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Max Whitehead
Bloor Homes Head Office
Ashby Road
Measham
Swadlincote
Derbyshire
DE12 7JP

Our Ref: RJM/10050
28th April 2014

Dear Max

Willington Road, Etwall

The County Council have reviewed the application and found the off-site impact to be acceptable and that there are no technical grounds to object. The Parish Council have expressed concerns regarding the acceptability of Willington Road in particular car parking and existing issues regarding the impact of pupil travel to school on the local road network. These are considered below.

Car parking does occur on Willington Road but this has not led to any identifiable highway safety issues and it is not considered to be a constraint to development. The accident assessment reported in the TA confirms that there have been no recorded accidents on this section of road. This is as would be expected on a residential street, where speeds are low and the traffic levels are a small fraction of its theoretical capacity. The development will add around 60 vehicles per hour (vph) in the peak hour (08:00-09:00). This would result in total flows of around 240vph which is still a small fraction of the capacity of a two way road and hence would not change the nature or characteristics of the road or performance in safety terms. To put this into context, 240vph is well within the capacity of a single track road with passing places (shuttle-working), indeed deliberate narrowings as part of a traffic calming scheme to slow traffic are most effective at two-way flows of at least 800vph. There is therefore no reason to conclude that there will be any advantage for vehicles to use alternative routes.

The school traffic peak periods are 08:00 – 09:00 and 15:00 – 16:00. The assessment takes full account of the impact of school traffic across the day in terms of survey work. The peak hours of assessment reported (08:00 - 09:00 and 17:00 - 18:00) which reflect the busiest cumulative period of impact (08:00 – 09:00) when the AM peak hour traffic is co-incident

Continued/. . .

with the AM school peak hour traffic. The PM peak hour for the school is not co-incident with the PM development peak hour. Indeed the development related traffic during the school PM peak is relatively low, around 20vph each way, and is likely to comprise predominantly education escort trips (which would arguably be reduced anyway given the accessibility of the site). The TA also considers the period 17:00 – 18:00 as this is the peak for development traffic and likely to be also the case for existing housing in Etwall. Notwithstanding this, in response to the queries, a junction assessment has been undertaken for the school PM peak. This confirms that the conclusions within the TA remain valid.

Whilst the operational appraisal does not indicate the requirement for changes to the road network in the vicinity of the school, Bloor Homes have confirmed their willingness to fund environmental improvements at Main Street/Willington Road to better suit the needs of all road users, in particular pedestrians. It is considered that these works, as part of the overall access strategy to the site, will encourage residents on the site to walk or cycle to destinations particularly within the village as well as benefit existing residents. These works are not required on operational or safety grounds.

The junction of Main Street/Eggington Road was not explicitly covered in the TA and was not part of the scope agreed with DCC. Approximately half of the traffic generated from the development is forecast to route to the south, much of which will be routeing to the A50. This is equivalent to circa 30vph in the peak hours or one additional vehicle every two minutes. At the Main Street – Eggington Road junction the majority of this traffic will be ahead movements through the junction with perhaps 10-20% (3-6vph) routeing along Eggington Road. In practical terms, the modest additional development traffic at this location will not have a material impact on the operation of this junction.

The “discrepancies” highlighted in the report are noted, but other than some minor issues with road labelling whereby Willington Road becomes Oakland Road and then Willington Road again, none of these points have any material impact on the assessment of the development.

The reference to bus services is misleading as the TA reports on the timetabled services rather than separate contracted school services noted. Again this does not alter the outcome of the assessment.

I trust this provides you with the information you require. However, if you have any further queries please do not hesitate to contact me.

Yours sincerely

Richard McCulloch
David Tucker Associates

Enc

Junctions 8

PICADY 8 - Priority Intersection Module

Version: 8.0.2.316 [14 Feb 2013]
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Filename: Main Street - Willington Road Picady.arc8
Path: P:\10000's\10050\Techincal
Report generation date: 28/04/2014 10:22:32

Summary of junction performance

	AM			
	Queue (PCU)	Delay (s)	RFC	LOS
	A1 - BASE			
Stream B-AC	0.63	13.75	0.37	B
Stream C-A	-	-	-	-
Stream C-B	0.00	7.22	0.00	A
Stream A-B	-	-	-	-
Stream A-C	-	-	-	-

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

"D1 - BASE, AM " model duration: 07:45 - 09:15
"D2 - BASE, PM" model duration: 16:45 - 18:15
"D3 - 2018 BASE + dev, AM" model duration: 07:45 - 09:15
"D4 - 2018 BASE + dev, PM" model duration: 16:45 - 18:15
"D5 - BASE, School PM" model duration: 15:00 - 16:30
"D6 - 2018 School + Dev, School PM" model duration: 15:00 - 16:30

Run using Junctions 8.0.2.316 at 28/04/2014 10:22:28

File summary

File Description

Title	Willington Road - Etwall 2014 with Dev AM Peak
Location	
Site Number	
Date	30/09/2009
Version	
Status	
Identifier	
Client	
Jobnumber	10050
Enumerator	jamesbyrne [DTA-JB]
Description	

Analysis Options

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

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Hour	perHour

(Default Analysis Set) - BASE, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
BASE, AM	BASE	AM	Willington Road - Etwall 2014 with Dev AM Peak	Varies by Arm	07:45	09:15	90	15				✓		

Junction Network

Junctions

Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
Main Street - Willington Road	T-Junction	Two-way	A,B,C		13.67	B

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Name	Description	Arm Type
Main Street North	Main Street North		Major
Willington Road	Willington Road		Minor
Main Street South	Main Street South		Major

Major Arm Geometry

Name	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
Main Street South	7.00		0.00		2.20	75.00		

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

Minor Arm Geometry

Name	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
Willington Road	One lane	2.80										50	42

Pedestrian Crossings

Name	Crossing Type
Main Street North	None
Willington Road	None
Main Street South	None

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	504.220	0.088	0.222	0.140	0.317
1	B-C	637.354	0.093	0.236	-	-
1	C-B	617.397	0.229	0.229	-	-

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

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

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

Traffic Flows

Demand Set Data Options

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

Entry Flows

General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
Main Street North	ONE HOUR	✓	266.00	100.000
Willington Road	ONE HOUR	✓	152.00	100.000
Main Street South	ONE HOUR	✓	235.00	100.000

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Main Street - Willington Road (for whole period)

		To		
		A	B	C
From	A	0.000	21.000	245.000
	B	95.000	0.000	57.000
	C	233.000	2.000	0.000

Turning Proportions (PCU) - Main Street - Willington Road (for whole period)

		To		
		A	B	C
From	A	0.00	0.08	0.92
	B	0.63	0.00	0.38
	C	0.99	0.01	0.00

Vehicle Mix

Average PCU Per Vehicle - Main Street - Willington Road (for whole period)

		To		
		A	B	C
From	A	1.100	1.100	1.100
	B	1.100	1.100	1.100
	C	1.100	1.100	1.100

Heavy Vehicle Percentages - Main Street - Willington Road (for whole period)

		To		
		A	B	C
From	A	10.000	10.000	10.000
	B	10.000	10.000	10.000
	C	10.000	10.000	10.000

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-hr)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-hr/hr)	Inclusive Total Queueing Delay (PCU-hr)	Inclusive Average Queueing Delay (s)
B-AC	0.37	13.75	0.63	B	139.48	209.22	0.70	12.06	0.47	0.70	12.06
C-A	-	-	-	-	213.80	320.71	-	-	-	-	-
C-B	0.00	7.22	0.00	A	1.84	2.75	0.01	7.05	0.00	0.01	7.05
A-B	-	-	-	-	19.27	28.90	-	-	-	-	-
A-C	-	-	-	-	224.82	337.22	-	-	-	-	-

Main Results for each time segment

Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	114.43	28.61	113.09	0.00	484.58	0.236	0.00	0.33	10.622	B
C-A	175.41	43.85	175.41	0.00	-	-	-	-	-	-
C-B	1.51	0.38	1.49	0.00	571.58	0.003	0.00	0.00	6.945	A
A-B	15.81	3.95	15.81	0.00	-	-	-	-	-	-
A-C	184.45	46.11	184.45	0.00	-	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	136.64	34.16	136.22	0.00	472.31	0.289	0.33	0.44	11.766	B
C-A	209.46	52.37	209.46	0.00	-	-	-	-	-	-
C-B	1.80	0.45	1.80	0.00	562.68	0.003	0.00	0.00	7.059	A
A-B	18.88	4.72	18.88	0.00	-	-	-	-	-	-
A-C	220.25	55.06	220.25	0.00	-	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	167.36	41.84	166.61	0.00	455.27	0.368	0.44	0.63	13.683	B
C-A	256.54	64.13	256.54	0.00	-	-	-	-	-	-
C-B	2.20	0.55	2.20	0.00	550.39	0.004	0.00	0.00	7.222	A
A-B	23.12	5.78	23.12	0.00	-	-	-	-	-	-
A-C	269.75	67.44	269.75	0.00	-	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	167.36	41.84	167.33	0.00	455.27	0.368	0.62	0.63	13.752	B
C-A	256.54	64.13	256.54	0.00	-	-	-	-	-	-
C-B	2.20	0.55	2.20	0.00	550.39	0.004	0.00	0.00	7.222	A
A-B	23.12	5.78	23.12	0.00	-	-	-	-	-	-
A-C	269.75	67.44	269.75	0.00	-	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	136.64	34.16	137.35	0.00	472.31	0.289	0.63	0.46	11.847	B
C-A	209.46	52.37	209.46	0.00	-	-	-	-	-	-
C-B	1.80	0.45	1.80	0.00	562.68	0.003	0.00	0.00	7.059	A
A-B	18.88	4.72	18.88	0.00	-	-	-	-	-	-
A-C	220.25	55.06	220.25	0.00	-	-	-	-	-	-

Main results: (09:00-09:15)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	114.43	28.61	114.88	0.00	484.57	0.236	0.46	0.35	10.726	B
C-A	175.41	43.85	175.41	0.00	-	-	-	-	-	-
C-B	1.51	0.38	1.51	0.00	571.58	0.003	0.00	0.00	6.945	A
A-B	15.81	3.95	15.81	0.00	-	-	-	-	-	-
A-C	184.45	46.11	184.45	0.00	-	-	-	-	-	-

Queueing Delay Results for each time segment

Queueing Delay results: (07:45-08:00)

Stream	Queueing Total Delay (PCU-hr)	Queueing Rate Of Delay (PCU-hr/hr)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	0.08	0.32	10.622	B	B
C-A	-	-	-	-	-
C-B	0.00	0.00	6.945	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (08:00-08:15)

Stream	Queueing Total Delay (PCU-hr)	Queueing Rate Of Delay (PCU-hr/hr)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	0.11	0.43	11.766	B	B
C-A	-	-	-	-	-
C-B	0.00	0.00	7.059	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (08:15-08:30)

Stream	Queueing Total Delay (PCU-hr)	Queueing Rate Of Delay (PCU-hr/hr)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	0.15	0.60	13.683	B	B
C-A	-	-	-	-	-
C-B	0.00	0.00	7.222	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (08:30-08:45)

Stream	Queueing Total Delay (PCU-hr)	Queueing Rate Of Delay (PCU-hr/hr)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	0.16	0.63	13.752	B	B
C-A	-	-	-	-	-
C-B	0.00	0.00	7.222	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (08:45-09:00)

Stream	Queueing Total Delay (PCU-hr)	Queueing Rate Of Delay (PCU-hr/hr)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	0.12	0.47	11.847	B	B
C-A	-	-	-	-	-
C-B	0.00	0.00	7.059	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (09:00-09:15)

Stream	Queueing Total Delay (PCU-hr)	Queueing Rate Of Delay (PCU-hr/hr)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	0.09	0.36	10.726	B	B
C-A	-	-	-	-	-
C-B	0.00	0.00	6.945	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

(Default Analysis Set) - BASE, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
BASE, PM	BASE	PM	Willington Road - Etwall 2014 with Dev AM Peak	Varies by Arm	16:45	18:15	90	15				✓		

Junction Network

Junctions

Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
Main Street - Willington Road	T-Junction	Two-way	A,B,C		8.39	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Name	Description	Arm Type
Main Street North	Main Street North		Major
Willington Road	Willington Road		Minor
Main Street South	Main Street South		Major

Major Arm Geometry

Name	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
Main Street South	7.00		0.00		2.20	75.00		

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

Minor Arm Geometry

Name	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
Willington Road	One lane	2.80										50	42

Pedestrian Crossings

Name	Crossing Type
Main Street North	None
Willington Road	None
Main Street South	None

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	504.220	0.088	0.222	0.140	0.317
1	B-C	637.354	0.093	0.236	-	-
1	C-B	617.397	0.229	0.229	-	-

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

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

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

Traffic Flows

Demand Set Data Options

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

Entry Flows

General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
Main Street North	ONE HOUR	✓	225.00	100.000
Willington Road	ONE HOUR	✓	70.00	100.000
Main Street South	ONE HOUR	✓	164.00	100.000

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Main Street - Willington Road (for whole period)

		To		
		A	B	C
From	A	0.000	33.000	192.000
	B	19.000	0.000	51.000
	C	115.000	49.000	0.000

Turning Proportions (PCU) - Main Street - Willington Road (for whole period)

		To		
		A	B	C
From	A	0.00	0.15	0.85
	B	0.27	0.00	0.73
	C	0.70	0.30	0.00

Vehicle Mix

Average PCU Per Vehicle - Main Street - Willington Road (for whole period)

		To		
		A	B	C
From	A	1.100	1.100	1.100
	B	1.100	1.100	1.100
	C	1.100	1.100	1.100

Heavy Vehicle Percentages - Main Street - Willington Road (for whole period)

		To		
		A	B	C
From	A	10.000	10.000	10.000
	B	10.000	10.000	10.000
	C	10.000	10.000	10.000

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-hr)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-hr/hr)	Inclusive Total Queueing Delay (PCU-hr)	Inclusive Average Queueing Delay (s)
B-AC	0.15	8.79	0.19	A	64.23	96.35	0.22	8.32	0.15	0.22	8.32
C-A	-	-	-	-	105.53	158.29	-	-	-	-	-
C-B	0.10	7.81	0.12	A	44.96	67.44	0.14	7.51	0.09	0.14	7.51
A-B	-	-	-	-	30.28	45.42	-	-	-	-	-
A-C	-	-	-	-	176.18	264.27	-	-	-	-	-

Main Results for each time segment

Main results: (16:45-17:00)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	52.70	13.17	52.24	0.00	549.19	0.096	0.00	0.12	7.961	A
C-A	86.58	21.64	86.58	0.00	-	-	-	-	-	-
C-B	36.89	9.22	36.59	0.00	578.64	0.064	0.00	0.07	7.303	A
A-B	24.84	6.21	24.84	0.00	-	-	-	-	-	-
A-C	144.55	36.14	144.55	0.00	-	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	62.93	15.73	62.82	0.00	540.18	0.116	0.12	0.14	8.293	A
C-A	103.38	25.85	103.38	0.00	-	-	-	-	-	-
C-B	44.05	11.01	43.98	0.00	571.12	0.077	0.07	0.09	7.512	A
A-B	29.67	7.42	29.67	0.00	-	-	-	-	-	-
A-C	172.60	43.15	172.60	0.00	-	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	77.07	19.27	76.90	0.00	527.70	0.146	0.14	0.19	8.784	A
C-A	126.62	31.65	126.62	0.00	-	-	-	-	-	-
C-B	53.95	13.49	53.85	0.00	560.71	0.096	0.09	0.12	7.810	A
A-B	36.33	9.08	36.33	0.00	-	-	-	-	-	-
A-C	211.40	52.85	211.40	0.00	-	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	77.07	19.27	77.07	0.00	527.69	0.146	0.19	0.19	8.787	A
C-A	126.62	31.65	126.62	0.00	-	-	-	-	-	-
C-B	53.95	13.49	53.95	0.00	560.71	0.096	0.12	0.12	7.814	A
A-B	36.33	9.08	36.33	0.00	-	-	-	-	-	-
A-C	211.40	52.85	211.40	0.00	-	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	62.93	15.73	63.09	0.00	540.16	0.117	0.19	0.15	8.303	A
C-A	103.38	25.85	103.38	0.00	-	-	-	-	-	-
C-B	44.05	11.01	44.14	0.00	571.12	0.077	0.12	0.09	7.518	A
A-B	29.67	7.42	29.67	0.00	-	-	-	-	-	-
A-C	172.60	43.15	172.60	0.00	-	-	-	-	-	-

Main results: (18:00-18:15)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	52.70	13.17	52.81	0.00	549.14	0.096	0.15	0.12	7.980	A
C-A	86.58	21.64	86.58	0.00	-	-	-	-	-	-
C-B	36.89	9.22	36.96	0.00	578.64	0.064	0.09	0.08	7.310	A
A-B	24.84	6.21	24.84	0.00	-	-	-	-	-	-
A-C	144.55	36.14	144.55	0.00	-	-	-	-	-	-

Queueing Delay Results for each time segment

Queueing Delay results: (16:45-17:00)

Stream	Queueing Total Delay (PCU-hr)	Queueing Rate Of Delay (PCU-hr/hr)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	0.03	0.11	7.961	A	A
C-A	-	-	-	-	-
C-B	0.02	0.07	7.303	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (17:00-17:15)

Stream	Queueing Total Delay (PCU-hr)	Queueing Rate Of Delay (PCU-hr/hr)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	0.04	0.14	8.293	A	A
C-A	-	-	-	-	-
C-B	0.02	0.09	7.512	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (17:15-17:30)

Stream	Queueing Total Delay (PCU-hr)	Queueing Rate Of Delay (PCU-hr/hr)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	0.05	0.18	8.784	A	A
C-A	-	-	-	-	-
C-B	0.03	0.11	7.810	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (17:30-17:45)

Stream	Queueing Total Delay (PCU-hr)	Queueing Rate Of Delay (PCU-hr/hr)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	0.05	0.19	8.787	A	A
C-A	-	-	-	-	-
C-B	0.03	0.12	7.814	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (17:45-18:00)

Stream	Queueing Total Delay (PCU-hr)	Queueing Rate Of Delay (PCU-hr/hr)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	0.04	0.15	8.303	A	A
C-A	-	-	-	-	-
C-B	0.02	0.09	7.518	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (18:00-18:15)

Stream	Queueing Total Delay (PCU-hr)	Queueing Rate Of Delay (PCU-hr/hr)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	0.03	0.12	7.980	A	A
C-A	-	-	-	-	-
C-B	0.02	0.08	7.310	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

(Default Analysis Set) - 2018 BASE + dev, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2018 BASE + dev, AM	2018 BASE + dev	AM	Willington Road - Etwall 2014 with Dev AM Peak	Varies by Arm	07:45	09:15	90	15				✓		

Junction Network

Junctions

Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
Main Street - Willington Road	T-Junction	Two-way	A,B,C		17.41	C

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Name	Description	Arm Type
Main Street North	Main Street North		Major
Willington Road	Willington Road		Minor
Main Street South	Main Street South		Major

Major Arm Geometry

Name	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
Main Street South	7.00		0.00		2.20	75.00		

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

Minor Arm Geometry

Name	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
Willington Road	One lane	2.80										50	42

Pedestrian Crossings

Name	Crossing Type
Main Street North	None
Willington Road	None
Main Street South	None

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	504.220	0.088	0.222	0.140	0.317
1	B-C	637.354	0.093	0.236	-	-
1	C-B	617.397	0.229	0.229	-	-

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

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

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

Traffic Flows

Demand Set Data Options

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

Entry Flows

General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
Main Street North	ONE HOUR	✓	299.00	100.000
Willington Road	ONE HOUR	✓	206.00	100.000
Main Street South	ONE HOUR	✓	258.00	100.000

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Main Street - Willington Road (for whole period)

		To		
		A	B	C
From	A	0.000	29.000	270.000
	B	123.000	0.000	83.000
	C	249.000	9.000	0.000

Turning Proportions (PCU) - Main Street - Willington Road (for whole period)

		To		
		A	B	C
From	A	0.00	0.10	0.90
	B	0.60	0.00	0.40
	C	0.97	0.03	0.00

Vehicle Mix

Average PCU Per Vehicle - Main Street - Willington Road (for whole period)

		To		
		A	B	C
From	A	1.100	1.100	1.100
	B	1.100	1.100	1.100
	C	1.100	1.100	1.100

Heavy Vehicle Percentages - Main Street - Willington Road (for whole period)

		To		
		A	B	C
From	A	10.000	10.000	10.000
	B	10.000	10.000	10.000
	C	10.000	10.000	10.000

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-hr)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-hr/hr)	Inclusive Total Queueing Delay (PCU-hr)	Inclusive Average Queueing Delay (s)
B-AC	0.51	17.84	1.10	C	189.03	283.54	1.15	14.63	0.77	1.15	14.64
C-A	-	-	-	-	228.49	342.73	-	-	-	-	-
C-B	0.02	7.44	0.02	A	8.26	12.39	0.02	7.22	0.02	0.02	7.22
A-B	-	-	-	-	26.61	39.92	-	-	-	-	-
A-C	-	-	-	-	247.76	371.64	-	-	-	-	-

Main Results for each time segment

Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	155.09	38.77	153.04	0.00	481.14	0.322	0.00	0.51	11.997	B
C-A	187.46	46.87	187.46	0.00	-	-	-	-	-	-
C-B	6.78	1.69	6.72	0.00	565.89	0.012	0.00	0.01	7.081	A
A-B	21.83	5.46	21.83	0.00	-	-	-	-	-	-
A-C	203.27	50.82	203.27	0.00	-	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	185.19	46.30	184.42	0.00	467.47	0.396	0.51	0.70	13.950	B
C-A	223.85	55.96	223.85	0.00	-	-	-	-	-	-
C-B	8.09	2.02	8.08	0.00	555.89	0.015	0.01	0.02	7.227	A
A-B	26.07	6.52	26.07	0.00	-	-	-	-	-	-
A-C	242.72	60.68	242.72	0.00	-	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	226.81	56.70	225.29	0.00	448.47	0.506	0.70	1.09	17.617	C
C-A	274.15	68.54	274.15	0.00	-	-	-	-	-	-
C-B	9.91	2.48	9.89	0.00	542.07	0.018	0.02	0.02	7.440	A
A-B	31.93	7.98	31.93	0.00	-	-	-	-	-	-
A-C	297.28	74.32	297.28	0.00	-	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	226.81	56.70	226.73	0.00	448.46	0.506	1.08	1.10	17.843	C
C-A	274.15	68.54	274.15	0.00	-	-	-	-	-	-
C-B	9.91	2.48	9.91	0.00	542.07	0.018	0.02	0.02	7.440	A
A-B	31.93	7.98	31.93	0.00	-	-	-	-	-	-
A-C	297.28	74.32	297.28	0.00	-	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	185.19	46.30	186.65	0.00	467.46	0.396	1.10	0.74	14.176	B
C-A	223.85	55.96	223.85	0.00	-	-	-	-	-	-
C-B	8.09	2.02	8.11	0.00	555.89	0.015	0.02	0.02	7.228	A
A-B	26.07	6.52	26.07	0.00	-	-	-	-	-	-
A-C	242.72	60.68	242.72	0.00	-	-	-	-	-	-

Main results: (09:00-09:15)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	155.09	38.77	155.91	0.00	481.13	0.322	0.74	0.53	12.209	B
C-A	187.46	46.87	187.46	0.00	-	-	-	-	-	-
C-B	6.78	1.69	6.79	0.00	565.89	0.012	0.02	0.01	7.084	A
A-B	21.83	5.46	21.83	0.00	-	-	-	-	-	-
A-C	203.27	50.82	203.27	0.00	-	-	-	-	-	-

Queueing Delay Results for each time segment

Queueing Delay results: (07:45-08:00)

Stream	Queueing Total Delay (PCU-hr)	Queueing Rate Of Delay (PCU-hr/hr)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	0.12	0.48	11.997	B	B
C-A	-	-	-	-	-
C-B	0.00	0.01	7.081	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (08:00-08:15)

Stream	Queueing Total Delay (PCU-hr)	Queueing Rate Of Delay (PCU-hr/hr)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	0.17	0.68	13.950	B	B
C-A	-	-	-	-	-
C-B	0.00	0.02	7.227	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (08:15-08:30)

Stream	Queueing Total Delay (PCU-hr)	Queueing Rate Of Delay (PCU-hr/hr)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	0.26	1.02	17.617	C	B
C-A	-	-	-	-	-
C-B	0.00	0.02	7.440	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (08:30-08:45)

Stream	Queueing Total Delay (PCU-hr)	Queueing Rate Of Delay (PCU-hr/hr)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	0.27	1.10	17.843	C	B
C-A	-	-	-	-	-
C-B	0.01	0.02	7.440	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (08:45-09:00)

Stream	Queueing Total Delay (PCU-hr)	Queueing Rate Of Delay (PCU-hr/hr)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	0.19	0.78	14.176	B	B
C-A	-	-	-	-	-
C-B	0.00	0.02	7.228	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (09:00-09:15)

Stream	Queueing Total Delay (PCU-hr)	Queueing Rate Of Delay (PCU-hr/hr)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	0.14	0.56	12.209	B	B
C-A	-	-	-	-	-
C-B	0.00	0.01	7.084	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

(Default Analysis Set) - 2018 BASE + dev, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2018 BASE + dev, PM	2018 BASE + dev	PM	Willington Road - Etwall 2014 with Dev AM Peak	Varies by Arm	16:45	18:15	90	15				✓		

Junction Network

Junctions

Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
Main Street - Willington Road	T-Junction	Two-way	A,B,C		9.30	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Name	Description	Arm Type
Main Street North	Main Street North		Major
Willington Road	Willington Road		Minor
Main Street South	Main Street South		Major

Major Arm Geometry

Name	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
Main Street South	7.00		0.00		2.20	75.00		

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

Minor Arm Geometry

Name	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
Willington Road	One lane	2.80										50	42

Pedestrian Crossings

Name	Crossing Type
Main Street North	None
Willington Road	None
Main Street South	None

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	504.220	0.088	0.222	0.140	0.317
1	B-C	637.354	0.093	0.236	-	-
1	C-B	617.397	0.229	0.229	-	-

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

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

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

Traffic Flows

Demand Set Data Options

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

Entry Flows

General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
Main Street North	ONE HOUR	✓	261.00	100.000
Willington Road	ONE HOUR	✓	98.00	100.000
Main Street South	ONE HOUR	✓	197.00	100.000

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Main Street - Willington Road (for whole period)

		To		
		A	**B**	**C**
From	**A**	0.000	54.000	207.000
	B	33.000	0.000	65.000
	C	126.000	71.000	0.000

Turning Proportions (PCU) - Main Street - Willington Road (for whole period)

		To		
		A	**B**	**C**
From	**A**	0.00	0.21	0.79
	B	0.34	0.00	0.66
	C	0.64	0.36	0.00

Vehicle Mix

Average PCU Per Vehicle - Main Street - Willington Road (for whole period)

		To		
		A	**B**	**C**
From	**A**	1.100	1.100	1.100
	B	1.100	1.100	1.100
	C	1.100	1.100	1.100

Heavy Vehicle Percentages - Main Street - Willington Road (for whole period)

		To		
		A	B	C
From	A	10.000	10.000	10.000
	B	10.000	10.000	10.000
	C	10.000	10.000	10.000

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-hr)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-hr/hr)	Inclusive Total Queueing Delay (PCU-hr)	Inclusive Average Queueing Delay (s)
B-AC	0.21	9.98	0.30	A	89.93	134.89	0.35	9.24	0.23	0.35	9.25
C-A	-	-	-	-	115.62	173.43	-	-	-	-	-
C-B	0.14	8.36	0.18	A	65.15	97.73	0.22	7.94	0.14	0.22	7.94
A-B	-	-	-	-	49.55	74.33	-	-	-	-	-
A-C	-	-	-	-	189.95	284.92	-	-	-	-	-

Main Results for each time segment

Main results: (16:45-17:00)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	73.78	18.44	73.08	0.00	530.76	0.139	0.00	0.18	8.639	A
C-A	94.86	23.71	94.86	0.00	-	-	-	-	-	-
C-B	53.45	13.36	53.00	0.00	572.44	0.093	0.00	0.11	7.617	A
A-B	40.65	10.16	40.65	0.00	-	-	-	-	-	-
A-C	155.84	38.96	155.84	0.00	-	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	88.10	22.03	87.91	0.00	519.89	0.169	0.18	0.22	9.163	A
C-A	113.27	28.32	113.27	0.00	-	-	-	-	-	-
C-B	63.83	15.96	63.72	0.00	563.71	0.113	0.11	0.14	7.918	A
A-B	48.54	12.14	48.54	0.00	-	-	-	-	-	-
A-C	186.09	46.52	186.09	0.00	-	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	107.90	26.98	107.61	0.00	504.80	0.214	0.22	0.30	9.963	A
C-A	138.73	34.68	138.73	0.00	-	-	-	-	-	-
C-B	78.17	19.54	78.01	0.00	551.65	0.142	0.14	0.18	8.358	A
A-B	59.46	14.86	59.46	0.00	-	-	-	-	-	-
A-C	227.91	56.98	227.91	0.00	-	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	107.90	26.98	107.89	0.00	504.77	0.214	0.29	0.30	9.977	A
C-A	138.73	34.68	138.73	0.00	-	-	-	-	-	-
C-B	78.17	19.54	78.17	0.00	551.65	0.142	0.18	0.18	8.363	A
A-B	59.46	14.86	59.46	0.00	-	-	-	-	-	-
A-C	227.91	56.98	227.91	0.00	-	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	88.10	22.03	88.38	0.00	519.85	0.169	0.30	0.23	9.185	A
C-A	113.27	28.32	113.27	0.00	-	-	-	-	-	-
C-B	63.83	15.96	63.98	0.00	563.71	0.113	0.18	0.14	7.928	A
A-B	48.54	12.14	48.54	0.00	-	-	-	-	-	-
A-C	186.09	46.52	186.09	0.00	-	-	-	-	-	-

Main results: (18:00-18:15)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	73.78	18.44	73.97	0.00	530.67	0.139	0.23	0.18	8.675	A
C-A	94.86	23.71	94.86	0.00	-	-	-	-	-	-
C-B	53.45	13.36	53.56	0.00	572.44	0.093	0.14	0.11	7.635	A
A-B	40.65	10.16	40.65	0.00	-	-	-	-	-	-
A-C	155.84	38.96	155.84	0.00	-	-	-	-	-	-

Queueing Delay Results for each time segment

Queueing Delay results: (16:45-17:00)

Stream	Queueing Total Delay (PCU-hr)	Queueing Rate Of Delay (PCU-hr/hr)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	0.04	0.17	8.639	A	A
C-A	-	-	-	-	-
C-B	0.03	0.11	7.617	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (17:00-17:15)

Stream	Queueing Total Delay (PCU-hr)	Queueing Rate Of Delay (PCU-hr/hr)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	0.05	0.22	9.163	A	A
C-A	-	-	-	-	-
C-B	0.03	0.14	7.918	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (17:15-17:30)

Stream	Queueing Total Delay (PCU-hr)	Queueing Rate Of Delay (PCU-hr/hr)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	0.07	0.29	9.963	A	A
C-A	-	-	-	-	-
C-B	0.04	0.18	8.358	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (17:30-17:45)

Stream	Queueing Total Delay (PCU-hr)	Queueing Rate Of Delay (PCU-hr/hr)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	0.07	0.30	9.977	A	A
C-A	-	-	-	-	-
C-B	0.05	0.18	8.363	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (17:45-18:00)

Stream	Queueing Total Delay (PCU-hr)	Queueing Rate Of Delay (PCU-hr/hr)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	0.06	0.23	9.185	A	A
C-A	-	-	-	-	-
C-B	0.04	0.15	7.928	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (18:00-18:15)

Stream	Queueing Total Delay (PCU-hr)	Queueing Rate Of Delay (PCU-hr/hr)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	0.05	0.18	8.675	A	A
C-A	-	-	-	-	-
C-B	0.03	0.12	7.635	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

(Default Analysis Set) - BASE, School PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
BASE, School PM	BASE	School PM		ONE HOUR	15:00	16:30	90	15				✓		

Junction Network

Junctions

Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
Main Street - Willington Road	T-Junction	Two-way	A,B,C		9.83	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Name	Description	Arm Type
Main Street North	Main Street North		Major
Willington Road	Willington Road		Minor
Main Street South	Main Street South		Major

Major Arm Geometry

Name	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
Main Street South	7.00		0.00		2.20	75.00		

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

Minor Arm Geometry

Name	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
Willington Road	One lane	2.80										50	42

Pedestrian Crossings

Name	Crossing Type
Main Street North	None
Willington Road	None
Main Street South	None

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	504.220	0.088	0.222	0.140	0.317
1	B-C	637.354	0.093	0.236	-	-
1	C-B	617.397	0.229	0.229	-	-

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

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

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

Traffic Flows

Demand Set Data Options

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

Entry Flows

General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
Main Street North	ONE HOUR	✓	268.00	100.000
Willington Road	ONE HOUR	✓	102.00	100.000
Main Street South	ONE HOUR	✓	119.00	100.000

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Main Street - Willington Road (for whole period)

		To		
		A	B	C
From	A	0.000	65.000	203.000
	B	45.000	0.000	57.000
	C	102.000	17.000	0.000

Turning Proportions (PCU) - Main Street - Willington Road (for whole period)

		To		
		A	B	C
From	A	0.00	0.24	0.76
	B	0.44	0.00	0.56
	C	0.86	0.14	0.00

Vehicle Mix

Average PCU Per Vehicle - Main Street - Willington Road (for whole period)

		To		
		A	B	C
From	A	1.100	1.100	1.100
	B	1.100	1.100	1.100
	C	1.100	1.100	1.100

Heavy Vehicle Percentages - Main Street - Willington Road (for whole period)

		To		
		A	B	C
From	A	10.000	10.000	10.000
	B	10.000	10.000	10.000
	C	10.000	10.000	10.000

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-hr)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-hr/hr)	Inclusive Total Queueing Delay (PCU-hr)	Inclusive Average Queueing Delay (s)
B-AC	0.22	10.22	0.32	B	93.60	140.40	0.37	9.47	0.25	0.37	9.47
C-A	-	-	-	-	93.60	140.40	-	-	-	-	-
C-B	0.03	7.45	0.04	A	15.60	23.40	0.05	7.23	0.03	0.05	7.23
A-B	-	-	-	-	59.65	89.47	-	-	-	-	-
A-C	-	-	-	-	186.28	279.41	-	-	-	-	-

Main Results for each time segment

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	76.79	19.20	76.04	0.00	522.38	0.147	0.00	0.19	8.859	A
C-A	76.79	19.20	76.79	0.00	-	-	-	-	-	-
C-B	12.80	3.20	12.70	0.00	571.23	0.022	0.00	0.03	7.090	A
A-B	48.94	12.23	48.94	0.00	-	-	-	-	-	-
A-C	152.83	38.21	152.83	0.00	-	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	91.70	22.92	91.50	0.00	512.88	0.179	0.19	0.24	9.394	A
C-A	91.70	22.92	91.70	0.00	-	-	-	-	-	-
C-B	15.28	3.82	15.26	0.00	562.27	0.027	0.03	0.03	7.238	A
A-B	58.43	14.61	58.43	0.00	-	-	-	-	-	-
A-C	182.49	45.62	182.49	0.00	-	-	-	-	-	-

Main results: (15:30-15:45)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	112.30	28.08	111.99	0.00	499.73	0.225	0.24	0.31	10.204	B
C-A	112.30	28.08	112.30	0.00	-	-	-	-	-	-
C-B	18.72	4.68	18.69	0.00	549.88	0.034	0.03	0.04	7.454	A
A-B	71.57	17.89	71.57	0.00	-	-	-	-	-	-
A-C	223.51	55.88	223.51	0.00	-	-	-	-	-	-

Main results: (15:45-16:00)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	112.30	28.08	112.30	0.00	499.72	0.225	0.31	0.32	10.221	B
C-A	112.30	28.08	112.30	0.00	-	-	-	-	-	-
C-B	18.72	4.68	18.72	0.00	549.88	0.034	0.04	0.04	7.454	A
A-B	71.57	17.89	71.57	0.00	-	-	-	-	-	-
A-C	223.51	55.88	223.51	0.00	-	-	-	-	-	-

Main results: (16:00-16:15)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	91.70	22.92	91.99	0.00	512.87	0.179	0.32	0.24	9.415	A
C-A	91.70	22.92	91.70	0.00	-	-	-	-	-	-
C-B	15.28	3.82	15.31	0.00	562.27	0.027	0.04	0.03	7.242	A
A-B	58.43	14.61	58.43	0.00	-	-	-	-	-	-
A-C	182.49	45.62	182.49	0.00	-	-	-	-	-	-

Main results: (16:15-16:30)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	76.79	19.20	76.99	0.00	522.35	0.147	0.24	0.19	8.897	A
C-A	76.79	19.20	76.79	0.00	-	-	-	-	-	-
C-B	12.80	3.20	12.82	0.00	571.23	0.022	0.03	0.03	7.090	A
A-B	48.94	12.23	48.94	0.00	-	-	-	-	-	-
A-C	152.83	38.21	152.83	0.00	-	-	-	-	-	-

Queueing Delay Results for each time segment

Queueing Delay results: (15:00-15:15)

Stream	Queueing Total Delay (PCU-hr)	Queueing Rate Of Delay (PCU-hr/hr)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	0.04	0.18	8.859	A	A
C-A	-	-	-	-	-
C-B	0.01	0.02	7.090	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (15:15-15:30)

Stream	Queueing Total Delay (PCU-hr)	Queueing Rate Of Delay (PCU-hr/hr)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	0.06	0.23	9.394	A	A
C-A	-	-	-	-	-
C-B	0.01	0.03	7.238	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (15:30-15:45)

Stream	Queueing Total Delay (PCU-hr)	Queueing Rate Of Delay (PCU-hr/hr)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	0.08	0.31	10.204	B	B
C-A	-	-	-	-	-
C-B	0.01	0.04	7.454	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (15:45-16:00)

Stream	Queueing Total Delay (PCU-hr)	Queueing Rate Of Delay (PCU-hr/hr)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	0.08	0.32	10.221	B	B
C-A	-	-	-	-	-
C-B	0.01	0.04	7.454	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (16:00-16:15)

Stream	Queueing Total Delay (PCU-hr)	Queueing Rate Of Delay (PCU-hr/hr)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	0.06	0.25	9.415	A	A
C-A	-	-	-	-	-
C-B	0.01	0.03	7.242	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (16:15-16:30)

Stream	Queueing Total Delay (PCU-hr)	Queueing Rate Of Delay (PCU-hr/hr)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	0.05	0.20	8.897	A	A
C-A	-	-	-	-	-
C-B	0.01	0.03	7.090	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

(Default Analysis Set) - 2018 School + Dev, School PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2018 School + Dev, School PM	2018 School + Dev	School PM		ONE HOUR	15:00	16:30	90	15				✓		

Junction Network

Junctions

Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
Main Street - Willington Road	T-Junction	Two-way	A,B,C		9.99	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Name	Description	Arm Type
Main Street North	Main Street North		Major
Willington Road	Willington Road		Minor
Main Street South	Main Street South		Major

Major Arm Geometry

Name	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
Main Street South	7.00		0.00		2.20	75.00		

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

Minor Arm Geometry

Name	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
Willington Road	One lane	2.80										50	42

Pedestrian Crossings

Name	Crossing Type
Main Street North	None
Willington Road	None
Main Street South	None

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	504.220	0.088	0.222	0.140	0.317
1	B-C	637.354	0.093	0.236	-	-
1	C-B	617.397	0.229	0.229	-	-

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

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

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

Traffic Flows

Demand Set Data Options

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

Entry Flows

General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
Main Street North	ONE HOUR	✓	285.00	100.000
Willington Road	ONE HOUR	✓	99.00	100.000
Main Street South	ONE HOUR	✓	127.00	100.000

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Main Street - Willington Road (for whole period)

		To		
		A	B	C
From	A	0.000	69.000	216.000
	B	48.000	0.000	51.000
	C	109.000	18.000	0.000

Turning Proportions (PCU) - Main Street - Willington Road (for whole period)

		To		
		A	B	C
From	A	0.00	0.24	0.76
	B	0.48	0.00	0.52
	C	0.86	0.14	0.00

Vehicle Mix

Average PCU Per Vehicle - Main Street - Willington Road (for whole period)

		To		
		A	B	C
From	A	1.100	1.100	1.100
	B	1.100	1.100	1.100
	C	1.100	1.100	1.100

Heavy Vehicle Percentages - Main Street - Willington Road (for whole period)

		To		
		A	B	C
From	A	10.000	10.000	10.000
	B	10.000	10.000	10.000
	C	10.000	10.000	10.000

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-hr)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-hr/hr)	Inclusive Total Queueing Delay (PCU-hr)	Inclusive Average Queueing Delay (s)
B-AC	0.22	10.43	0.31	B	90.84	136.27	0.37	9.65	0.24	0.37	9.65
C-A	-	-	-	-	100.02	150.03	-	-	-	-	-
C-B	0.04	7.53	0.04	A	16.52	24.78	0.05	7.29	0.03	0.05	7.29
A-B	-	-	-	-	63.32	94.97	-	-	-	-	-
A-C	-	-	-	-	198.21	297.31	-	-	-	-	-

Main Results for each time segment

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	74.53	18.63	73.79	0.00	512.85	0.145	0.00	0.18	9.004	A
C-A	82.06	20.52	82.06	0.00	-	-	-	-	-	-
C-B	13.55	3.39	13.44	0.00	568.30	0.024	0.00	0.03	7.137	A
A-B	51.95	12.99	51.95	0.00	-	-	-	-	-	-
A-C	162.62	40.65	162.62	0.00	-	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	89.00	22.25	88.80	0.00	502.63	0.177	0.18	0.23	9.564	A
C-A	97.99	24.50	97.99	0.00	-	-	-	-	-	-
C-B	16.18	4.05	16.16	0.00	558.77	0.029	0.03	0.03	7.297	A
A-B	62.03	15.51	62.03	0.00	-	-	-	-	-	-
A-C	194.18	48.54	194.18	0.00	-	-	-	-	-	-

Main results: (15:30-15:45)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	109.00	27.25	108.69	0.00	488.47	0.223	0.23	0.31	10.418	B
C-A	120.01	30.00	120.01	0.00	-	-	-	-	-	-
C-B	19.82	4.95	19.78	0.00	545.60	0.036	0.03	0.04	7.530	A
A-B	75.97	18.99	75.97	0.00	-	-	-	-	-	-
A-C	237.82	59.46	237.82	0.00	-	-	-	-	-	-

Main results: (15:45-16:00)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	109.00	27.25	108.99	0.00	488.46	0.223	0.31	0.31	10.435	B
C-A	120.01	30.00	120.01	0.00	-	-	-	-	-	-
C-B	19.82	4.95	19.82	0.00	545.60	0.036	0.04	0.04	7.530	A
A-B	75.97	18.99	75.97	0.00	-	-	-	-	-	-
A-C	237.82	59.46	237.82	0.00	-	-	-	-	-	-

Main results: (16:00-16:15)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	89.00	22.25	89.29	0.00	502.61	0.177	0.31	0.24	9.589	A
C-A	97.99	24.50	97.99	0.00	-	-	-	-	-	-
C-B	16.18	4.05	16.21	0.00	558.77	0.029	0.04	0.03	7.301	A
A-B	62.03	15.51	62.03	0.00	-	-	-	-	-	-
A-C	194.18	48.54	194.18	0.00	-	-	-	-	-	-

Main results: (16:15-16:30)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	74.53	18.63	74.73	0.00	512.82	0.145	0.24	0.19	9.044	A
C-A	82.06	20.52	82.06	0.00	-	-	-	-	-	-
C-B	13.55	3.39	13.58	0.00	568.30	0.024	0.03	0.03	7.140	A
A-B	51.95	12.99	51.95	0.00	-	-	-	-	-	-
A-C	162.62	40.65	162.62	0.00	-	-	-	-	-	-

Queueing Delay Results for each time segment

Queueing Delay results: (15:00-15:15)

Stream	Queueing Total Delay (PCU-hr)	Queueing Rate Of Delay (PCU-hr/hr)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	0.04	0.18	9.004	A	A
C-A	-	-	-	-	-
C-B	0.01	0.03	7.137	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (15:15-15:30)

Stream	Queueing Total Delay (PCU-hr)	Queueing Rate Of Delay (PCU-hr/hr)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	0.06	0.23	9.564	A	A
C-A	-	-	-	-	-
C-B	0.01	0.03	7.297	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (15:30-15:45)

Stream	Queueing Total Delay (PCU-hr)	Queueing Rate Of Delay (PCU-hr/hr)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	0.08	0.30	10.418	B	B
C-A	-	-	-	-	-
C-B	0.01	0.04	7.530	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (15:45-16:00)

Stream	Queueing Total Delay (PCU-hr)	Queueing Rate Of Delay (PCU-hr/hr)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	0.08	0.31	10.435	B	B
C-A	-	-	-	-	-
C-B	0.01	0.04	7.530	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (16:00-16:15)

Stream	Queueing Total Delay (PCU-hr)	Queueing Rate Of Delay (PCU-hr/hr)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	0.06	0.25	9.589	A	A
C-A	-	-	-	-	-
C-B	0.01	0.03	7.301	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (16:15-16:30)

Stream	Queueing Total Delay (PCU-hr)	Queueing Rate Of Delay (PCU-hr/hr)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	0.05	0.19	9.044	A	A
C-A	-	-	-	-	-
C-B	0.01	0.03	7.140	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-