82	0.415	- - -	1.2	0.7	11.3	-	0.160
ARM D	5.88	17.42	0.338	- - -	0.7	0.5	7.9	-	0.087

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.0	
08.15	0.0	
08.30	0.0	
08.45	0.0	
09.00	0.0	
09.15	0.0	

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	1.1	*
08.15	1.8	**
08.30	4.1	****
08.45	4.3	****
09.00	1.9	**
09.15	1.1	*

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.7	*
08.15	1.1	*
08.30	2.3	**
08.45	2.4	**
09.00	1.2	*
09.15	0.7	*

QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.5	*
08.15	0.7	*
08.30	1.0	*
08.45	1.1	*
09.00	0.7	*
09.15	0.5	*

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

T75

ARM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
A	13.8	9.2	1.5	0.11	1.5	0.11
B	938.7	625.8	206.1	0.22	206.2	0.22
C	492.8	328.5	121.1	0.25	121.1	0.25
D	645.5	430.4	67.0	0.10	67.0	0.10
ALL	2090.8	1393.9	395.7	0.19	395.8	0.19

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

========== end of file ==========

Printed at 09:29:36 on 18/06/2019]

_____ A R C A D Y 6 _____

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 7.0 (FEBRUARY 2010)

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Run with file:-
"j:\11000\11000\11057_SchoolStreetThurnsco\engineering\Traffic_Programs\Arcady\2024 AM.vai"
(drive-on-the-left) at 09:27:30 on Tuesday, 18 June 2019

FILE PROPERTIES

RUN TITLE: Houghton Road-John Street-Station Road-Shepherd Lane
LOCATION: Thurnscoe
DATE: 27/07/17
CLIENT: Keepmoat Homes Ltd
ENUMERATOR: mark.devenish [PC119]
JOB NUMBER: 10082
STATUS: Preliminary
DESCRIPTION:

INPUT DATA

ARM A - John Street
ARM B - Station Road
ARM C - Shepherd Lane
ARM D - Houghton Road

MINI-ROUNDABOUT GEOMETRIC DATA

JUNCTION IN LONDON
LIGHTING CONDITIONS : NORMAL
ROAD SURFACE CONDITION: NORMAL

T5

ARM	V (M)	E (M)	Lm(M)	Vm(M)	A (M)	K (M)	G (%)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	4.15	4.45	1.00	4.15	12.00	4.00	4.00	0.770	16.750
ARM B	3.50	4.50	6.00	3.50	15.00	6.00	-6.00	0.863	18.536
ARM C	3.50	4.45	1.00	3.50	15.00	6.00	2.00	0.641	14.485
ARM D	3.60	4.55	7.00	3.60	14.00	9.50	5.00	0.821	19.169

V = approach half-width Lm = effective flare length A = distance between arms
E = entry width Vm = minimum approach half-width K= entry corner kerb line G=gradient over 50 m

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

T13

IARM	I FLOW SCALE(%) I
I A I	100 I
I B I	100 I
I C I	100 I
I D I	100 I

TIME PERIOD BEGINS(07.45)AND ENDS(09.15)

LENGTH OF TIME PERIOD -(90) MINUTES

LENGTH OF TIME SEGMENT - (15) MINUTES

DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: 2024 AM Base

T15

I ARM I	NUMBER OF MINUTES FROM START WHEN I FLOW STARTS TO RISE	I TOP OF PEAK I IS REACHED	I FLOW STOPS I FALLING	I RATE OF FLOW (VEH/MIN) I BEFORE I PEAK	I AT TOP I OF PEAK	I AFTER I PEAK I
I ARM A I	15.00 I	45.00 I	75.00 I	0.32 I	0.49 I	0.32 I
I ARM B I	15.00 I	45.00 I	75.00 I	3.81 I	5.72 I	3.81 I
I ARM C I	15.00 I	45.00 I	75.00 I	4.06 I	6.09 I	4.06 I
I ARM D I	15.00 I	45.00 I	75.00 I	6.15 I	9.23 I	6.15 I

DEMAND SET TITLE: Phase 2 Development AM

T15

I ARM I	NUMBER OF MINUTES FROM START WHEN I FLOW STARTS TO RISE	I TOP OF PEAK I IS REACHED	I FLOW STOPS I FALLING	I RATE OF FLOW (VEH/MIN) I BEFORE I PEAK	I AT TOP I OF PEAK	I AFTER I PEAK I
I ARM A I	15.00 I	45.00 I	75.00 I	0.00 I	0.00 I	0.00 I
I ARM B I	15.00 I	45.00 I	75.00 I	0.05 I	0.08 I	0.05 I
I ARM C I	15.00 I	45.00 I	75.00 I	0.05 I	0.08 I	0.05 I
I ARM D I	15.00 I	45.00 I	75.00 I	0.30 I	0.45 I	0.30 I

DEMAND SET TITLE: Phase 3 Development AM

T15

I ARM I	NUMBER OF MINUTES FROM START WHEN I FLOW STARTS TO RISE	I TOP OF PEAK I IS REACHED	I FLOW STOPS I FALLING	I RATE OF FLOW (VEH/MIN) I BEFORE I PEAK	I AT TOP I OF PEAK	I AFTER I PEAK I
I ARM A I	15.00 I	45.00 I	75.00 I	0.00 I	0.00 I	0.00 I
I ARM B I	15.00 I	45.00 I	75.00 I	0.15 I	0.23 I	0.15 I
I ARM C I	15.00 I	45.00 I	75.00 I	0.15 I	0.23 I	0.15 I
I ARM D I	15.00 I	45.00 I	75.00 I	0.80 I	1.20 I	0.80 I

DEMAND SET TITLE: Phase 3 Additional Development AM

T15

I ARM I	NUMBER OF MINUTES FROM START WHEN I FLOW STARTS TO RISE	I TOP OF PEAK I IS REACHED	I FLOW STOPS I FALLING	I RATE OF FLOW (VEH/MIN) I BEFORE I PEAK	I AT TOP I OF PEAK	I AFTER I PEAK I
I ARM A I	15.00 I	45.00 I	75.00 I	0.00 I	0.00 I	0.00 I
I ARM B I	15.00 I	45.00 I	75.00 I	0.00 I	0.00 I	0.00 I
I ARM C I	15.00 I	45.00 I	75.00 I	0.01 I	0.02 I	0.01 I
I ARM D I	15.00 I	45.00 I	75.00 I	0.03 I	0.04 I	0.03 I

DEMAND SET TITLE: 2024 AM Base

T33

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TIME	FROM/T	ARM A	ARM B	ARM C	ARM D
07.45 - 09.15	ARM A	0.000	0.385	0.423	0.192
		0.0	10.0	11.0	5.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM B	0.007	0.000	0.485	0.508
		2.0	0.0	148.0	155.0
		(0.0)	(0.0)	(1.5)	(7.7)
	ARM C	0.043	0.514	0.000	0.443
		14.0	167.0	0.0	144.0
		(0.0)	(0.0)	(0.0)	(1.5)
	ARM D	0.018	0.667	0.315	0.000
		9.0	328.0	155.0	0.0
		(0.0)	(3.6)	(0.7)	(0.0)

DEMAND SET TITLE: Phase 2 Development AM

T33

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TIME	FROM/T	ARM A	ARM B	ARM C	ARM D
07.45 - 09.15	ARM A	0.000	0.000	0.000	0.000
		0.0	0.0	0.0	0.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM B	0.000	0.000	0.000	1.000
		0.0	0.0	0.0	4.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM C	0.000	0.000	0.000	1.000
		0.0	0.0	0.0	4.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM D	0.000	0.500	0.500	0.000
		0.0	12.0	12.0	0.0
		(0.0)	(0.0)	(0.0)	(0.0)

DEMAND SET TITLE: Phase 3 Development AM

T33

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TIME	FROM/T	ARM A	ARM B	ARM C	ARM D
07.45 - 09.15	ARM A	0.000	0.000	0.000	0.000
		0.0	0.0	0.0	0.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM B	0.000	0.000	0.000	1.000
		0.0	0.0	0.0	12.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM C	0.000	0.000	0.000	1.000
		0.0	0.0	0.0	12.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM D	0.000	0.500	0.500	0.000
		0.0	32.0	32.0	0.0
		(0.0)	(0.0)	(0.0)	(0.0)

DEMAND SET TITLE: Phase 3 Additional Development AM

T33

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TIME	FROM/T	ARM A	ARM B	ARM C	ARM D
07.45 - 09.15	ARM A	0.000	0.000	0.000	0.000
		0.0	0.0	0.0	0.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM B	0.000	0.000	0.000	0.000
		0.0	0.0	0.0	0.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM C	0.000	0.000	0.000	1.000
		0.0	0.0	0.0	0.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM D	0.000	0.500	0.500	0.000
		0.0	1.0	1.0	0.0
		(0.0)	(0.0)	(0.0)	(0.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00								
ARM A	0.33	9.53	0.034	- - -	0.0	0.0	0.5	0.109
ARM B	4.03	15.52	0.260	- - -	0.0	0.3	5.1	0.087
ARM C	4.29	12.88	0.333	- - -	0.0	0.5	7.1	0.116
ARM D	7.30	16.92	0.432	- - -	0.0	0.7	10.8	0.103
08.00-08.15								
ARM A	0.39	8.09	0.048	- - -	0.0	0.1	0.7	0.130
ARM B	4.81	15.07	0.319	- - -	0.3	0.5	6.8	0.097
ARM C	5.12	12.58	0.407	- - -	0.5	0.7	9.8	0.134
ARM D	8.72	16.56	0.527	- - -	0.7	1.1	15.8	0.127
08.15-08.30								
ARM A	0.48	6.17	0.077	- - -	0.1	0.1	1.2	0.176
ARM B	5.89	14.48	0.407	- - -	0.5	0.7	9.9	0.116
ARM C	6.28	12.18	0.515	- - -	0.7	1.0	14.9	0.168
ARM D	10.68	16.07	0.665	- - -	1.1	1.9	27.0	0.182
08.30-08.45								
ARM A	0.48	6.12	0.078	- - -	0.1	0.1	1.3	0.177
ARM B	5.89	14.46	0.407	- - -	0.7	0.7	10.2	0.117
ARM C	6.28	12.17	0.516	- - -	1.0	1.1	15.7	0.170
ARM D	10.68	16.06	0.665	- - -	1.9	1.9	29.0	0.186

TRL TRL Viewer 3.2 AG j:\11000\11000\11057_SchoolStreetThurnsco\engineering\Traffic_Programs\Arcady\2024 AM.vao

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.45-09.00								
ARM A	0.39	8.02	0.049	- - -	0.1	0.1	0.8 -	0.131
ARM B	4.81	15.05	0.320	- - -	0.7	0.5	7.3 -	0.098
ARM C	5.12	12.57	0.408	- - -	1.1	0.7	10.9 -	0.135
ARM D	8.72	16.54	0.527	- - -	1.9	1.1	17.8 -	0.129

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
09.00-09.15								
ARM A	0.33	9.45	0.035	- - -	0.1	0.0	0.6 -	0.110
ARM B	4.03	15.50	0.260	- - -	0.5	0.4	5.4 -	0.087
ARM C	4.29	12.87	0.333	- - -	0.7	0.5	7.8 -	0.117
ARM D	7.30	16.90	0.432	- - -	1.1	0.8	11.9 -	0.105

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.0	
08.15	0.1	
08.30	0.1	
08.45	0.1	
09.00	0.1	
09.15	0.0	

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.3	
08.15	0.5	
08.30	0.7	*
08.45	0.7	*
09.00	0.5	
09.15	0.4	

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.5	
08.15	0.7	*
08.30	1.0	*
08.45	1.1	*
09.00	0.7	*
09.15	0.5	*

QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.7	*
08.15	1.1	*
08.30	1.9	**
08.45	1.9	**
09.00	1.1	*
09.15	0.8	*

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

T75

ARM	TOTAL DEMAND (VEH)	TOTAL DEMAND (VEH/H)	* QUEUEING * DELAY * (MIN)	* QUEUEING * DELAY * (MIN/VEH)	* INCLUSIVE QUEUEING * DELAY * (MIN)	* INCLUSIVE QUEUEING * DELAY * (MIN/VEH)
A	35.8	23.9	5.1	0.14	5.1	0.14
B	441.8	294.6	44.7	0.10	44.7	0.10
C	470.7	313.8	66.3	0.14	66.3	0.14
D	801.1	534.1	112.4	0.14	112.4	0.14
ALL	1749.4	1166.3	228.3	0.13	228.4	0.13

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

========== end of file ==========

Printed at 09:27:38 on 18/06/2019]

_____ A R C A D Y 6 _____

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 7.0 (FEBRUARY 2010)

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Run with file:-
"j:\11000\11000\11057_SchoolStreetThurnsco\engineering\Traffic_Programs\Arcady\2024 PM.vai"
(drive-on-the-left) at 09:29:55 on Tuesday, 18 June 2019

FILE PROPERTIES

RUN TITLE: Houghton Road-John Street-Station Road-Shepherd Lane
LOCATION: Thurnscoe
DATE: 27/07/17
CLIENT: Keepmoat Homes Ltd
ENUMERATOR: mark.devenish [PC119]
JOB NUMBER: 10082
STATUS: Preliminary
DESCRIPTION:

INPUT DATA

ARM A - John Street
ARM B - Station Road
ARM C - Shepherd Lane
ARM D - Houghton Road

MINI-ROUNDABOUT GEOMETRIC DATA

JUNCTION IN LONDON
LIGHTING CONDITIONS : NORMAL
ROAD SURFACE CONDITION: NORMAL

T5

ARM	V (M)	E (M)	Lm(M)	Vm(M)	A (M)	K (M)	G (%)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	4.15	4.45	1.00	4.15	12.00	4.00	4.00	0.770	16.750
ARM B	3.50	4.50	6.00	3.50	15.00	6.00	-6.00	0.863	18.536
ARM C	3.50	4.45	1.00	3.50	15.00	6.00	2.00	0.641	14.485
ARM D	3.60	4.55	7.00	3.60	14.00	9.50	5.00	0.821	19.169

V = approach half-width Lm = effective flare length A = distance between arms
E = entry width Vm = minimum approach half-width K= entry corner kerb line G=gradient over 50 m

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

T13

ARM	FLOW SCALE(%)
A	100
B	100
C	100
D	100

TIME PERIOD BEGINS(07.45)AND ENDS(09.15)

LENGTH OF TIME PERIOD -(90) MINUTES

LENGTH OF TIME SEGMENT - (15) MINUTES

DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: 2024 PM Base

T15

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED	NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) AT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	15.00	45.00	75.00	0.13	0.19	0.13
ARM B	15.00	45.00	75.00	8.01	12.02	8.01
ARM C	15.00	45.00	75.00	3.96	5.94	3.96
ARM D	15.00	45.00	75.00	5.24	7.86	5.24

DEMAND SET TITLE: Phase 2 Development PM

T15

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED	NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) AT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	15.00	45.00	75.00	0.00	0.00	0.00
ARM B	15.00	45.00	75.00	0.14	0.21	0.14
ARM C	15.00	45.00	75.00	0.14	0.21	0.14
ARM D	15.00	45.00	75.00	0.17	0.26	0.17

DEMAND SET TITLE: Phase 3 Development PM

T15

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED	NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) AT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	15.00	45.00	75.00	0.00	0.00	0.00
ARM B	15.00	45.00	75.00	0.38	0.56	0.38
ARM C	15.00	45.00	75.00	0.38	0.56	0.38
ARM D	15.00	45.00	75.00	0.45	0.67	0.45

DEMAND SET TITLE: Phase 3 Additional Development PM

T15

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED	NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) AT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	15.00	45.00	75.00	0.00	0.00	0.00
ARM B	15.00	45.00	75.00	0.01	0.02	0.01
ARM C	15.00	45.00	75.00	0.01	0.02	0.01
ARM D	15.00	45.00	75.00	0.01	0.02	0.01

DEMAND SET TITLE: 2024 PM Base

T33

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TIME	FROM/T	ARM A	ARM B	ARM C	ARM D
07.45 - 09.15	ARM A	0.000	0.400	0.400	0.200
		0.0	4.0	4.0	2.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM B	0.012	0.000	0.390	0.598
		8.0	0.0	250.0	383.0
		(0.0)	(0.0)	(1.3)	(2.5)
	ARM C	0.009	0.448	0.000	0.543
		3.0	142.0	0.0	172.0
		(0.0)	(0.0)	(0.0)	(1.5)
	ARM D	0.010	0.613	0.377	0.000
		4.0	257.0	158.0	0.0
		(0.0)	(1.7)	(0.0)	(0.0)

DEMAND SET TITLE: Phase 2 Development PM

T33

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TIME	FROM/T	ARM A	ARM B	ARM C	ARM D
07.45 - 09.15	ARM A	0.000	0.000	0.000	0.000
		0.0	0.0	0.0	0.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM B	0.000	0.000	0.000	1.000
		0.0	0.0	0.0	11.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM C	0.000	0.000	0.000	1.000
		0.0	0.0	0.0	11.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM D	0.000	0.500	0.500	0.000
		0.0	7.0	7.0	0.0
		(0.0)	(0.0)	(0.0)	(0.0)

DEMAND SET TITLE: Phase 3 Development PM

T33

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TIME	FROM/T	ARM A	ARM B	ARM C	ARM D
07.45 - 09.15	ARM A	0.000	0.000	0.000	0.000
		0.0	0.0	0.0	0.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM B	0.000	0.000	0.000	1.000
		0.0	0.0	0.0	30.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM C	0.000	0.000	0.000	1.000
		0.0	0.0	0.0	30.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM D	0.000	0.500	0.500	0.000
		0.0	18.0	18.0	0.0
		(0.0)	(0.0)	(0.0)	(0.0)

DEMAND SET TITLE: Phase 3 Additional Development PM

T33

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TIME	FROM/T	ARM A	ARM B	ARM C	ARM D
07.45 - 09.15	ARM A	0.000	0.000	0.000	0.000
		0.0	0.0	0.0	0.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM B	0.000	0.000	0.000	1.000
		0.0	0.0	0.0	0.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM C	0.000	0.000	0.000	1.000
		0.0	0.0	0.0	0.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM D	0.000	0.000	1.000	0.000
		0.0	0.0	0.0	0.0
		(0.0)	(0.0)	(0.0)	(0.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00								
ARM A	0.13	10.88	0.012	- - -	0.0	0.0	0.2	0.093
ARM B	8.57	16.19	0.529	- - -	0.0	1.1	15.7	0.129
ARM C	4.50	10.86	0.415	- - -	0.0	0.7	9.9	0.155
ARM D	5.90	17.45	0.338	- - -	0.0	0.5	7.4	0.086

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15								
ARM A	0.15	9.71	0.015	- - -	0.0	0.0	0.2	0.105
ARM B	10.23	15.79	0.648	- - -	1.1	1.8	25.3	0.177
ARM C	5.38	10.16	0.530	- - -	0.7	1.1	15.6	0.207
ARM D	7.04	17.14	0.411	- - -	0.5	0.7	10.1	0.099

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.15-08.30								
ARM A	0.18	8.15	0.023	- - -	0.0	0.0	0.3	0.126
ARM B	12.53	15.25	0.822	- - -	1.8	4.1	54.0	0.332
ARM C	6.59	9.25	0.712	- - -	1.1	2.3	30.9	0.354
ARM D	8.62	16.74	0.515	- - -	0.7	1.0	15.1	0.122

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45								
ARM A	0.18	8.11	0.023	- - -	0.0	0.0	0.3	0.126
ARM B	12.53	15.24	0.822	- - -	4.1	4.3	63.8	0.361
ARM C	6.59	9.19	0.717	- - -	2.3	2.4	35.5	0.381
ARM D	8.62	16.71	0.516	- - -	1.0	1.1	15.8	0.124

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.45-09.00								
ARM A	0.15	9.65	0.016	- - -	0.0	0.0	0.2	0.105
ARM B	10.23	15.78	0.649	- - -	4.3	1.9	31.2	0.191
ARM C	5.38	10.07	0.534	- - -	2.4	1.2	19.0	0.220
ARM D	7.04	17.10	0.412	- - -	1.1	0.7	10.9	0.100

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
09.00-09.15								
ARM A	0.13	10.82	0.012	- - -	0.0	0.0	0.2	0.094
ARM B	8.57	16.17	0.530	- - -	1.9	1.1	18.0	0.133
ARM C	4.50	10.81	0.417	- - -	1.2	0.7	11.4	0.160
ARM D	5.90	17.42	0.339	- - -	0.7	0.5	7.9	0.087

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.0	
08.15	0.0	
08.30	0.0	
08.45	0.0	
09.00	0.0	
09.15	0.0	

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	1.1	*
08.15	1.8	**
08.30	4.1	****
08.45	4.3	****
09.00	1.9	**
09.15	1.1	*

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.7	*
08.15	1.1	*
08.30	2.3	**
08.45	2.4	**
09.00	1.2	*
09.15	0.7	*

QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.5	*
08.15	0.7	*
08.30	1.0	*
08.45	1.1	*
09.00	0.7	*
09.15	0.5	*

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

T75

ARM	TOTAL DEMAND (VEH)	TOTAL DEMAND (VEH/H)	* QUEUEING * DELAY * (MIN)	* QUEUEING * DELAY * (MIN/VEH)	* INCLUSIVE QUEUEING * DELAY * (MIN)	* INCLUSIVE QUEUEING * DELAY * (MIN/VEH)
A	13.8	9.2	1.5	0.11	1.5	0.11
B	940.1	626.7	208.0	0.22	208.0	0.22
C	494.1	329.4	122.3	0.25	122.3	0.25
D	646.9	431.3	67.2	0.10	67.2	0.10
ALL	2094.9	1396.6	399.0	0.19	399.1	0.19

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

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