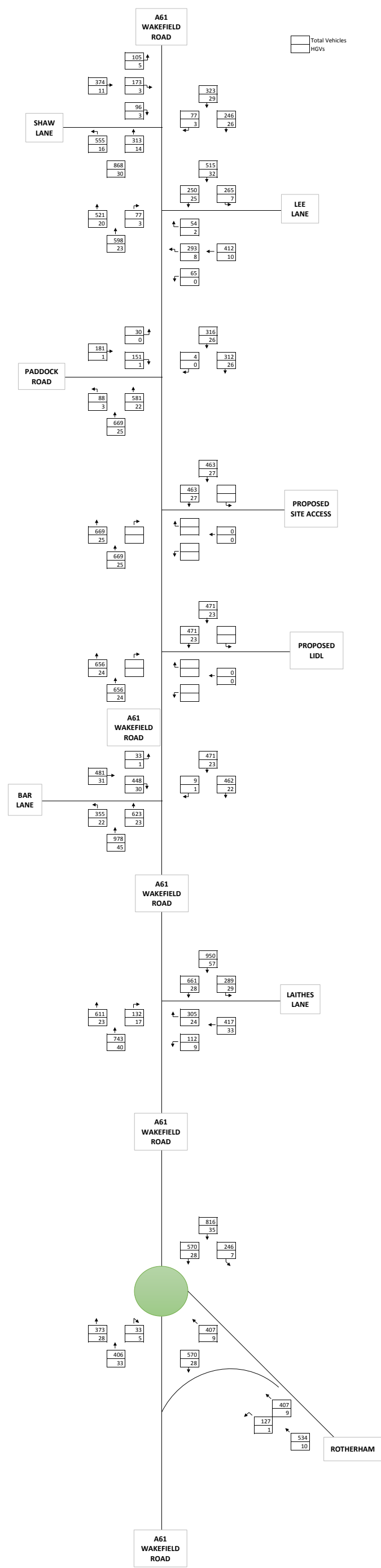
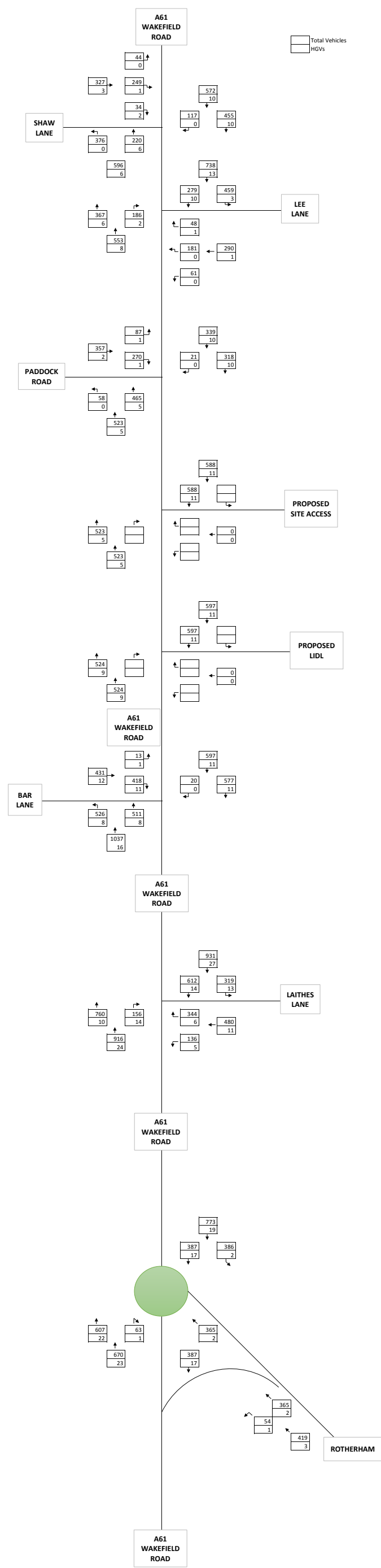


APPENDIX BGH 5

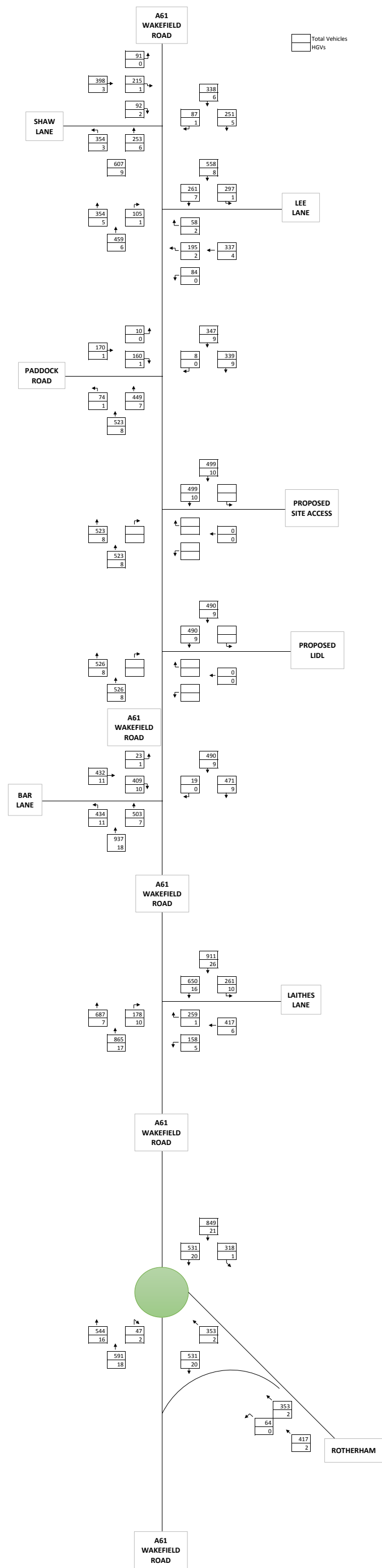
2017 SURVEYED FLOWS
PROPOSED RESIDENTIAL DEVELOPMENT, WAKEFIELD ROAD, MAPPLEWELL
FRIDAY 10 NOVEMBER 2017
07:45 - 08:45
AM PEAK



2017 SURVEYED FLOWS
PROPOSED RESIDENTIAL DEVELOPMENT, WAKEFIELD ROAD, MAPPLEWELL
FRIDAY 10 NOVEMBER 2017
16:45 - 17:45
PM PEAK



2017 SURVEYED FLOWS
PROPOSED RESIDENTIAL DEVELOPMENT, WAKEFIELD ROAD, MAPPLEWELL
SATURDAY 11 NOVEMBER 2017
11:45 - 12:45
PM PEAK



APPENDIX BGH 6

Junctions 8				
PICADY 8 - Priority Intersection Module				
Version: 8.0.5.523 [19102,19/06/2015] © Copyright TRL Limited, 2017				
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Filename: Wakefield Road - Lee Lane - Shaw Lane.arc8

Path: Y:\2014\14-101 to 14-125\14-114 Former William Freeman Works, Mapplewell\Technical\2017 Transport Assessment\Junction Modelling\Junctions 8

Report generation date: 15/12/2017 11:59:08

« Existing Layout - 2017 Existing, AM

- » Junction Network
- » Arms
- » Traffic Flows
- » Entry Flows
- » Turning Proportions
- » Vehicle Mix
- » Results

Summary of junction performance

	AM			
	Queue (PCU)	Delay (s)	RFC	LOS
Existing Layout - 2017 Existing				
Stream B-C	7.55	233.92	1.03	F
Stream B-AD	15.02	177.86	1.05	F
Stream A-B	-	-	-	-
Stream A-C	-	-	-	-
Stream A-D	0.20	8.13	0.17	A
Stream D-A	6.96	386.54	1.14	F
Stream D-BC	30.02	264.22	1.14	F
Stream C-D	-	-	-	-
Stream C-A	-	-	-	-
Stream C-B	0.23	9.64	0.19	A

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

"D1 - 2017 Existing, AM" model duration: 07:30 - 09:00

"D2 - 2017 Existing, PM" model duration: 16:30 - 18:00

"D3 - 2017 Existing, Saturday" model duration: 11:30 - 13:00

"D4 - 2023 Base, AM" model duration: 07:30 - 09:00

"D5 - 2023 Base, PM" model duration: 16:30 - 18:00

"D6 - 2023 Base, Saturday" model duration: 11:30 - 13:00

"D7 - 2023 Predicted, AM" model duration: 07:30 - 09:00

"D8 - 2023 Predicted, PM" model duration: 16:30 - 18:00

"D9 - 2023 Predicted, Saturday" model duration: 11:30 - 13:00

"D10 - 2023 Predicted with Lidl, AM" model duration: 07:30 - 09:00

"D11 - 2023 Predicted with Lidl, PM" model duration: 16:30 - 18:00

"D12 - 2023 Predicted with Lidl, Saturday" model duration: 11:30 - 13:00

Run using Junctions 8.0.5.523 at 15/12/2017 11:59:07

File summary

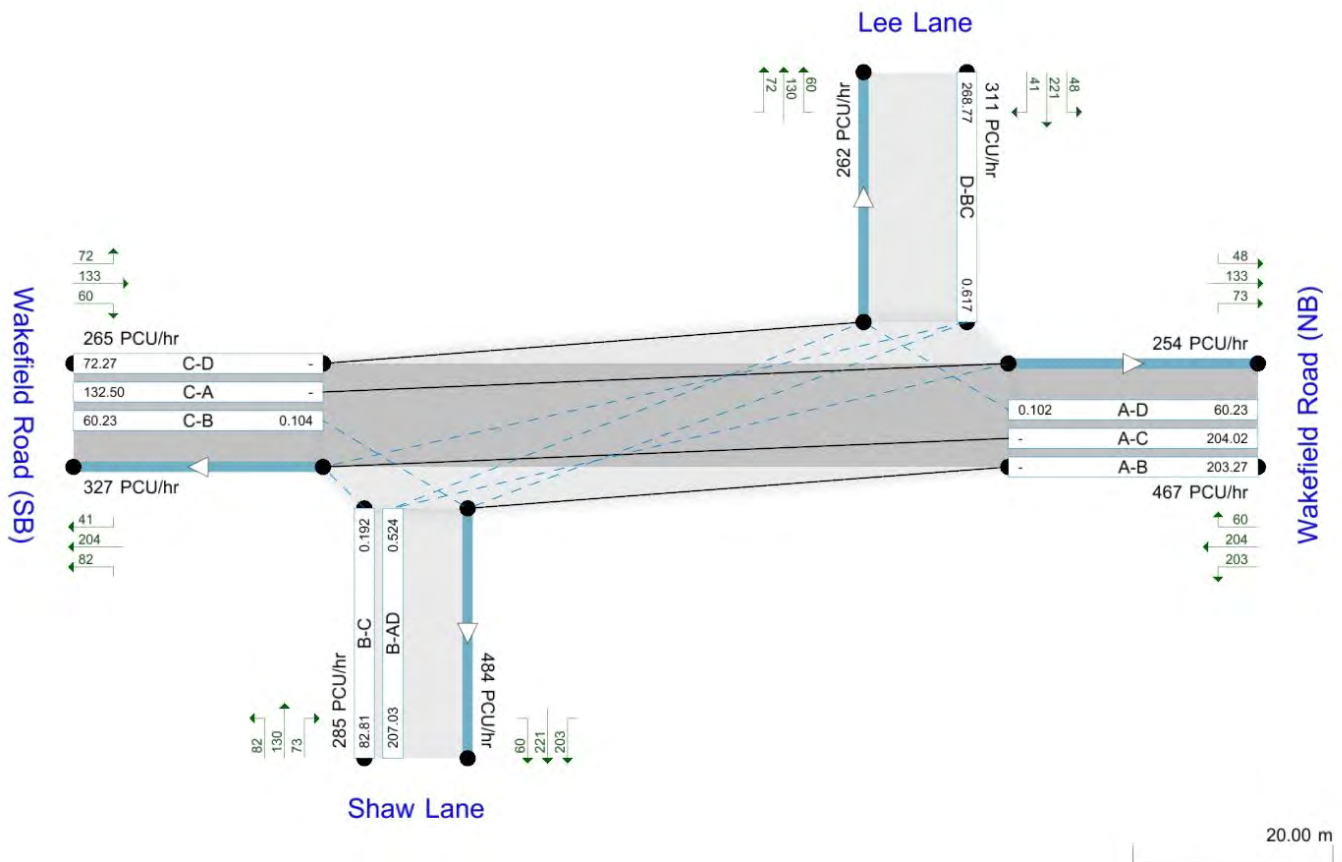
Title	Mapplewell, Barnsley
Location	Wakefield Road, Lee Lane, Shaw Lane Stagger
Site Number	
Date	29/11/2017
Version	
Status	(new file)
Identifier	
Client	Netherton Building and Construction
Jobnumber	14-114
Enumerator	BRYANGHALL\JTurner
Description	

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	-Min	perMin



Showing modelled flow through junction (PCU/hr).
Streams (upstreams) show Total Demand (PCU/hr). Streams (downstreams) show RFC (l)
Time Segment: (07:30-07:45)
Showing Analysis Set "A1 - Existing Layout", Demand Set "D1 - 2017 Existing, AM"

The junction diagram reflects the last run of ARCADY.

Existing Layout - 2017 Existing, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Existing Layout	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2017 Existing, AM	2017 Existing	AM		ONE HOUR	07:30	09:00	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	Wakefield Road - Lee Lane - Shaw Lane	OS-NS Stagger (UK RL Stagger)	Two-way	A,B,C,D	202.19	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description	Arm Type
Wakefield Road (NB)	A	Wakefield Road (NB)		Major
Shaw Lane	B	Shaw Lane		Minor
Wakefield Road (SB)	C	Wakefield Road (SB)		Major
Lee Lane	D	Lee Lane		Minor

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)
Wakefield Road (NB)	6.00		0.00	✓	3.00	130.00		
Wakefield Road (SB)	6.00		0.00	✓	3.00	250.00		

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)
Shaw Lane	One lane plus flare				10.00	6.40	3.60	3.40	3.40	✓	1.00	55	35
Lee Lane	One lane plus flare				10.00	8.00	5.00	4.25	3.50	✓	2.00	40	65

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
1	A-D	705.776	-	-	-	0.273	0.273	0.273	-	0.273	-	-
1	B-AD	563.701	0.103	0.260	-	-	-	0.163	0.371	0.163	0.103	0.260
1	B-C	672.763	0.103	0.261	-	-	-	-	-	-	0.103	0.261
1	C-B	781.320	0.303	0.303	-	-	-	-	-	-	0.303	0.303
1	D-A	659.756	-	-	-	0.256	0.101	0.256	-	0.101	-	-
1	D-BC	613.834	0.178	0.178	0.404	0.283	0.112	0.283	-	0.112	-	-

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 (%)
Wakefield Road (NB)	ONE HOUR	✓	621.00	100.000
Shaw Lane	ONE HOUR	✓	385.00	100.000
Wakefield Road (SB)	ONE HOUR	✓	352.00	100.000
Lee Lane	ONE HOUR	✓	422.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Wakefield Road - Lee Lane - Shaw Lane (for whole period)

	To				
		Wakefield Road (NB)	Shaw Lane	Wakefield Road (SB)	Lee Lane
From	Wakefield Road (NB)	0.000	270.000	271.000	80.000
	Shaw Lane	99.000	0.000	110.000	176.000
	Wakefield Road (SB)	176.000	80.000	0.000	96.000
	Lee Lane	65.000	301.000	56.000	0.000

Turning Proportions (PCU) - Wakefield Road - Lee Lane - Shaw Lane (for whole period)

	To				
		Wakefield Road (NB)	Shaw Lane	Wakefield Road (SB)	Lee Lane
From	Wakefield Road (NB)	0.00	0.43	0.44	0.13
	Shaw Lane	0.26	0.00	0.29	0.46
	Wakefield Road (SB)	0.50	0.23	0.00	0.27
	Lee Lane	0.15	0.71	0.13	0.00

Vehicle Mix

Average PCU Per Vehicle - Wakefield Road - Lee Lane - Shaw Lane (for whole period)

	To				
		Wakefield Road (NB)	Shaw Lane	Wakefield Road (SB)	Lee Lane
From	Wakefield Road (NB)	1.000	1.010	1.022	1.000
	Shaw Lane	1.010	1.000	1.000	1.006
	Wakefield Road (SB)	1.028	1.000	1.000	1.000
	Lee Lane	1.000	1.010	1.000	1.000

Heavy Vehicle Percentages - Wakefield Road - Lee Lane - Shaw Lane (for whole period)

	To				
		Wakefield Road (NB)	Shaw Lane	Wakefield Road (SB)	Lee Lane
From	Wakefield Road (NB)	0.0	1.0	2.2	0.0
	Shaw Lane	1.0	0.0	0.0	0.6
	Wakefield Road (SB)	2.8	0.0	0.0	0.0
	Lee Lane	0.0	1.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	1.03	233.92	7.55	F
B-AD	1.05	177.86	15.02	F
A-B	-	-	-	-
A-C	-	-	-	-
A-D	0.17	8.13	0.20	A
D-A	1.14	386.54	6.96	F
D-BC	1.14	264.22	30.02	F
C-D	-	-	-	-
C-A	-	-	-	-
C-B	0.19	9.64	0.23	A

Main Results for each time segment

Main results: (07:30-07:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	82.81	81.88	0.00	431.27	0.192	0.23	10.276	B
B-AD	207.03	202.78	0.00	394.74	0.524	1.06	18.515	C
A-B	203.27	203.27	0.00	-	-	-	-	-
A-C	204.02	204.02	0.00	-	-	-	-	-
A-D	60.23	59.78	0.00	593.16	0.102	0.11	6.743	A
D-A	48.94	48.43	0.00	434.57	0.113	0.13	9.311	A
D-BC	268.77	262.64	0.00	435.49	0.617	1.53	20.355	C
C-D	72.27	72.27	0.00	-	-	-	-	-
C-A	132.50	132.50	0.00	-	-	-	-	-
C-B	60.23	59.77	0.00	576.66	0.104	0.12	6.959	A

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	98.89	98.10	0.00	322.41	0.307	0.43	15.986	C
B-AD	247.22	243.22	0.00	356.33	0.694	2.06	30.981	D
A-B	242.72	242.72	0.00	-	-	-	-	-
A-C	243.62	243.62	0.00	-	-	-	-	-
A-D	71.92	71.79	0.00	570.14	0.126	0.14	7.221	A
D-A	58.43	57.91	0.00	281.61	0.208	0.26	16.056	C
D-BC	320.94	313.46	0.00	399.69	0.803	3.40	39.005	E
C-D	86.30	86.30	0.00	-	-	-	-	-
C-A	158.22	158.22	0.00	-	-	-	-	-
C-B	71.92	71.77	0.00	535.08	0.134	0.15	7.767	A

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	121.11	100.90	0.00	117.77	1.028	5.48	148.352	F
B-AD	302.78	274.26	0.00	298.19	1.015	9.19	99.455	F
A-B	297.28	297.28	0.00	-	-	-	-	-
A-C	298.38	298.38	0.00	-	-	-	-	-
A-D	88.08	87.88	0.00	538.83	0.163	0.19	7.980	A
D-A	71.57	52.78	0.00	62.61	1.143	4.95	239.072	F
D-BC	393.06	338.03	0.00	350.75	1.121	17.16	134.564	F
C-D	105.70	105.70	0.00	-	-	-	-	-
C-A	193.78	193.78	0.00	-	-	-	-	-
C-B	88.08	87.80	0.00	477.89	0.184	0.22	9.222	A

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	121.11	112.85	0.00	121.62	0.996	7.55	233.921	F
B-AD	302.78	279.49	0.00	288.69	1.049	15.02	177.859	F
A-B	297.28	297.28	0.00	-	-	-	-	-
A-C	298.38	298.38	0.00	-	-	-	-	-
A-D	88.08	88.07	0.00	531.03	0.166	0.20	8.127	A
D-A	71.57	63.53	0.00	68.23	1.049	6.96	386.536	F
D-BC	393.06	341.63	0.00	344.76	1.140	30.02	264.218	F
C-D	105.70	105.70	0.00	-	-	-	-	-
C-A	193.78	193.78	0.00	-	-	-	-	-
C-B	88.08	88.04	0.00	461.23	0.191	0.23	9.645	A

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	98.89	122.76	0.00	171.26	0.577	1.58	92.187	F
B-AD	247.22	290.90	0.00	325.73	0.759	4.10	112.989	F
A-B	242.72	242.72	0.00	-	-	-	-	-
A-C	243.62	243.62	0.00	-	-	-	-	-
A-D	71.92	72.11	0.00	554.88	0.130	0.15	7.458	A
D-A	58.43	67.09	0.00	75.91	0.770	4.80	300.040	F
D-BC	320.94	375.39	0.00	388.00	0.827	16.41	226.853	F
C-D	86.30	86.30	0.00	-	-	-	-	-
C-A	158.22	158.22	0.00	-	-	-	-	-
C-B	71.92	72.17	0.00	500.58	0.144	0.17	8.407	A

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	82.81	88.08	0.00	398.43	0.208	0.27	11.787	B
B-AD	207.03	218.49	0.00	384.46	0.539	1.23	23.191	C
A-B	203.27	203.27	0.00	-	-	-	-	-
A-C	204.02	204.02	0.00	-	-	-	-	-
A-D	60.23	60.37	0.00	588.68	0.102	0.11	6.817	A
D-A	48.94	67.41	0.00	330.44	0.148	0.18	14.640	B
D-BC	268.77	327.10	0.00	430.86	0.624	1.83	50.826	F
C-D	72.27	72.27	0.00	-	-	-	-	-
C-A	132.50	132.50	0.00	-	-	-	-	-
C-B	60.23	60.42	0.00	556.79	0.108	0.12	7.257	A

Junctions 8				
PICADY 8 - Priority Intersection Module				
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Filename: Wakefield Road - Lee Lane - Shaw Lane.arc8

Path: Y:\2014\14-101 to 14-125\14-114 Former William Freeman Works, Mapplewell\Technical\2017 Transport Assessment\Junction Modelling\Junctions 8

Report generation date: 15/12/2017 11:59:37

« Existing Layout - 2017 Existing, PM

- » Junction Network
- » Arms
- » Traffic Flows
- » Entry Flows
- » Turning Proportions
- » Vehicle Mix
- » Results

Summary of junction performance

	PM			
	Queue (PCU)	Delay (s)	RFC	LOS
Existing Layout - 2017 Existing				
Stream B-C	3.51	259.88	0.99	F
Stream B-AD	10.92	129.73	0.98	F
Stream A-B	-	-	-	-
Stream A-C	-	-	-	-
Stream A-D	0.77	13.62	0.44	B
Stream D-A	0.48	26.32	0.33	D
Stream D-BC	4.25	65.41	0.84	F
Stream C-D	-	-	-	-
Stream C-A	-	-	-	-
Stream C-B	0.29	8.05	0.22	A

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

"D1 - 2017 Existing, AM" model duration: 07:30 - 09:00

"D2 - 2017 Existing, PM" model duration: 16:30 - 18:00

"D3 - 2017 Existing, Saturday" model duration: 11:30 - 13:00

"D4 - 2023 Base, AM" model duration: 07:30 - 09:00

"D5 - 2023 Base, PM" model duration: 16:30 - 18:00

"D6 - 2023 Base, Saturday" model duration: 11:30 - 13:00

"D7 - 2023 Predicted, AM" model duration: 07:30 - 09:00

"D8 - 2023 Predicted, PM" model duration: 16:30 - 18:00

"D9 - 2023 Predicted, Saturday" model duration: 11:30 - 13:00

"D10 - 2023 Predicted with Lidl, AM" model duration: 07:30 - 09:00

"D11 - 2023 Predicted with Lidl, PM" model duration: 16:30 - 18:00

"D12 - 2023 Predicted with Lidl, Saturday" model duration: 11:30 - 13:00

Run using Junctions 8.0.5.523 at 15/12/2017 11:59:36

File summary

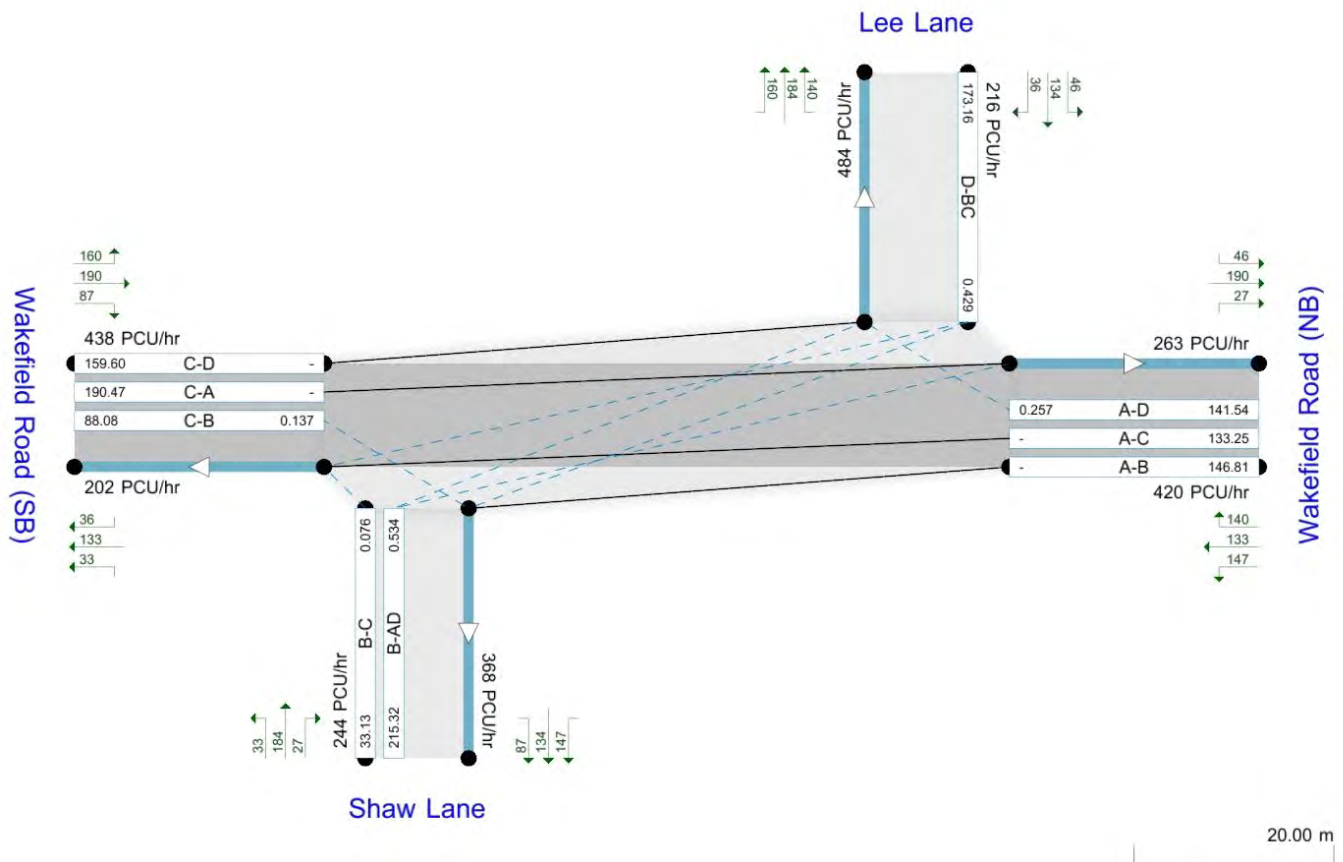
Title	Mapplewell, Barnsley
Location	Wakefield Road, Lee Lane, Shaw Lane Stagger
Site Number	
Date	29/11/2017
Version	
Status	(new file)
Identifier	
Client	Netherton Building and Construction
Jobnumber	14-114
Enumerator	BRYANGHALL\JTurner
Description	

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	-Min	perMin



Showing modelled flow through junction (PCU/hr).
Streams (upstreams) show Total Demand (PCU/hr). Streams (downstreams) show RfC (l).
Time Segment: (16:30-16:45)
Showing Analysis Set "A1 - Existing Layout", Demand Set "D2 - 2017 Existing, PM"

The junction diagram reflects the last run of ARCADY.

Existing Layout - 2017 Existing, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Existing Layout	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2017 Existing, PM	2017 Existing	PM		ONE HOUR	16:30	18:00	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	Wakefield Road - Lee Lane - Shaw Lane	OS-NS Stagger (UK RL Stagger)	Two-way	A,B,C,D	74.18	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description	Arm Type
Wakefield Road (NB)	A	Wakefield Road (NB)		Major
Shaw Lane	B	Shaw Lane		Minor
Wakefield Road (SB)	C	Wakefield Road (SB)		Major
Lee Lane	D	Lee Lane		Minor

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)
Wakefield Road (NB)	6.00		0.00	✓	3.00	130.00		
Wakefield Road (SB)	6.00		0.00	✓	3.00	250.00		

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)
Shaw Lane	One lane plus flare				10.00	6.40	3.60	3.40	3.40	✓	1.00	55	35
Lee Lane	One lane plus flare				10.00	8.00	5.00	4.25	3.50	✓	2.00	40	65

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
1	A-D	705.776	-	-	-	0.273	0.273	0.273	-	0.273	-	-
1	B-AD	568.100	0.103	0.262	-	-	-	0.165	0.374	0.165	0.103	0.262
1	B-C	658.905	0.101	0.255	-	-	-	-	-	-	0.101	0.255
1	C-B	781.320	0.303	0.303	-	-	-	-	-	-	0.303	0.303
1	D-A	665.924	-	-	-	0.258	0.102	0.258	-	0.102	-	-
1	D-BC	608.986	0.176	0.176	0.401	0.280	0.111	0.280	-	0.111	-	-

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 (%)
Wakefield Road (NB)	ONE HOUR	✓	560.00	100.000
Shaw Lane	ONE HOUR	✓	330.00	100.000
Wakefield Road (SB)	ONE HOUR	✓	582.00	100.000
Lee Lane	ONE HOUR	✓	291.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Wakefield Road - Lee Lane - Shaw Lane (for whole period)

	To				
		Wakefield Road (NB)	Shaw Lane	Wakefield Road (SB)	Lee Lane
From	Wakefield Road (NB)	0.000	195.000	177.000	188.000
	Shaw Lane	36.000	0.000	44.000	250.000
	Wakefield Road (SB)	253.000	117.000	0.000	212.000
	Lee Lane	61.000	181.000	49.000	0.000

Turning Proportions (PCU) - Wakefield Road - Lee Lane - Shaw Lane (for whole period)

	To				
		Wakefield Road (NB)	Shaw Lane	Wakefield Road (SB)	Lee Lane
From	Wakefield Road (NB)	0.00	0.35	0.32	0.34
	Shaw Lane	0.11	0.00	0.13	0.76
	Wakefield Road (SB)	0.43	0.20	0.00	0.36
	Lee Lane	0.21	0.62	0.17	0.00

Vehicle Mix

Average PCU Per Vehicle - Wakefield Road - Lee Lane - Shaw Lane (for whole period)

	To				
		Wakefield Road (NB)	Shaw Lane	Wakefield Road (SB)	Lee Lane
From	Wakefield Road (NB)	1.000	1.010	1.022	1.000
	Shaw Lane	1.010	1.000	1.000	1.006
	Wakefield Road (SB)	1.028	1.000	1.000	1.000
	Lee Lane	1.000	1.010	1.000	1.000

Heavy Vehicle Percentages - Wakefield Road - Lee Lane - Shaw Lane (for whole period)

	To				
		Wakefield Road (NB)	Shaw Lane	Wakefield Road (SB)	Lee Lane
From	Wakefield Road (NB)	0.0	1.0	2.2	0.0
	Shaw Lane	1.0	0.0	0.0	0.6
	Wakefield Road (SB)	2.8	0.0	0.0	0.0
	Lee Lane	0.0	1.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.99	259.88	3.51	F
B-AD	0.98	129.73	10.92	F
A-B	-	-	-	-
A-C	-	-	-	-
A-D	0.44	13.62	0.77	B
D-A	0.33	26.32	0.48	D
D-BC	0.84	65.41	4.25	F
C-D	-	-	-	-
C-A	-	-	-	-
C-B	0.22	8.05	0.29	A

Main Results for each time segment

Main results: (16:30-16:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	33.13	32.80	0.00	438.08	0.076	0.08	8.869	A
B-AD	215.32	210.90	0.00	402.97	0.534	1.11	18.473	C
A-B	146.81	146.81	0.00	-	-	-	-	-
A-C	133.25	133.25	0.00	-	-	-	-	-
A-D	141.54	140.17	0.00	551.17	0.257	0.34	8.731	A
D-A	45.92	45.52	0.00	498.43	0.092	0.10	7.942	A
D-BC	173.16	170.21	0.00	403.22	0.429	0.74	15.388	C
C-D	159.60	159.60	0.00	-	-	-	-	-
C-A	190.47	190.47	0.00	-	-	-	-	-
C-B	88.08	87.46	0.00	644.12	0.137	0.16	6.460	A

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	39.56	39.32	0.00	320.68	0.123	0.14	12.785	B
B-AD	257.11	253.18	0.00	369.56	0.696	2.09	30.120	D
A-B	175.30	175.30	0.00	-	-	-	-	-
A-C	159.12	159.12	0.00	-	-	-	-	-
A-D	169.01	168.48	0.00	519.95	0.325	0.47	10.227	B
D-A	54.84	54.66	0.00	431.59	0.127	0.14	9.547	A
D-BC	206.77	204.63	0.00	362.07	0.571	1.27	22.726	C
C-D	190.58	190.58	0.00	-	-	-	-	-
C-A	227.44	227.44	0.00	-	-	-	-	-
C-B	105.18	104.99	0.00	616.60	0.171	0.20	7.035	A

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	48.44	37.05	0.00	48.92	0.990	2.99	221.566	F
B-AD	314.89	291.88	0.00	322.73	0.976	7.84	83.877	F
A-B	214.70	214.70	0.00	-	-	-	-	-
A-C	194.88	194.88	0.00	-	-	-	-	-
A-D	206.99	205.90	0.00	477.38	0.434	0.75	13.206	B
D-A	67.16	66.26	0.00	243.73	0.276	0.37	20.185	C
D-BC	253.23	243.71	0.00	305.53	0.829	3.65	52.200	F
C-D	233.42	233.42	0.00	-	-	-	-	-
C-A	278.56	278.56	0.00	-	-	-	-	-
C-B	128.82	128.50	0.00	579.13	0.222	0.28	7.983	A

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	48.44	46.36	0.00	55.83	0.868	3.51	259.877	F
B-AD	314.89	302.55	0.00	320.10	0.984	10.92	129.727	F
A-B	214.70	214.70	0.00	-	-	-	-	-
A-C	194.88	194.88	0.00	-	-	-	-	-
A-D	206.99	206.90	0.00	471.09	0.439	0.77	13.617	B
D-A	67.16	66.74	0.00	203.01	0.331	0.48	26.321	D
D-BC	253.23	250.83	0.00	302.08	0.838	4.25	65.412	F
C-D	233.42	233.42	0.00	-	-	-	-	-
C-A	278.56	278.56	0.00	-	-	-	-	-
C-B	128.82	128.81	0.00	576.25	0.224	0.29	8.045	A

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	39.56	52.74	0.00	231.68	0.171	0.21	21.538	C
B-AD	257.11	289.89	0.00	365.36	0.704	2.73	59.384	F
A-B	175.30	175.30	0.00	-	-	-	-	-
A-C	159.12	159.12	0.00	-	-	-	-	-
A-D	169.01	170.07	0.00	509.21	0.332	0.51	10.647	B
D-A	54.84	56.11	0.00	404.85	0.135	0.16	10.360	B
D-BC	206.77	217.86	0.00	356.43	0.580	1.48	27.967	D
C-D	190.58	190.58	0.00	-	-	-	-	-
C-A	227.44	227.44	0.00	-	-	-	-	-
C-B	105.18	105.49	0.00	612.34	0.172	0.21	7.108	A

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	33.13	33.63	0.00	421.94	0.079	0.09	9.283	A
B-AD	215.32	221.38	0.00	401.74	0.536	1.21	20.703	C
A-B	146.81	146.81	0.00	-	-	-	-	-
A-C	133.25	133.25	0.00	-	-	-	-	-
A-D	141.54	142.15	0.00	548.18	0.258	0.35	8.881	A
D-A	45.92	46.14	0.00	492.23	0.093	0.10	8.073	A
D-BC	173.16	175.92	0.00	401.15	0.432	0.79	16.297	C
C-D	159.60	159.60	0.00	-	-	-	-	-
C-A	190.47	190.47	0.00	-	-	-	-	-
C-B	88.08	88.28	0.00	642.33	0.137	0.16	6.499	A

Junctions 8				
PICADY 8 - Priority Intersection Module				
Version: 8.0.5.523 [19102,19/06/2015] © Copyright TRL Limited, 2017				
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Filename: Wakefield Road - Lee Lane - Shaw Lane.arc8

Path: Y:\2014\14-101 to 14-125\14-114 Former William Freeman Works, Mapplewell\Technical\2017 Transport Assessment\Junction Modelling\Junctions 8

Report generation date: 15/12/2017 12:00:41

« Existing Layout - 2017 Existing, Saturday

- » Junction Network
- » Arms
- » Traffic Flows
- » Entry Flows
- » Turning Proportions
- » Vehicle Mix
- » Results

Summary of junction performance

	Saturday			
	Queue (PCU)	Delay (s)	RFC	LOS
Existing Layout - 2017 Existing				
Stream B-C	5.25	195.22	0.96	F
Stream B-AD	11.34	123.90	0.99	F
Stream A-B	-	-	-	-
Stream A-C	-	-	-	-
Stream A-D	0.28	8.78	0.22	A
Stream D-A	0.44	17.47	0.31	C
Stream D-BC	3.17	42.89	0.78	E
Stream C-D	-	-	-	-
Stream C-A	-	-	-	-
Stream C-B	0.20	7.57	0.17	A

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

"D1 - 2017 Existing, AM" model duration: 07:30 - 09:00

"D2 - 2017 Existing, PM" model duration: 16:30 - 18:00

"D3 - 2017 Existing, Saturday " model duration: 11:30 - 13:00

"D4 - 2023 Base, AM" model duration: 07:30 - 09:00

"D5 - 2023 Base, PM" model duration: 16:30 - 18:00

"D6 - 2023 Base, Saturday" model duration: 11:30 - 13:00

"D7 - 2023 Predicted, AM" model duration: 07:30 - 09:00

"D8 - 2023 Predicted, PM" model duration: 16:30 - 18:00

"D9 - 2023 Predicted, Saturday" model duration: 11:30 - 13:00

"D10 - 2023 Predicted with Lidl, AM" model duration: 07:30 - 09:00

"D11 - 2023 Predicted with Lidl, PM" model duration: 16:30 - 18:00

"D12 - 2023 Predicted with Lidl, Saturday" model duration: 11:30 - 13:00

Run using Junctions 8.0.5.523 at 15/12/2017 12:00:40

File summary

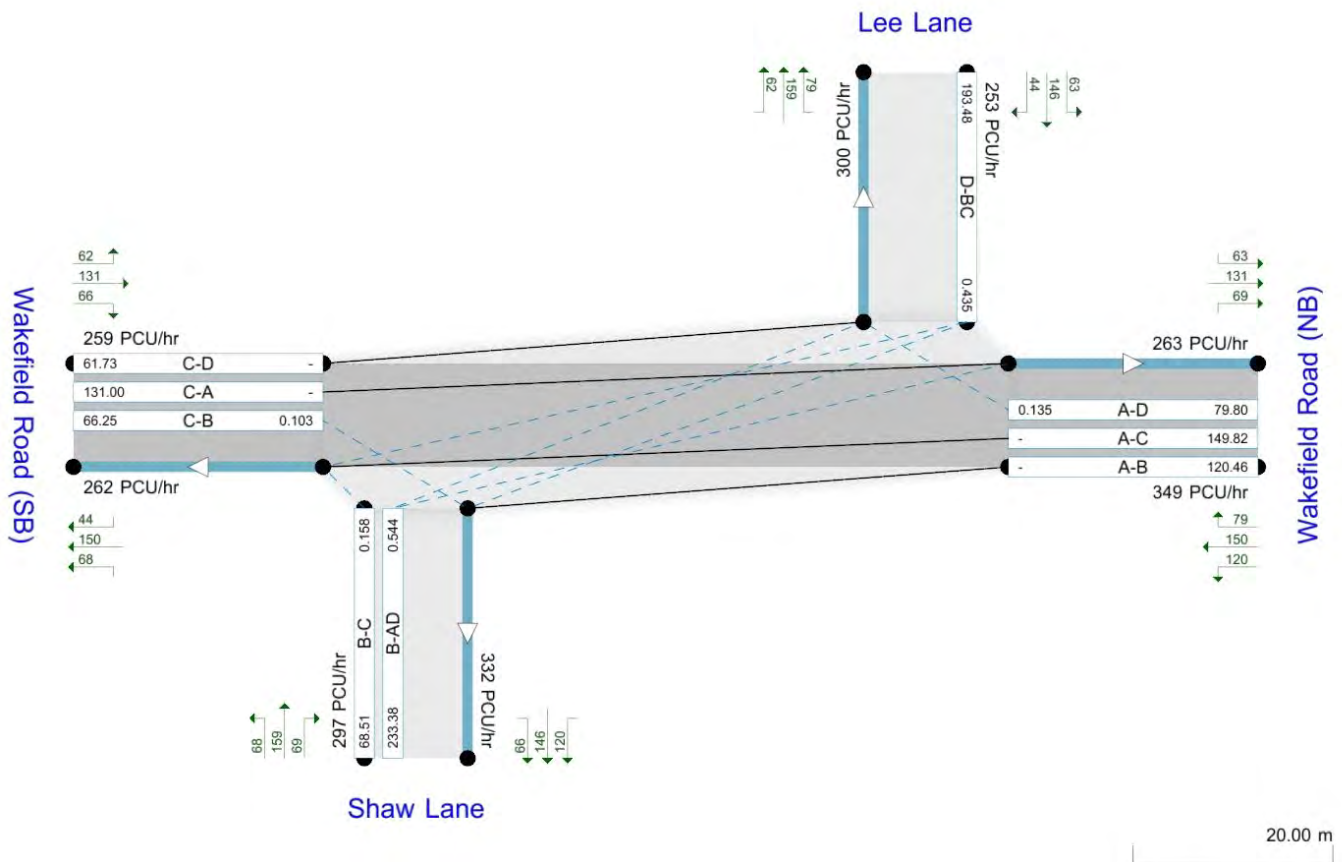
Title	Mapplewell, Barnsley
Location	Wakefield Road, Lee Lane, Shaw Lane Stagger
Site Number	
Date	29/11/2017
Version	
Status	(new file)
Identifier	
Client	Netherton Building and Construction
Jobnumber	14-114
Enumerator	BRYANGHALL\JTurner
Description	

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	-Min	perMin



Showing modelled flow through junction (PCU/hr).
Streams (upstreams) show Total Demand (PCU/hr). Streams (downstreams) show RFC (%).
Time Segment: (11:30-11:45)
Showing Analysis Set "A1 - Existing Layout", Demand Set "D3 - 2017 Existing, Saturday"

The junction diagram reflects the last run of ARCADY.

Existing Layout - 2017 Existing, Saturday

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Existing Layout	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2017 Existing, Saturday	2017 Existing	Saturday		ONE HOUR	11:30	13:00	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	Wakefield Road - Lee Lane - Shaw Lane	OS-NS Stagger (UK RL Stagger)	Two-way	A,B,C,D	75.07	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description	Arm Type
Wakefield Road (NB)	A	Wakefield Road (NB)		Major
Shaw Lane	B	Shaw Lane		Minor
Wakefield Road (SB)	C	Wakefield Road (SB)		Major
Lee Lane	D	Lee Lane		Minor

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)
Wakefield Road (NB)	6.00		0.00	✓	3.00	130.00		
Wakefield Road (SB)	6.00		0.00	✓	3.00	250.00		

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)
Shaw Lane	One lane plus flare				10.00	6.40	3.60	3.40	3.40	✓	1.00	55	35
Lee Lane	One lane plus flare				10.00	8.00	5.00	4.25	3.50	✓	2.00	40	65

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
1	A-D	705.776	-	-	-	0.273	0.273	0.273	-	0.273	-	-
1	B-AD	567.562	0.103	0.261	-	-	-	0.164	0.373	0.164	0.103	0.261
1	B-C	660.598	0.101	0.256	-	-	-	-	-	-	0.101	0.256
1	C-B	781.320	0.303	0.303	-	-	-	-	-	-	0.303	0.303
1	D-A	669.997	-	-	-	0.260	0.103	0.260	-	0.103	-	-
1	D-BC	605.785	0.175	0.175	0.398	0.279	0.110	0.279	-	0.110	-	-

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 (%)
Wakefield Road (NB)	ONE HOUR	✓	465.00	100.000
Shaw Lane	ONE HOUR	✓	401.00	100.000
Wakefield Road (SB)	ONE HOUR	✓	344.00	100.000
Lee Lane	ONE HOUR	✓	341.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Wakefield Road - Lee Lane - Shaw Lane (for whole period)

	To				
		Wakefield Road (NB)	Shaw Lane	Wakefield Road (SB)	Lee Lane
From	Wakefield Road (NB)	0.000	160.000	199.000	106.000
	Shaw Lane	94.000	0.000	91.000	216.000
	Wakefield Road (SB)	174.000	88.000	0.000	82.000
	Lee Lane	84.000	197.000	60.000	0.000

Turning Proportions (PCU) - Wakefield Road - Lee Lane - Shaw Lane (for whole period)

	To				
		Wakefield Road (NB)	Shaw Lane	Wakefield Road (SB)	Lee Lane
From	Wakefield Road (NB)	0.00	0.34	0.43	0.23
	Shaw Lane	0.23	0.00	0.23	0.54
	Wakefield Road (SB)	0.51	0.26	0.00	0.24
	Lee Lane	0.25	0.58	0.18	0.00

Vehicle Mix

Average PCU Per Vehicle - Wakefield Road - Lee Lane - Shaw Lane (for whole period)

	To				
		Wakefield Road (NB)	Shaw Lane	Wakefield Road (SB)	Lee Lane
From	Wakefield Road (NB)	1.000	1.010	1.022	1.000
	Shaw Lane	1.010	1.000	1.000	1.006
	Wakefield Road (SB)	1.028	1.000	1.000	1.000
	Lee Lane	1.000	1.010	1.000	1.000

Heavy Vehicle Percentages - Wakefield Road - Lee Lane - Shaw Lane (for whole period)

	To				
		Wakefield Road (NB)	Shaw Lane	Wakefield Road (SB)	Lee Lane
From	Wakefield Road (NB)	0.0	1.0	2.2	0.0
	Shaw Lane	1.0	0.0	0.0	0.6
	Wakefield Road (SB)	2.8	0.0	0.0	0.0
	Lee Lane	0.0	1.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.96	195.22	5.25	F
B-AD	0.99	123.90	11.34	F
A-B	-	-	-	-
A-C	-	-	-	-
A-D	0.22	8.78	0.28	A
D-A	0.31	17.47	0.44	C
D-BC	0.78	42.89	3.17	E
C-D	-	-	-	-
C-A	-	-	-	-
C-B	0.17	7.57	0.20	A

Main Results for each time segment

Main results: (11:30-11:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	68.51	67.77	0.00	434.77	0.158	0.18	9.790	A
B-AD	233.38	228.77	0.00	428.63	0.544	1.15	17.765	C
A-B	120.46	120.46	0.00	-	-	-	-	-
A-C	149.82	149.82	0.00	-	-	-	-	-
A-D	79.80	79.18	0.00	589.25	0.135	0.16	7.048	A
D-A	63.24	62.69	0.00	515.42	0.123	0.14	7.942	A
D-BC	193.48	190.47	0.00	445.29	0.435	0.75	14.078	B
C-D	61.73	61.73	0.00	-	-	-	-	-
C-A	131.00	131.00	0.00	-	-	-	-	-
C-B	66.25	65.79	0.00	640.93	0.103	0.11	6.250	A

Main results: (11:45-12:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	81.81	81.24	0.00	327.95	0.249	0.33	14.559	B
B-AD	278.68	274.72	0.00	397.91	0.700	2.14	28.516	D
A-B	143.84	143.84	0.00	-	-	-	-	-
A-C	178.90	178.90	0.00	-	-	-	-	-
A-D	95.29	95.11	0.00	565.38	0.169	0.20	7.649	A
D-A	75.51	75.29	0.00	457.52	0.165	0.20	9.412	A
D-BC	231.04	229.16	0.00	412.87	0.560	1.22	19.538	C
C-D	73.72	73.72	0.00	-	-	-	-	-
C-A	156.42	156.42	0.00	-	-	-	-	-
C-B	79.11	78.98	0.00	612.77	0.129	0.15	6.742	A

Main results: (12:00-12:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	100.19	84.86	0.00	103.99	0.963	4.16	139.819	F
B-AD	341.32	317.81	0.00	350.86	0.973	8.02	79.032	F
A-B	176.16	176.16	0.00	-	-	-	-	-
A-C	219.10	219.10	0.00	-	-	-	-	-
A-D	116.71	116.40	0.00	533.02	0.219	0.28	8.635	A
D-A	92.49	91.69	0.00	320.94	0.288	0.40	15.648	C
D-BC	282.96	276.39	0.00	367.83	0.769	2.87	37.226	E
C-D	90.28	90.28	0.00	-	-	-	-	-
C-A	191.58	191.58	0.00	-	-	-	-	-
C-B	96.89	96.67	0.00	574.52	0.169	0.20	7.530	A

Main results: (12:15-12:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	100.19	95.81	0.00	108.37	0.925	5.25	195.222	F
B-AD	341.32	328.03	0.00	346.36	0.985	11.34	123.903	F
A-B	176.16	176.16	0.00	-	-	-	-	-
A-C	219.10	219.10	0.00	-	-	-	-	-
A-D	116.71	116.69	0.00	526.59	0.222	0.28	8.782	A
D-A	92.49	92.31	0.00	298.13	0.310	0.44	17.471	C
D-BC	282.96	281.75	0.00	363.84	0.778	3.17	42.893	E
C-D	90.28	90.28	0.00	-	-	-	-	-
C-A	191.58	191.58	0.00	-	-	-	-	-
C-B	96.89	96.88	0.00	572.53	0.169	0.20	7.567	A

Main results: (12:30-12:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	81.81	100.77	0.00	247.55	0.330	0.51	27.512	D
B-AD	278.68	312.38	0.00	388.89	0.717	2.92	58.504	F
A-B	143.84	143.84	0.00	-	-	-	-	-
A-C	178.90	178.90	0.00	-	-	-	-	-
A-D	95.29	95.58	0.00	554.23	0.172	0.21	7.853	A
D-A	75.51	76.43	0.00	438.01	0.172	0.21	9.980	A
D-BC	231.04	238.13	0.00	406.24	0.569	1.40	22.392	C
C-D	73.72	73.72	0.00	-	-	-	-	-
C-A	156.42	156.42	0.00	-	-	-	-	-
C-B	79.11	79.32	0.00	609.84	0.130	0.15	6.787	A

Main results: (12:45-13:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	68.51	69.77	0.00	418.82	0.164	0.20	10.351	B
B-AD	233.38	239.99	0.00	427.27	0.546	1.27	19.982	C
A-B	120.46	120.46	0.00	-	-	-	-	-
A-C	149.82	149.82	0.00	-	-	-	-	-
A-D	79.80	80.01	0.00	586.06	0.136	0.16	7.118	A
D-A	63.24	63.51	0.00	509.47	0.124	0.14	8.078	A
D-BC	193.48	195.86	0.00	443.23	0.437	0.80	14.802	B
C-D	61.73	61.73	0.00	-	-	-	-	-
C-A	131.00	131.00	0.00	-	-	-	-	-
C-B	66.25	66.39	0.00	639.24	0.104	0.12	6.287	A

Junctions 8				
PICADY 8 - Priority Intersection Module				
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Filename: Wakefield Road - Paddock Road.arc8

Path: Y:\2014\14-101 to 14-125\14-114 Former William Freeman Works, Mapplewell\Technical\2017 Transport Assessment\Junction Modelling\Junctions 8\Wakefield Road - Paddock Road

Report generation date: 15/12/2017 13:13:21

« Existing Layout - 2017 Existing, AM

- » Junction Network
- » Arms
- » Traffic Flows
- » Entry Flows
- » Turning Proportions
- » Vehicle Mix
- » Results

Summary of junction performance

	AM			
	Queue (PCU)	Delay (s)	RFC	LOS
Existing Layout - 2017 Existing				
Stream B-C	0.10	10.83	0.09	B
Stream B-A	0.92	20.20	0.48	C
Stream C-AB	0.01	4.84	0.01	A
Stream C-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 - 2017 Existing, AM" model duration: 07:30 - 09:00

"D2 - 2017 Existing, PM" model duration: 16:30 - 18:00

"D3 - 2017 Existing, Saturday" model duration: 11:30 - 13:00

"D4 - 2023 Base, AM" model duration: 07:30 - 09:00

"D5 - 2023 Base, PM" model duration: 16:30 - 18:00

"D6 - 2023 Base, Saturday" model duration: 11:30 - 13:00

"D7 - 2023 Predicted, AM" model duration: 07:30 - 09:00

"D8 - 2023 Predicted, PM" model duration: 16:30 - 18:00

"D9 - 2023 Predicted, Saturday" model duration: 11:30 - 13:00

"D10 - 2023 Predicted with Lidl, AM" model duration: 07:30 - 09:00

"D11 - 2023 Predicted with Lidl, PM" model duration: 16:30 - 18:00

"D12 - 2023 Predicted with Lidl, Saturday" model duration: 11:30 - 13:00

Run using Junctions 8.0.5.523 at 15/12/2017 13:13:20

File summary

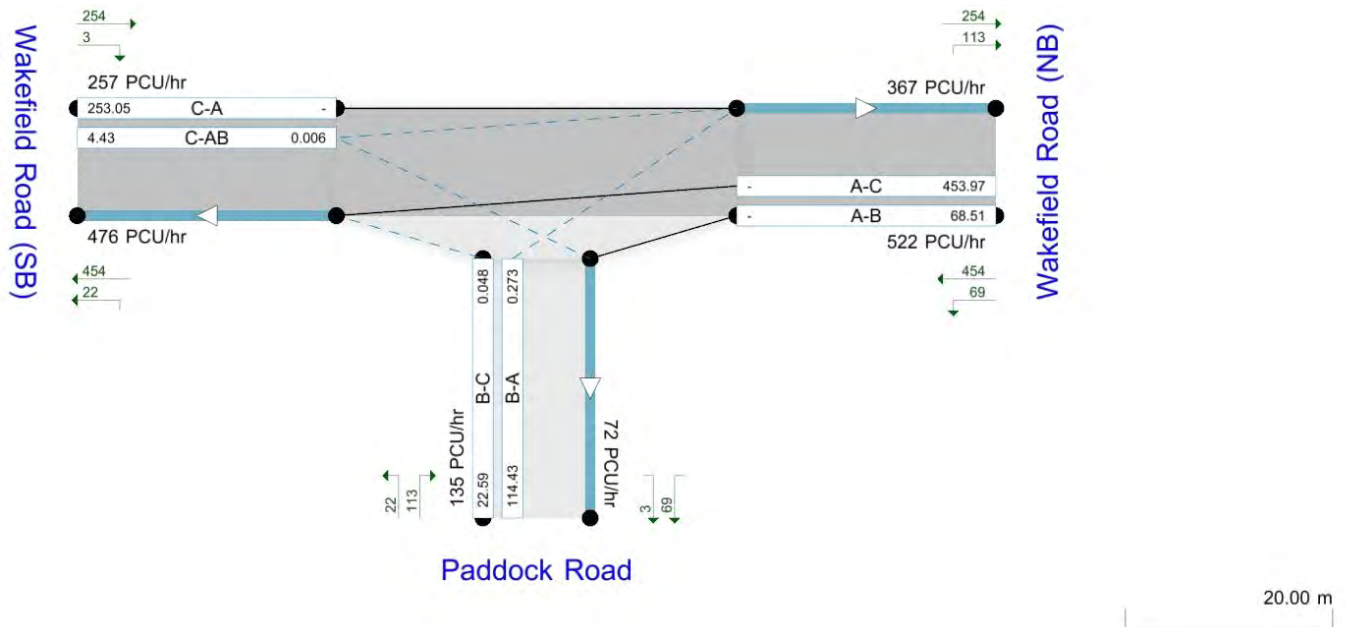
Title	Mapplewell, Barnsley
Location	Wakefield Road - Paddock Road
Site Number	
Date	29/11/2017
Version	
Status	(new file)
Identifier	
Client	Netherton Building and Construction
Jobnumber	14/114
Enumerator	BRYANGHALLJTurner
Description	

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	-Min	perMin



Value Comparison Overlay Boxes Enabled
 Showing modelled flow through junction (PCU/hr).
 Streams (upstreams) show Total Demand (PCU/hr). Streams (downstreams) show RFC (i)
 Time Segment: (07:30-07:45)
 Showing Analysis Set "A1 - Existing Layout", Demand Set "D1 - 2017 Existing, AM"

The junction diagram reflects the last run of ARCADY.

Existing Layout - 2017 Existing, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Existing Layout	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2017 Existing, AM	2017 Existing	AM		ONE HOUR	07:30	09:00	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	Site Access	T-Junction	Two-way	A,B,C	18.17	C

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description	Arm Type
Wakefield Road (NB)	A	Wakefield Road (NB)		Major
Paddock Road	B	Paddock Road		Minor
Wakefield Road (SB)	C	Wakefield Road (SB)		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)
Wakefield Road (SB)	7.90		0.00		2.20	250.00	✓	0.00

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)
Paddock Road	One lane plus flare				10.00	6.00	4.40	3.00	3.00		1.00	30	80

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	575.933	0.096	0.243	0.153	0.347
1	B-C	623.111	0.088	0.221	-	-
1	C-B	718.741	0.255	0.255	-	-

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 (%)
Wakefield Road (NB)	ONE HOUR	✓	694.00	100.000
Paddock Road	ONE HOUR	✓	182.00	100.000
Wakefield Road (SB)	ONE HOUR	✓	342.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Site Access (for whole period)

	To			
		Wakefield Road (NB)	Paddock Road	Wakefield Road (SB)
From	Wakefield Road (NB)	0.000	91.000	603.000
	Paddock Road	152.000	0.000	30.000
	Wakefield Road (SB)	338.000	4.000	0.000

Turning Proportions (PCU) - Site Access (for whole period)

	To			
		Wakefield Road (NB)	Paddock Road	Wakefield Road (SB)
From	Wakefield Road (NB)	0.00	0.13	0.87
	Paddock Road	0.84	0.00	0.16
	Wakefield Road (SB)	0.99	0.01	0.00

Vehicle Mix

Average PCU Per Vehicle - Site Access (for whole period)

	To			
		Wakefield Road (NB)	Paddock Road	Wakefield Road (SB)
From	Wakefield Road (NB)	1.000	1.000	1.016
	Paddock Road	1.000	1.000	1.000
	Wakefield Road (SB)	1.022	1.000	1.000

Heavy Vehicle Percentages - Site Access (for whole period)

From	To			
		Wakefield Road (NB)	Paddock Road	Wakefield Road (SB)
	Wakefield Road (NB)	0.0	0.0	1.6
	Paddock Road	0.0	0.0	0.0
	Wakefield Road (SB)	2.2	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.09	10.83	0.10	B
B-A	0.48	20.20	0.92	C
C-AB	0.01	4.84	0.01	A
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (07:30-07:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	22.59	22.39	0.00	472.50	0.048	0.05	7.995	A
B-A	114.43	112.96	0.00	418.71	0.273	0.37	11.719	B
C-AB	4.43	4.40	0.00	754.04	0.006	0.01	4.835	A
C-A	253.05	253.05	0.00	-	-	-	-	-
A-B	68.51	68.51	0.00	-	-	-	-	-
A-C	453.97	453.97	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	26.97	26.91	0.00	433.55	0.062	0.07	8.852	A
B-A	136.64	136.00	0.00	388.03	0.352	0.53	14.247	B
C-AB	5.75	5.74	0.00	763.81	0.008	0.01	4.784	A
C-A	301.70	301.70	0.00	-	-	-	-	-
A-B	81.81	81.81	0.00	-	-	-	-	-
A-C	542.08	542.08	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	33.03	32.90	0.00	366.90	0.090	0.10	10.778	B
B-A	167.36	165.87	0.00	345.34	0.485	0.90	19.890	C
C-AB	7.92	7.91	0.00	778.43	0.010	0.01	4.713	A
C-A	368.63	368.63	0.00	-	-	-	-	-
A-B	100.19	100.19	0.00	-	-	-	-	-
A-C	663.92	663.92	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	33.03	33.03	0.00	365.27	0.090	0.10	10.835	B
B-A	167.36	167.28	0.00	345.34	0.485	0.92	20.196	C
C-AB	7.92	7.92	0.00	778.43	0.010	0.01	4.716	A
C-A	368.63	368.63	0.00	-	-	-	-	-
A-B	100.19	100.19	0.00	-	-	-	-	-
A-C	663.92	663.92	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	26.97	27.09	0.00	431.91	0.062	0.07	8.895	A
B-A	136.64	138.10	0.00	388.04	0.352	0.56	14.484	B
C-AB	5.75	5.77	0.00	763.82	0.008	0.01	4.791	A
C-A	301.70	301.70	0.00	-	-	-	-	-
A-B	81.81	81.81	0.00	-	-	-	-	-
A-C	542.08	542.08	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	22.59	22.65	0.00	471.22	0.048	0.05	8.026	A
B-A	114.43	115.13	0.00	418.73	0.273	0.38	11.886	B
C-AB	4.44	4.45	0.00	754.05	0.006	0.01	4.838	A
C-A	253.04	253.04	0.00	-	-	-	-	-
A-B	68.51	68.51	0.00	-	-	-	-	-
A-C	453.97	453.97	0.00	-	-	-	-	-

Junctions 8				
PICADY 8 - Priority Intersection Module				
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Filename: Wakefield Road - Paddock Road.arc8

Path: Y:\2014\14-101 to 14-125\14-114 Former William Freeman Works, Mapplewell\Technical\2017 Transport Assessment\Junction Modelling\Junctions 8\Wakefield Road - Paddock Road

Report generation date: 15/12/2017 13:13:48

« Existing Layout - 2017 Existing, PM

- » Junction Network
- » Arms
- » Traffic Flows
- » Entry Flows
- » Turning Proportions
- » Vehicle Mix
- » Results

Summary of junction performance

	PM			
	Queue (PCU)	Delay (s)	RFC	LOS
Existing Layout - 2017 Existing				
Stream B-C	0.89	34.74	0.49	D
Stream B-A	4.22	54.73	0.83	F
Stream C-AB	0.07	4.81	0.05	A
Stream C-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 - 2017 Existing, AM" model duration: 07:30 - 09:00

"D2 - 2017 Existing, PM" model duration: 16:30 - 18:00

"D3 - 2017 Existing, Saturday" model duration: 11:30 - 13:00

"D4 - 2023 Base, AM" model duration: 07:30 - 09:00

"D5 - 2023 Base, PM" model duration: 16:30 - 18:00

"D6 - 2023 Base, Saturday" model duration: 11:30 - 13:00

"D7 - 2023 Predicted, AM" model duration: 07:30 - 09:00

"D8 - 2023 Predicted, PM" model duration: 16:30 - 18:00

"D9 - 2023 Predicted, Saturday" model duration: 11:30 - 13:00

"D10 - 2023 Predicted with Lidl, AM" model duration: 07:30 - 09:00

"D11 - 2023 Predicted with Lidl, PM" model duration: 16:30 - 18:00

"D12 - 2023 Predicted with Lidl, Saturday" model duration: 11:30 - 13:00

Run using Junctions 8.0.5.523 at 15/12/2017 13:13:47

File summary

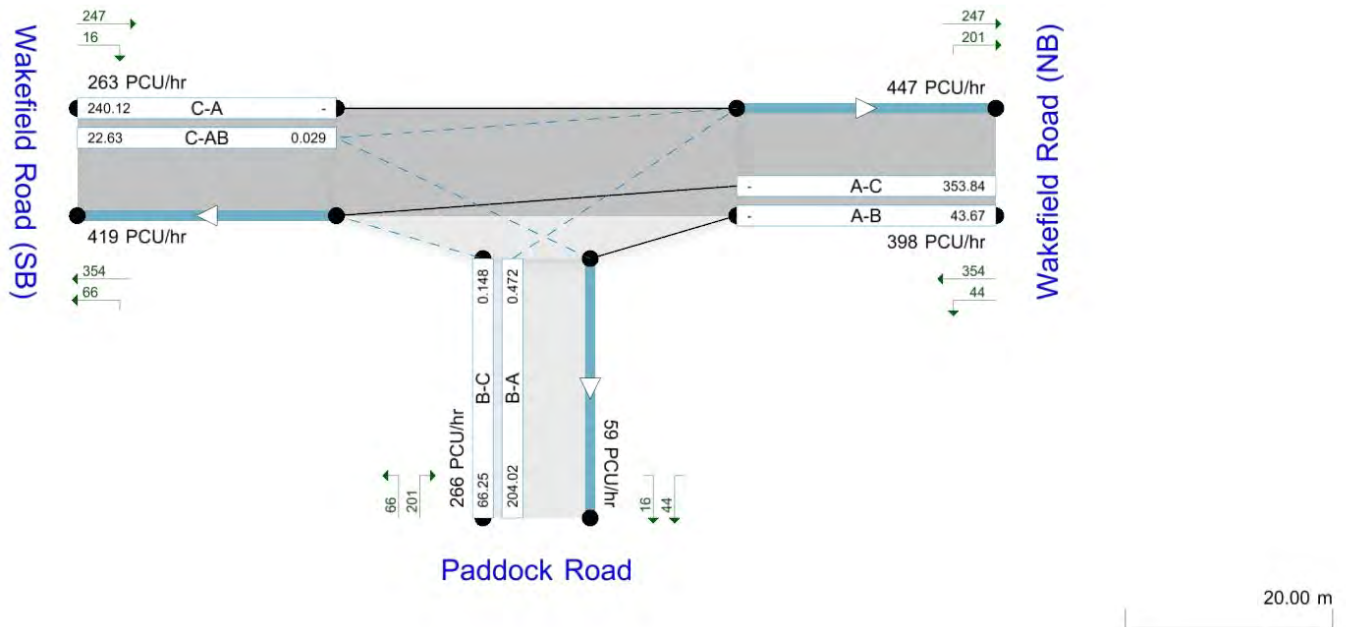
Title	Mapplewell, Barnsley
Location	Wakefield Road - Paddock Road
Site Number	
Date	29/11/2017
Version	
Status	(new file)
Identifier	
Client	Netherton Building and Construction
Jobnumber	14/114
Enumerator	BRYANGHALLJTurner
Description	

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	-Min	perMin



The junction diagram reflects the last run of ARCADY.

Existing Layout - 2017 Existing, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Existing Layout	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2017 Existing, PM	2017 Existing	PM		ONE HOUR	16:30	18:00	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	Site Access	T-Junction	Two-way	A,B,C	46.02	E

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description	Arm Type
Wakefield Road (NB)	A	Wakefield Road (NB)		Major
Paddock Road	B	Paddock Road		Minor
Wakefield Road (SB)	C	Wakefield Road (SB)		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)
Wakefield Road (SB)	7.90		0.00		2.20	250.00	✓	0.00

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)
Paddock Road	One lane plus flare				10.00	6.00	4.40	3.00	3.00		1.00	30	80

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	567.244	0.095	0.240	0.151	0.342
1	B-C	641.654	0.090	0.228	-	-
1	C-B	718.741	0.255	0.255	-	-

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 (%)
Wakefield Road (NB)	ONE HOUR	✓	528.00	100.000
Paddock Road	ONE HOUR	✓	359.00	100.000
Wakefield Road (SB)	ONE HOUR	✓	349.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Site Access (for whole period)

	To			
		Wakefield Road (NB)	Paddock Road	Wakefield Road (SB)
From	Wakefield Road (NB)	0.000	58.000	470.000
	Paddock Road	271.000	0.000	88.000
	Wakefield Road (SB)	328.000	21.000	0.000

Turning Proportions (PCU) - Site Access (for whole period)

	To			
		Wakefield Road (NB)	Paddock Road	Wakefield Road (SB)
From	Wakefield Road (NB)	0.00	0.11	0.89
	Paddock Road	0.75	0.00	0.25
	Wakefield Road (SB)	0.94	0.06	0.00

Vehicle Mix

Average PCU Per Vehicle - Site Access (for whole period)

	To			
		Wakefield Road (NB)	Paddock Road	Wakefield Road (SB)
From	Wakefield Road (NB)	1.000	1.000	1.016
	Paddock Road	1.000	1.000	1.000
	Wakefield Road (SB)	1.022	1.000	1.000

Heavy Vehicle Percentages - Site Access (for whole period)

From	To			
		Wakefield Road (NB)	Paddock Road	Wakefield Road (SB)
	Wakefield Road (NB)	0.0	0.0	1.6
	Paddock Road	0.0	0.0	0.0
	Wakefield Road (SB)	2.2	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.49	34.74	0.89	D
B-A	0.83	54.73	4.22	F
C-AB	0.05	4.81	0.07	A
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (16:30-16:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	66.25	65.56	0.00	447.40	0.148	0.17	9.411	A
B-A	204.02	200.56	0.00	432.46	0.472	0.86	15.309	C
C-AB	22.63	22.48	0.00	776.82	0.029	0.04	4.804	A
C-A	240.12	240.12	0.00	-	-	-	-	-
A-B	43.67	43.67	0.00	-	-	-	-	-
A-C	353.84	353.84	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	79.11	78.73	0.00	370.80	0.213	0.27	12.310	B
B-A	243.62	241.32	0.00	403.65	0.604	1.44	21.855	C
C-AB	29.11	29.06	0.00	790.06	0.037	0.05	4.764	A
C-A	284.64	284.64	0.00	-	-	-	-	-
A-B	52.14	52.14	0.00	-	-	-	-	-
A-C	422.52	422.52	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	96.89	94.95	0.00	218.94	0.443	0.75	28.604	D
B-A	298.38	289.09	0.00	359.87	0.829	3.76	45.801	E
C-AB	39.47	39.38	0.00	809.00	0.049	0.07	4.717	A
C-A	344.78	344.78	0.00	-	-	-	-	-
A-B	63.86	63.86	0.00	-	-	-	-	-
A-C	517.48	517.48	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	96.89	96.32	0.00	199.17	0.486	0.89	34.736	D
B-A	298.38	296.54	0.00	358.63	0.832	4.22	54.727	F
C-AB	39.50	39.50	0.00	809.03	0.049	0.07	4.720	A
C-A	344.75	344.75	0.00	-	-	-	-	-
A-B	63.86	63.86	0.00	-	-	-	-	-
A-C	517.48	517.48	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	79.11	81.51	0.00	351.98	0.225	0.30	13.423	B
B-A	243.62	254.01	0.00	402.84	0.605	1.62	25.641	D
C-AB	29.15	29.23	0.00	790.11	0.037	0.05	4.774	A
C-A	284.60	284.60	0.00	-	-	-	-	-
A-B	52.14	52.14	0.00	-	-	-	-	-
A-C	422.52	422.52	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	66.25	66.72	0.00	440.82	0.150	0.18	9.636	A
B-A	204.02	206.83	0.00	432.35	0.472	0.92	16.153	C
C-AB	22.69	22.74	0.00	776.86	0.029	0.04	4.810	A
C-A	240.06	240.06	0.00	-	-	-	-	-
A-B	43.67	43.67	0.00	-	-	-	-	-
A-C	353.84	353.84	0.00	-	-	-	-	-

Junctions 8				
PICADY 8 - Priority Intersection Module				
Version: 8.0.5.523 [19102,19/06/2015] © Copyright TRL Limited, 2017				
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Filename: Wakefield Road - Paddock Road.arc8

Path: Y:\2014\14-101 to 14-125\14-114 Former William Freeman Works, Mapplewell\Technical\2017 Transport Assessment\Junction Modelling\Junctions 8\Wakefield Road - Paddock Road

Report generation date: 15/12/2017 13:14:23

« Existing Layout - 2017 Existing, Saturday

» Junction Network

» Arms

» Traffic Flows

» Entry Flows

» Turning Proportions

» Vehicle Mix

» Results

Summary of junction performance

	Saturday			
	Queue (PCU)	Delay (s)	RFC	LOS
Existing Layout - 2017 Existing				
Stream B-C	0.03	9.84	0.03	A
Stream B-A	0.98	20.41	0.50	C
Stream C-AB	0.03	4.20	0.02	A
Stream C-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 - 2017 Existing, AM" model duration: 07:30 - 09:00

"D2 - 2017 Existing, PM" model duration: 16:30 - 18:00

"D3 - 2017 Existing, Saturday " model duration: 11:30 - 13:00

"D4 - 2023 Base, AM" model duration: 07:30 - 09:00

"D5 - 2023 Base, PM" model duration: 16:30 - 18:00

"D6 - 2023 Base, Saturday" model duration: 11:30 - 13:00

"D7 - 2023 Predicted, AM" model duration: 07:30 - 09:00

"D8 - 2023 Predicted, PM" model duration: 16:30 - 18:00

"D9 - 2023 Predicted, Saturday" model duration: 11:30 - 13:00

"D10 - 2023 Predicted with Lidl, AM" model duration: 07:30 - 09:00

"D11 - 2023 Predicted with Lidl, PM" model duration: 16:30 - 18:00

"D12 - 2023 Predicted with Lidl, Saturday" model duration: 11:30 - 13:00

Run using Junctions 8.0.5.523 at 15/12/2017 13:14:22

File summary

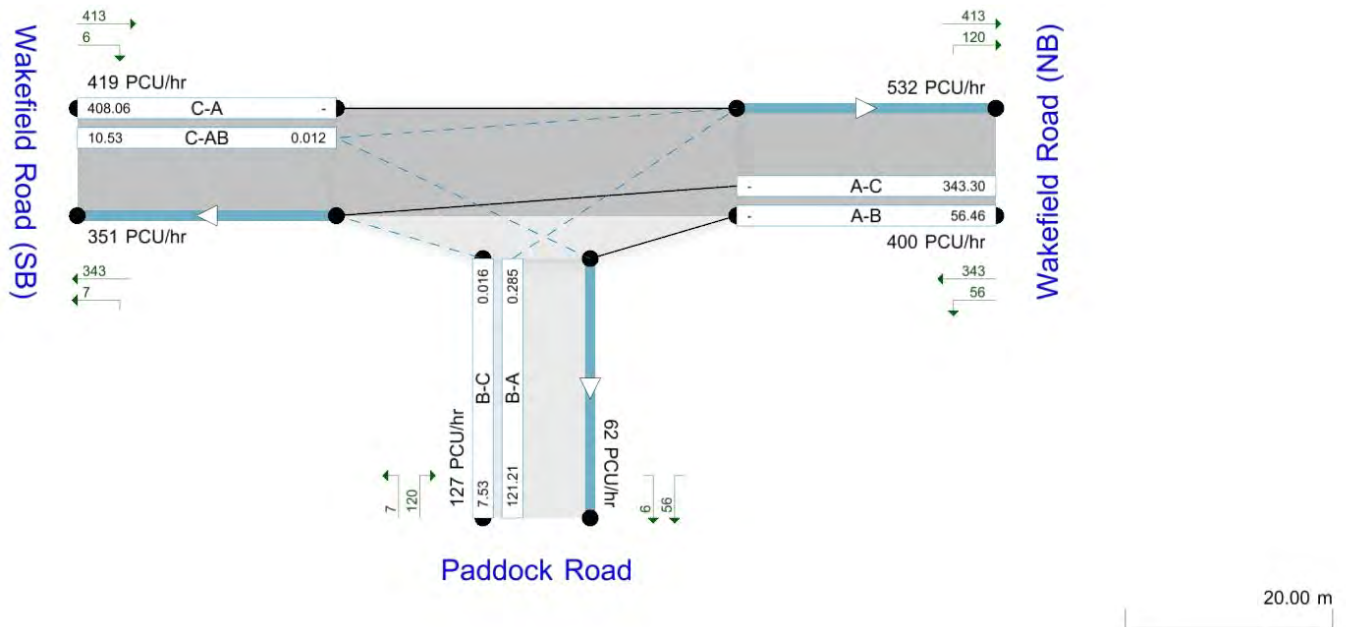
Title	Mapplewell, Barnsley
Location	Wakefield Road - Paddock Road
Site Number	
Date	29/11/2017
Version	
Status	(new file)
Identifier	
Client	Netherton Building and Construction
Jobnumber	14/114
Enumerator	BRYANGHALLJTurner
Description	

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	-Min	perMin



The junction diagram reflects the last run of ARCADY.

Existing Layout - 2017 Existing, Saturday

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Existing Layout	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2017 Existing, Saturday	2017 Existing	Saturday		ONE HOUR	11:30	13:00	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	Site Access	T-Junction	Two-way	A,B,C	18.45	C

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description	Arm Type
Wakefield Road (NB)	A	Wakefield Road (NB)		Major
Paddock Road	B	Paddock Road		Minor
Wakefield Road (SB)	C	Wakefield Road (SB)		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)
Wakefield Road (SB)	7.90		0.00		2.20	250.00	✓	0.00

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)
Paddock Road	One lane plus flare				10.00	6.00	4.40	3.00	3.00		1.00	30	80

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	580.868	0.097	0.245	0.154	0.350
1	B-C	612.581	0.086	0.218	-	-
1	C-B	718.741	0.255	0.255	-	-

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 (%)
Wakefield Road (NB)	ONE HOUR	✓	531.00	100.000
Paddock Road	ONE HOUR	✓	171.00	100.000
Wakefield Road (SB)	ONE HOUR	✓	556.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Site Access (for whole period)

	To			
		Wakefield Road (NB)	Paddock Road	Wakefield Road (SB)
From	Wakefield Road (NB)	0.000	75.000	456.000
	Paddock Road	161.000	0.000	10.000
	Wakefield Road (SB)	548.000	8.000	0.000

Turning Proportions (PCU) - Site Access (for whole period)

	To			
		Wakefield Road (NB)	Paddock Road	Wakefield Road (SB)
From	Wakefield Road (NB)	0.00	0.14	0.86
	Paddock Road	0.94	0.00	0.06
	Wakefield Road (SB)	0.99	0.01	0.00

Vehicle Mix

Average PCU Per Vehicle - Site Access (for whole period)

	To			
		Wakefield Road (NB)	Paddock Road	Wakefield Road (SB)
From	Wakefield Road (NB)	1.000	1.000	1.016
	Paddock Road	1.000	1.000	1.000
	Wakefield Road (SB)	1.022	1.000	1.000

Heavy Vehicle Percentages - Site Access (for whole period)

From	To			
		Wakefield Road (NB)	Paddock Road	Wakefield Road (SB)
	Wakefield Road (NB)	0.0	0.0	1.6
	Paddock Road	0.0	0.0	0.0
	Wakefield Road (SB)	2.2	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.03	9.84	0.03	A
B-A	0.50	20.41	0.98	C
C-AB	0.02	4.20	0.03	A
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (11:30-11:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	7.53	7.47	0.00	484.08	0.016	0.02	7.553	A
B-A	121.21	119.64	0.00	425.37	0.285	0.39	11.717	B
C-AB	10.53	10.47	0.00	876.73	0.012	0.01	4.194	A
C-A	408.06	408.06	0.00	-	-	-	-	-
A-B	56.46	56.46	0.00	-	-	-	-	-
A-C	343.30	343.30	0.00	-	-	-	-	-

Main results: (11:45-12:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	8.99	8.97	0.00	446.85	0.020	0.02	8.221	A
B-A	144.74	144.04	0.00	395.15	0.366	0.56	14.296	B
C-AB	13.96	13.94	0.00	907.82	0.015	0.02	4.067	A
C-A	485.87	485.87	0.00	-	-	-	-	-
A-B	67.42	67.42	0.00	-	-	-	-	-
A-C	409.93	409.93	0.00	-	-	-	-	-

Main results: (12:00-12:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	11.01	10.97	0.00	378.86	0.029	0.03	9.784	A
B-A	177.26	175.66	0.00	353.37	0.502	0.97	20.072	C
C-AB	19.66	19.63	0.00	949.89	0.021	0.03	3.913	A
C-A	592.50	592.50	0.00	-	-	-	-	-
A-B	82.58	82.58	0.00	-	-	-	-	-
A-C	502.07	502.07	0.00	-	-	-	-	-

Main results: (12:15-12:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	11.01	11.01	0.00	376.88	0.029	0.03	9.839	A
B-A	177.26	177.19	0.00	353.37	0.502	0.98	20.408	C
C-AB	19.67	19.67	0.00	949.90	0.021	0.03	3.917	A
C-A	592.49	592.49	0.00	-	-	-	-	-
A-B	82.58	82.58	0.00	-	-	-	-	-
A-C	502.07	502.07	0.00	-	-	-	-	-

Main results: (12:30-12:45)

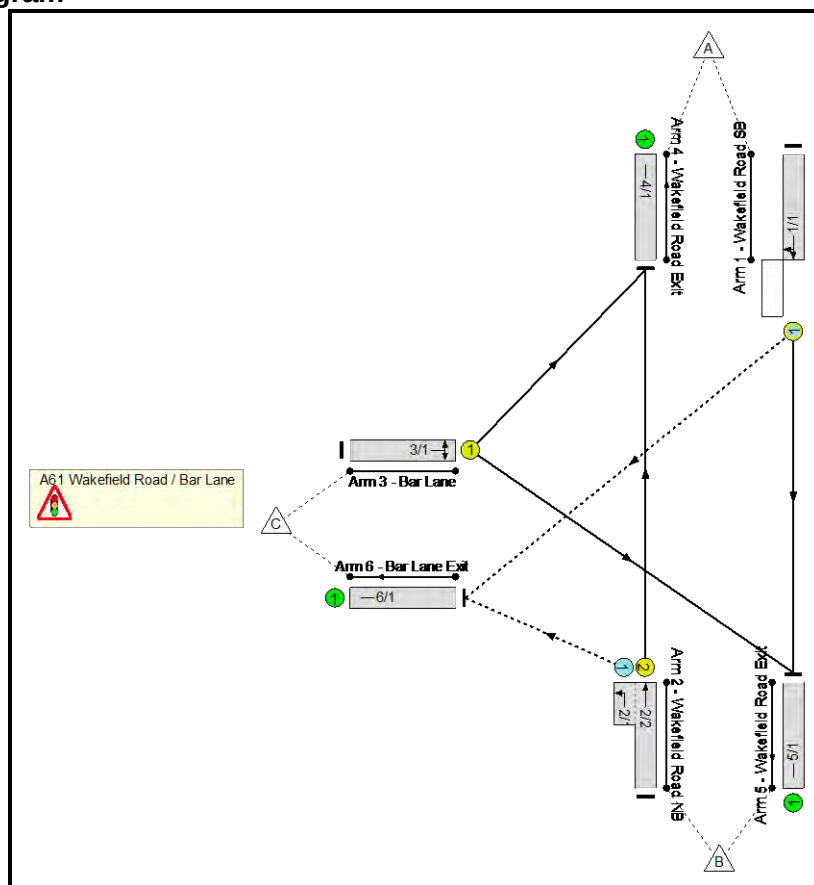
Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	8.99	9.03	0.00	444.94	0.020	0.02	8.260	A
B-A	144.74	146.31	0.00	395.16	0.366	0.59	14.557	B
C-AB	13.98	14.00	0.00	907.84	0.015	0.02	4.073	A
C-A	485.86	485.86	0.00	-	-	-	-	-
A-B	67.42	67.42	0.00	-	-	-	-	-
A-C	409.93	409.93	0.00	-	-	-	-	-

Main results: (12:45-13:00)

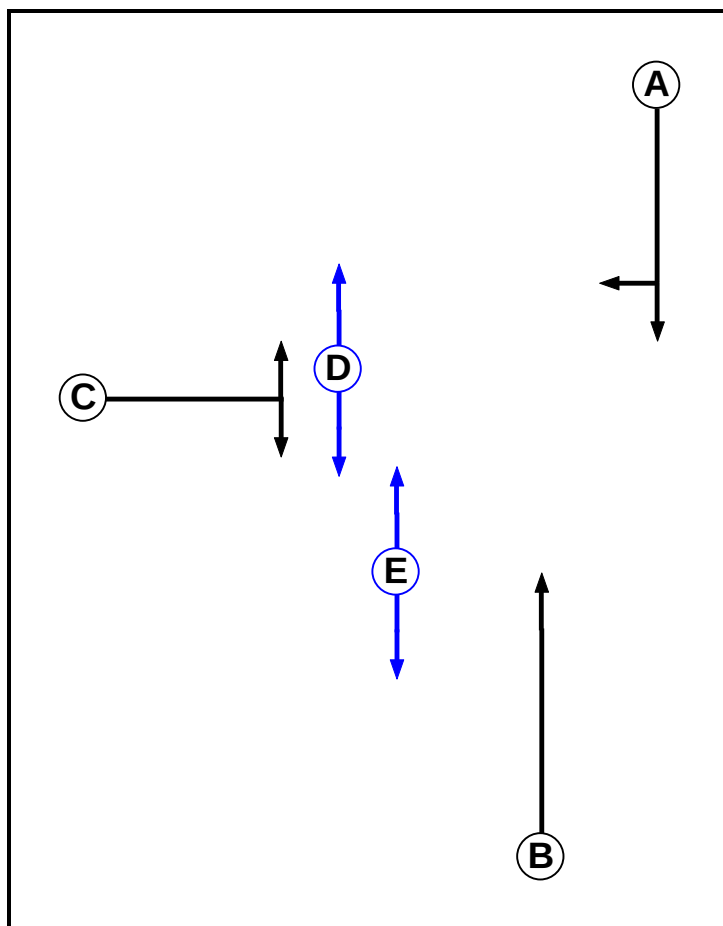
Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	7.53	7.55	0.00	482.66	0.016	0.02	7.576	A
B-A	121.21	121.95	0.00	425.36	0.285	0.41	11.893	B
C-AB	10.55	10.57	0.00	876.75	0.012	0.01	4.199	A
C-A	408.03	408.03	0.00	-	-	-	-	-
A-B	56.46	56.46	0.00	-	-	-	-	-
A-C	343.30	343.30	0.00	-	-	-	-	-

Full Input Data And Results**User and Project Details**

Project:	Wakefield Road, Mapplewell
Title:	2017 Existing
Location:	
File name:	Wakefield Road - Bar Lane.lsg3x
Author:	John Turner
Company:	Bryan G Hall
Address:	
Notes:	Wakefield Road/Bar Lane

Network Layout Diagram

Phase Diagram



Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Pedestrian		6	6
E	Pedestrian		6	6

Phase Intergreens Matrix

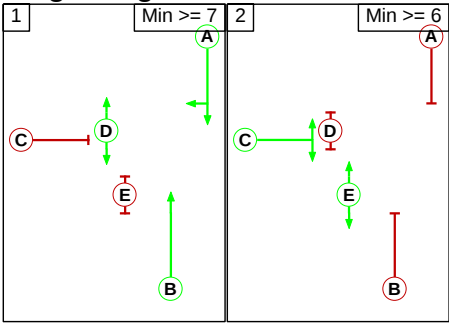
Terminating Phase	Starting Phase					
		A	B	C	D	E
	A		-	5	-	9
	B	-		6	-	-
	C	5	5		5	-
	D	-	-	7		-
	E	8	-	-	-	

Phases in Stage

Stage No.	Phases in Stage
1	A B D
2	C E

Full Input Data And Results

Stage Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Change

From Stage	To Stage	
	1	2
	1	9
2	8	

Full Input Data And Results

Give-Way Lane Input Data

Junction: A61 Wakefield Road / Bar Lane											
Lane	Movement	Max Flow when Giving Way (PCU/Hr)	Min Flow when Giving Way (PCU/Hr)	Opposing Lane	Opp. Lane Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	Non-Blocking Storage (PCU)	RTF	Right Turn Move up (s)	Max Turns in Intergreen (PCU)
1/1 (Wakefield Road SB)	6/1 (Right)	1439	0	2/2	1.09	All	4.00	4.00	0.50	4	2.00
2/1 (Wakefield Road NB)	6/1 (Left)	1439	0	1/1	1.09	To 6/1 (Right)	-	-	-	-	-

Full Input Data And Results

Lane Input Data

Junction: A61 Wakefield Road / Bar Lane

Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (Wakefield Road SB)	O	A	2	3	60.0	Geom	-	3.40	0.00	Y	Arm 5 Ahead	Inf
2/1 (Wakefield Road NB)	O		2	3	3.0	Geom	-	4.00	0.00	Y	Arm 6 Right	12.50
2/2 (Wakefield Road NB)	U	B	2	3	60.0	Geom	-	3.80	0.00	Y	Arm 6 Left	100.00
3/1 (Bar Lane)	U	C	2	3	60.0	Geom	-	3.70	0.00	Y	Arm 4 Ahead	Inf
4/1 (Wakefield Road Exit)	U		2	3	60.0	Inf	-	-	-	-	Arm 4 Left	12.50
5/1 (Wakefield Road Exit)	U		2	3	60.0	Inf	-	-	-	-	Arm 5 Right	8.00
6/1 (Bar Lane Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2017 Existing AM'	07:45	08:45	01:00	
2: '2017 Existing PM'	16:45	17:45	01:00	
3: '2017 Existing Saturday'	11:45	12:45	01:00	

Scenario 1: '2017 Existing AM' (FG1: '2017 Existing AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination				
Origin	A	B	C	Tot.	
	A	0	484	10	494
	B	646	0	377	1023
	C	34	478	0	512
	Tot.	680	962	387	2029

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 1: 2017 Existing AM
Junction: A61 Wakefield Road / Bar Lane	
1/1	494
2/1 (short)	377
2/2 (with short)	1023(In) 646(Out)
3/1	512
4/1	680
5/1	962
6/1	387

Lane Saturation Flows

Junction: A61 Wakefield Road / Bar Lane								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Wakefield Road SB)	3.40	0.00	Y	Arm 5 Ahead Arm 6 Right	Inf 12.50	98.0 % 2.0 %	1950	1950
2/1 (Wakefield Road NB)	4.00	0.00	Y	Arm 6 Left	100.00	100.0 %	1985	1985
2/2 (Wakefield Road NB)	3.80	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1995	1995
3/1 (Bar Lane)	3.70	0.00	Y	Arm 4 Left Arm 5 Right	12.50 8.00	6.6 % 93.4 %	1678	1678
4/1 (Wakefield Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Wakefield Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Bar Lane Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 2: '2017 Existing PM' (FG2: '2017 Existing PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination				
	A	B	C	Tot.	
Origin	A	0	588	20	608
	B	519	0	534	1053
	C	14	429	0	443
	Tot.	533	1017	554	2104

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: 2017 Existing PM
Junction: A61 Wakefield Road / Bar Lane	
1/1	608
2/1 (short)	534
2/2 (with short)	1053(In) 519(Out)
3/1	443
4/1	533
5/1	1017
6/1	554

Lane Saturation Flows

Junction: A61 Wakefield Road / Bar Lane								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Wakefield Road SB)	3.40	0.00	Y	Arm 5 Ahead Arm 6 Right	Inf 12.50	96.7 % 3.3 %	1947	1947
2/1 (Wakefield Road NB)	4.00	0.00	Y	Arm 6 Left	100.00	100.0 %	1985	1985
2/2 (Wakefield Road NB)	3.80	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1995	1995
3/1 (Bar Lane)	3.70	0.00	Y	Arm 4 Left Arm 5 Right	12.50 8.00	3.2 % 96.8 %	1675	1675
4/1 (Wakefield Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Wakefield Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Bar Lane Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 3: '2017 Existing Saturday' (FG3: '2017 Existing Saturday', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination				
	A	B	C	Tot.	
Origin	A	0	480	19	499
	B	510	0	445	955
	C	24	419	0	443
	Tot.	534	899	464	1897

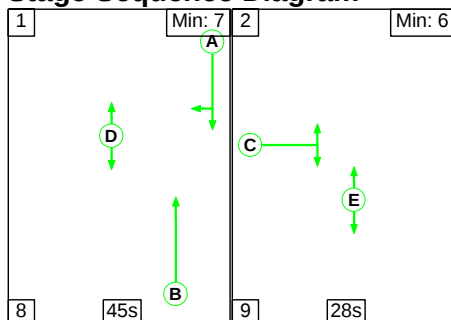
Traffic Lane Flows

Lane	Scenario 3: 2017 Existing Saturday
Junction: A61 Wakefield Road / Bar Lane	
1/1	499
2/1 (short)	445
2/2 (with short)	955(In) 510(Out)
3/1	443
4/1	534
5/1	899
6/1	464

Lane Saturation Flows

Junction: A61 Wakefield Road / Bar Lane										
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)		
1/1 (Wakefield Road SB)	3.40	0.00	Y	Arm 5 Ahead	Inf	96.2 %	1946	1946		
				Arm 6 Right	12.50	3.8 %				
2/1 (Wakefield Road NB)	4.00	0.00	Y	Arm 6 Left	100.00	100.0 %	1985	1985		
2/2 (Wakefield Road NB)	3.80	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1995	1995		
3/1 (Bar Lane)	3.70	0.00	Y	Arm 4 Left	12.50	5.4 %	1677	1677		
				Arm 5 Right	8.00	94.6 %				
4/1 (Wakefield Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf		
5/1 (Wakefield Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf		
6/1 (Bar Lane Exit Lane 1)	Infinite Saturation Flow						Inf	Inf		

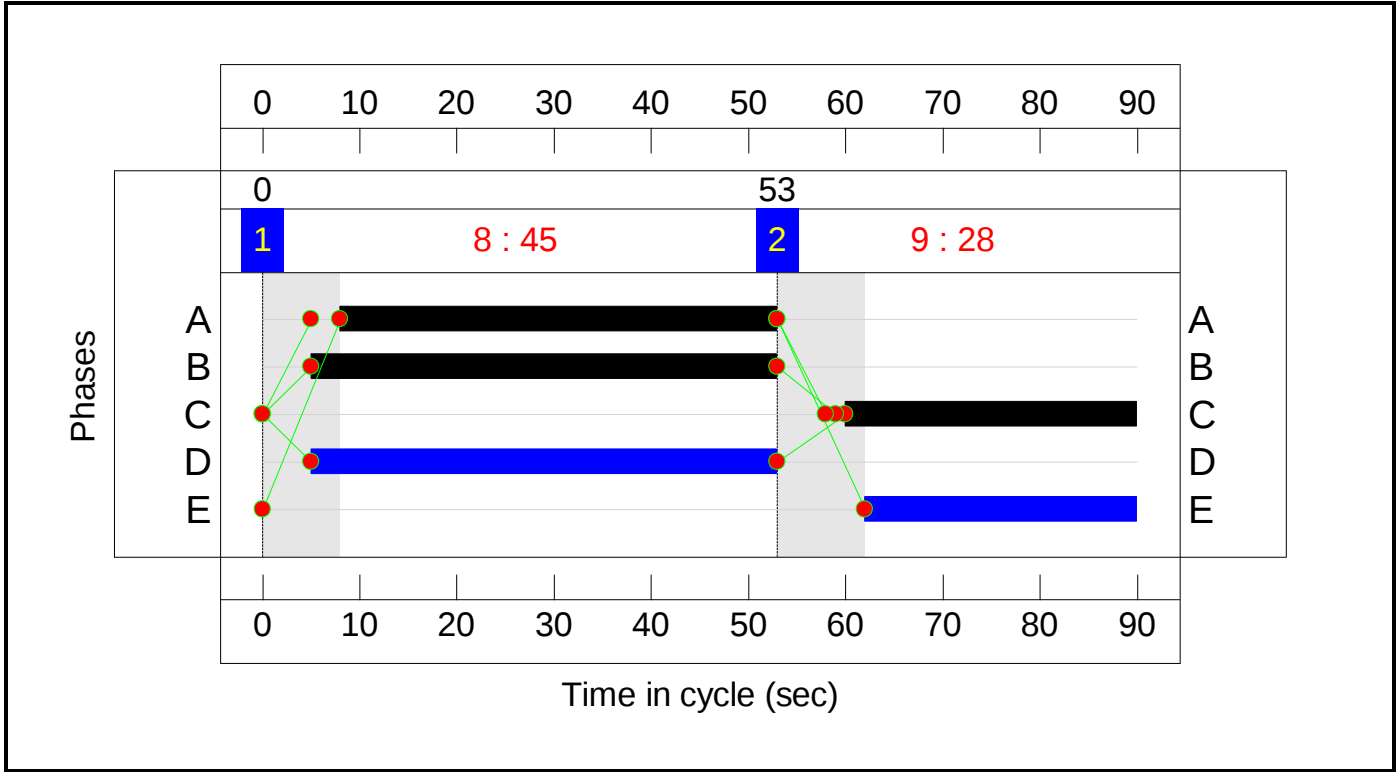
Scenario 1: '2017 Existing AM' (FG1: '2017 Existing AM', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

Stage Timings

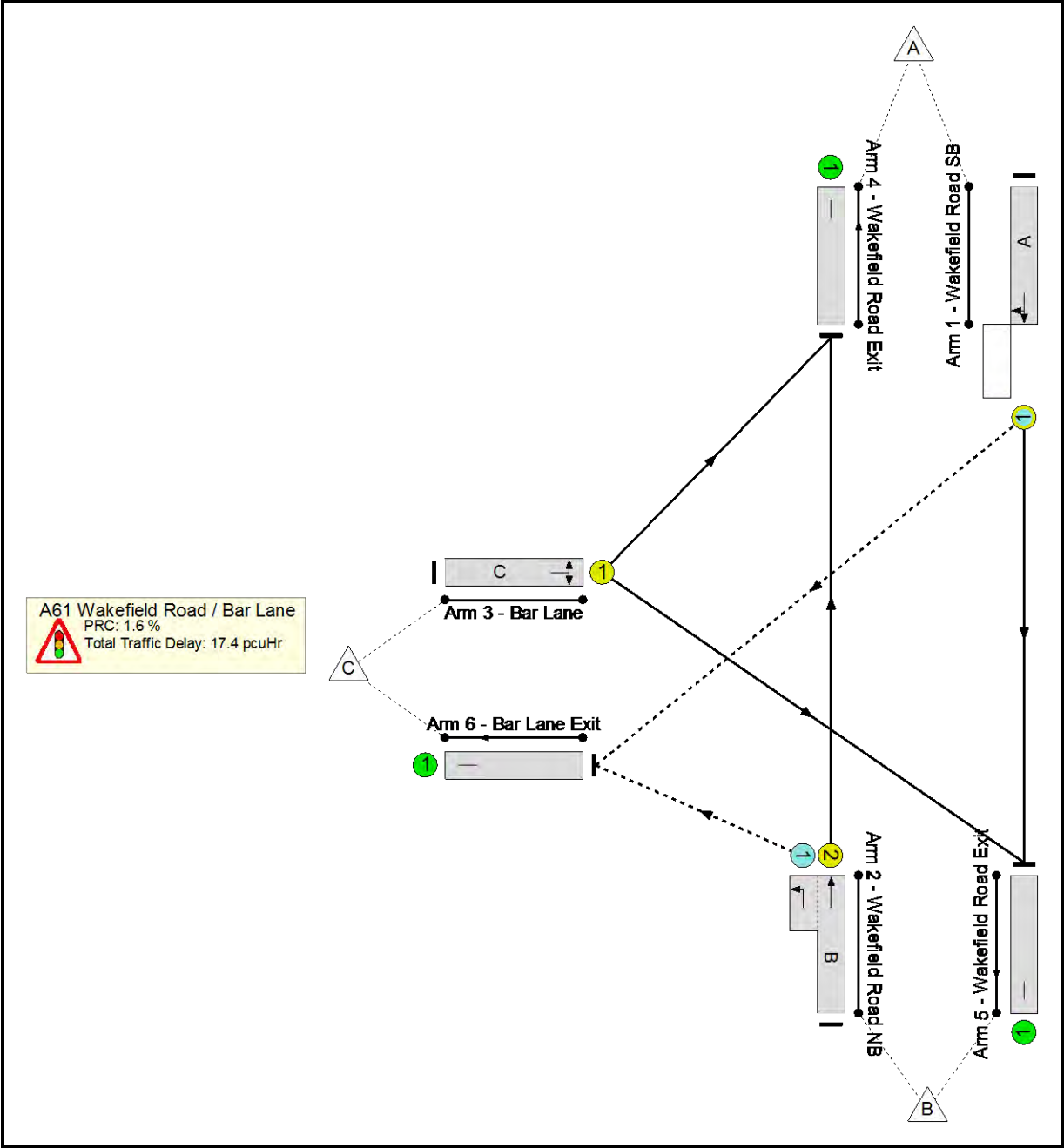
Stage	1	2
Duration	45	28
Change Point	0	53

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

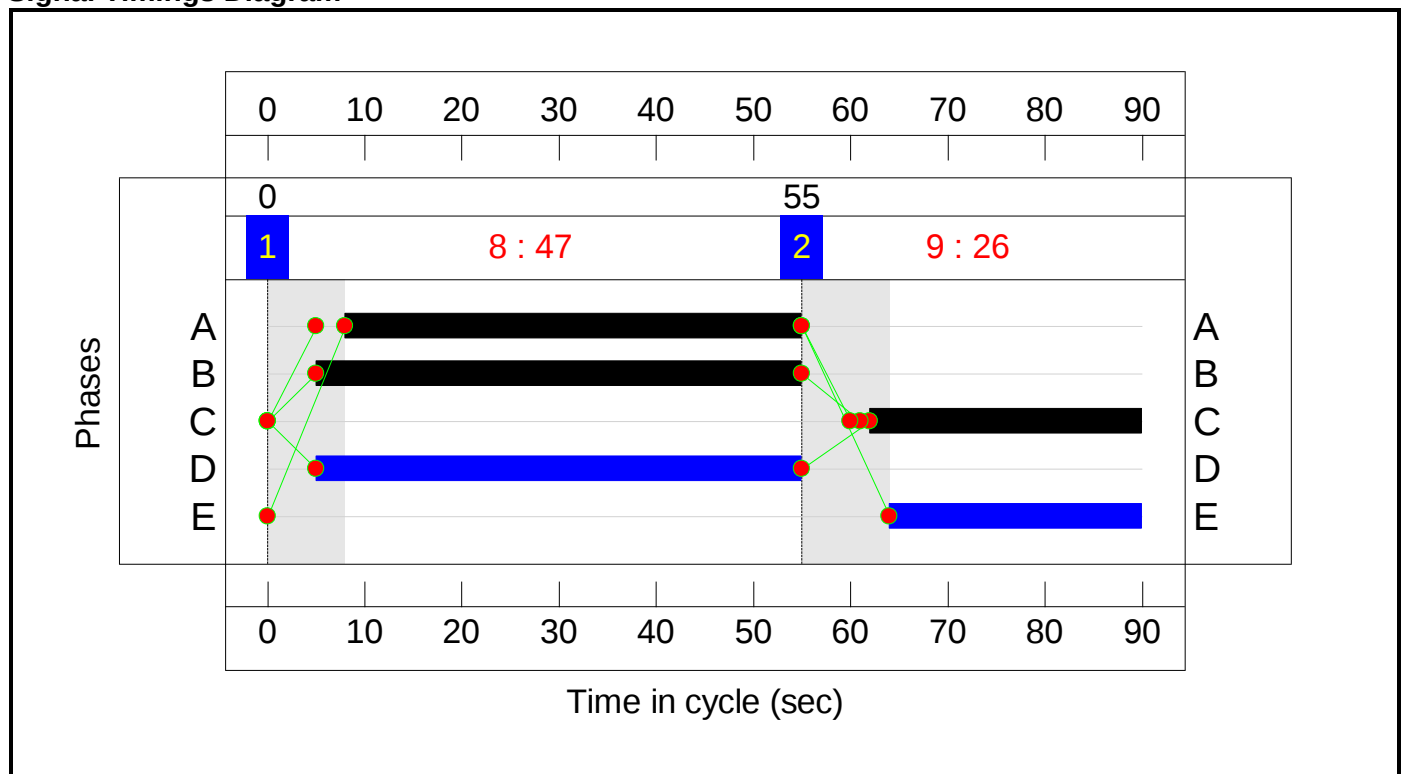
Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: 2017 Existing	-	-	N/A	-	-		-	-	-	-	-	-	88.6%
A61 Wakefield Road / Bar Lane	-	-	N/A	-	-		-	-	-	-	-	-	88.6%
1/1	Wakefield Road SB Ahead Right	O	N/A	N/A	A		1	45	-	494	1950	997	49.6%
2/2+2/1	Wakefield Road NB Ahead Left	U+O	N/A	N/A	B -		1	48	-	1023	1995:1985	1164	87.9%
3/1	Bar Lane Left Right	U	N/A	N/A	C		1	30	-	512	1678	578	88.6%
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: 2017 Existing	-	-	325	62	0	9.9	7.5	0.0	17.4	-	-	-	-
A61 Wakefield Road / Bar Lane	-	-	325	62	0	9.9	7.5	0.0	17.4	-	-	-	-
1/1	494	494	10	0	0	2.0	0.5	0.0	2.5	18.0	8.0	0.5	8.4
2/2+2/1	1023	1023	315	62	0	4.0	3.5	-	7.4	26.2	20.0	3.5	23.5
3/1	512	512	-	-	-	4.0	3.5	-	7.5	52.5	11.9	3.5	15.5
C1 PRC for Signalled Lanes (%): 1.6 Total Delay for Signalled Lanes (pcuHr): 17.36 Cycle Time (s): 90 PRC Over All Lanes (%): 1.6 Total Delay Over All Lanes(pcuHr): 17.36													

Stage Sequence Diagram

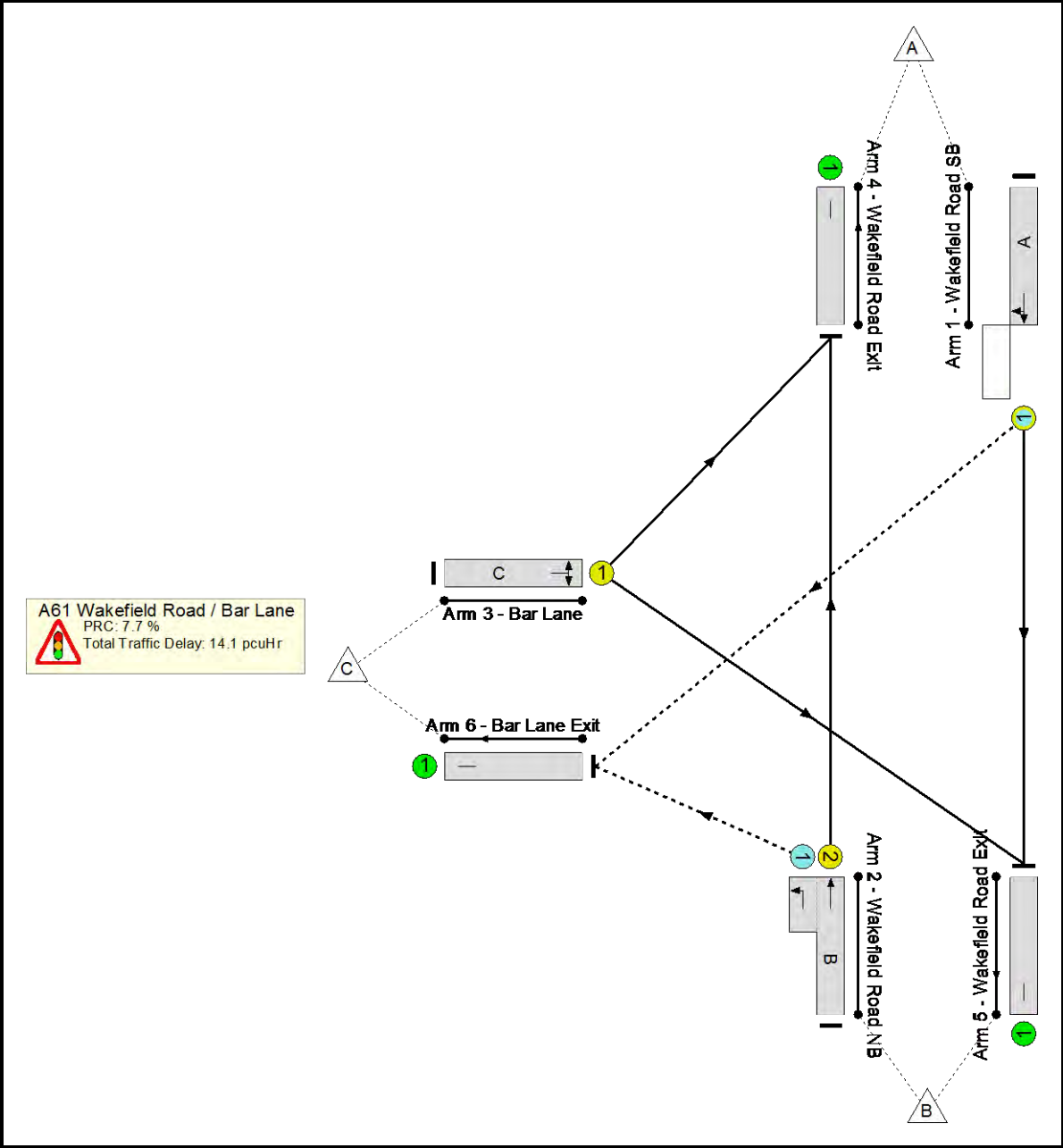


Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

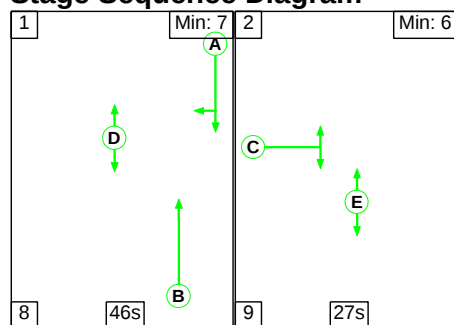


Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: 2017 Existing	-	-	N/A	-	-		-	-	-	-	-	-	83.5%
A61 Wakefield Road / Bar Lane	-	-	N/A	-	-		-	-	-	-	-	-	83.5%
1/1	Wakefield Road SB Ahead Right	O	N/A	N/A	A		1	47	-	608	1947	1038	58.6%
2/2+2/1	Wakefield Road NB Ahead Left	U+O	N/A	N/A	B -		1	50	-	1053	1995:1985	1261	83.5%
3/1	Bar Lane Left Right	U	N/A	N/A	C		1	28	-	443	1675	540	82.1%
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: 2017 Existing	-	-	442	112	0	8.8	5.4	0.0	14.1	-	-	-	-
A61 Wakefield Road / Bar Lane	-	-	442	112	0	8.8	5.4	0.0	14.1	-	-	-	-
1/1	608	608	20	0	0	2.4	0.7	0.0	3.1	18.4	10.3	0.7	11.0
2/2+2/1	1053	1053	422	112	0	2.9	2.5	-	5.4	18.4	17.6	2.5	20.1
3/1	443	443	-	-	-	3.5	2.2	-	5.6	45.9	10.1	2.2	12.3
C1 PRC for Signalled Lanes (%): 7.7 Total Delay for Signalled Lanes (pcuHr): 14.14 Cycle Time (s): 90 PRC Over All Lanes (%): 7.7 Total Delay Over All Lanes(pcuHr): 14.14													

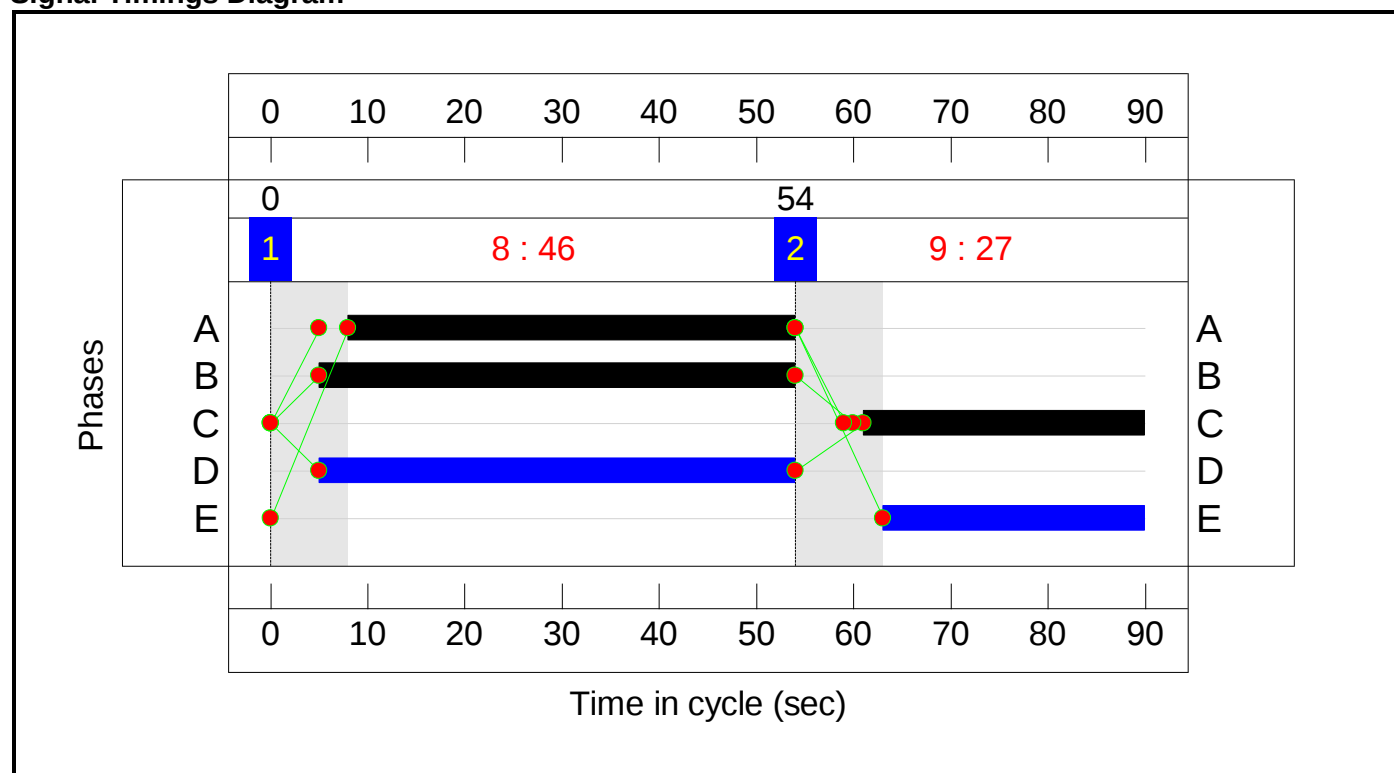
Stage Sequence Diagram



Stage Timings

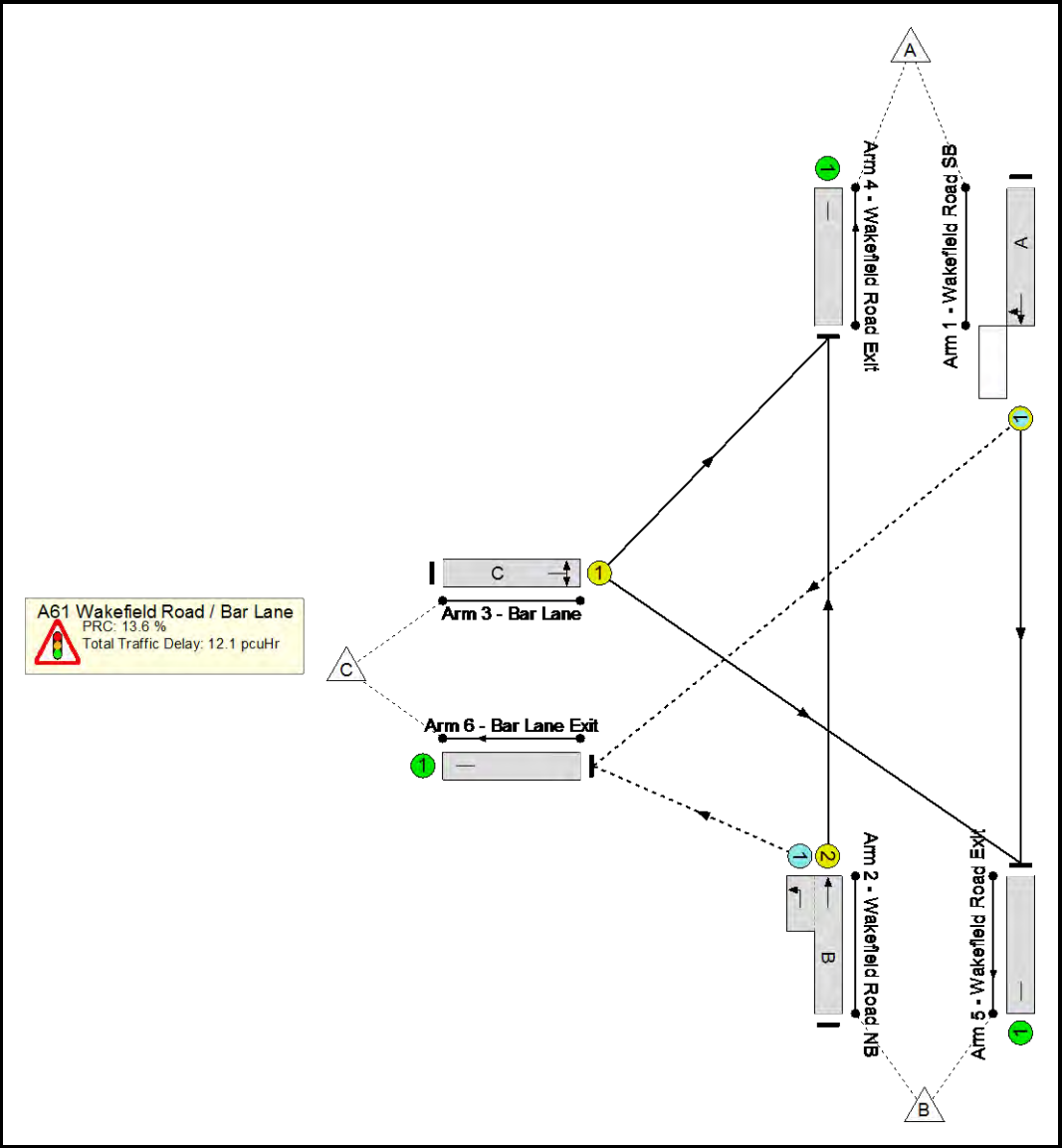
Stage	1	2
Duration	46	27
Change Point	0	54

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: 2017 Existing	-	-	N/A	-	-		-	-	-	-	-	-	79.2%
A61 Wakefield Road / Bar Lane	-	-	N/A	-	-		-	-	-	-	-	-	79.2%
1/1	Wakefield Road SB Ahead Right	O	N/A	N/A	A		1	46	-	499	1946	1016	49.1%
2/2+2/1	Wakefield Road NB Ahead Left	U+O	N/A	N/A	B -		1	49	-	955	1995:1985	1220	78.3%
3/1	Bar Lane Left Right	U	N/A	N/A	C		1	29	-	443	1677	559	79.2%
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: 2017 Existing	-	-	369	95	0	7.9	4.1	0.0	12.1	-	-	-	-
A61 Wakefield Road / Bar Lane	-	-	369	95	0	7.9	4.1	0.0	12.1	-	-	-	-
1/1	499	499	19	0	0	1.9	0.5	0.0	2.4	17.3	7.9	0.5	8.4
2/2+2/1	955	955	350	95	0	2.7	1.8	-	4.5	16.8	15.2	1.8	17.0
3/1	443	443	-	-	-	3.3	1.9	-	5.2	42.2	10.0	1.9	11.8
C1 PRC for Signalled Lanes (%): 13.6 Total Delay for Signalled Lanes (pcuHr): 12.05 Cycle Time (s): 90 PRC Over All Lanes (%): 13.6 Total Delay Over All Lanes(pcuHr): 12.05													

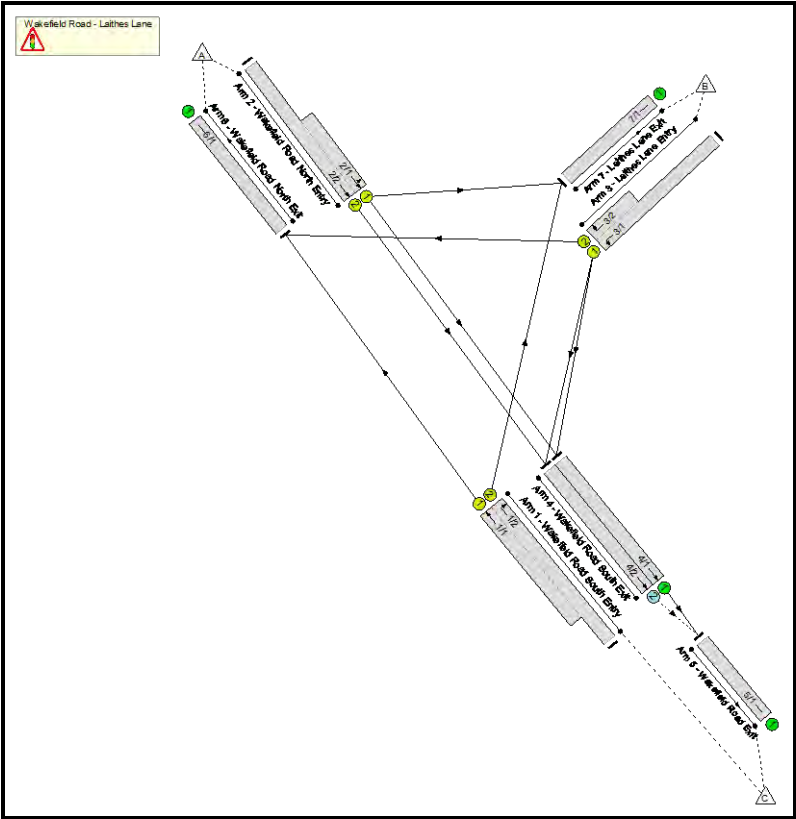
Full Input Data And Results

Full Input Data And Results

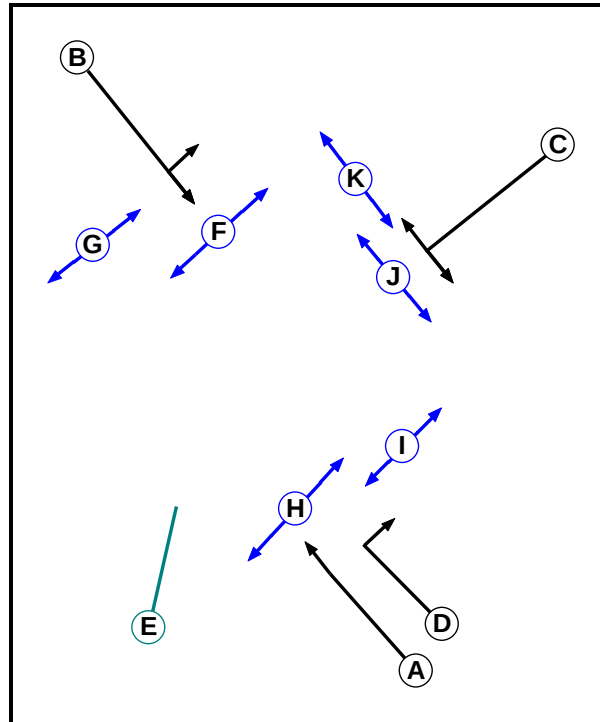
User and Project Details

Project:	Former William Freeman Works, Wakefield Road
Title:	Wakefield Road - Laithes Lane
Location:	
File name:	Wakefield Road - Laithes Lane.lsg3x
Author:	John Turner
Company:	Bryan G Hall
Address:	
Notes:	

Network Layout Diagram



Phase Diagram



Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		7	7
E	Dummy		7	7
F	Pedestrian		7	7
G	Pedestrian		7	7
H	Pedestrian		7	7
I	Pedestrian		7	7
J	Pedestrian		7	7
K	Pedestrian		7	7

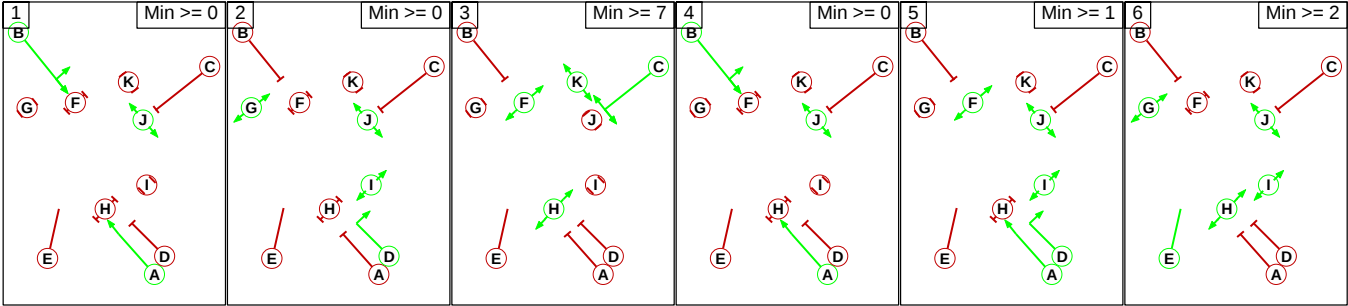
Phase Intergreens Matrix

Terminating Phase	Starting Phase											
		A	B	C	D	E	F	G	H	I	J	K
	A		-	6	-	5	-	8	5	-	-	-
	B	-		8	5	5	5	-	-	9	-	7
	C	5	5		5	5	-	8	-	7	5	-
	D	-	7	5		5	-	-	5	-	-	7
	E	5	5	5	5		-	-	-	-	-	6
	F	-	8	-	-	-		10	-	-	-	-
	G	6	-	6	-	-	-		-	-	-	-
	H	8	-	-	6	-	-	-		-	-	-
	I	-	7	7	-	-	-	-	-		-	-
	J	-	-	7	-	-	-	-	-	-		-
	K	-	7	-	7	7	-	-	-	-	-	

Phases in Stage

Stage No.	Phases in Stage
1	A B J
2	D G I J
3	C F H K
4	A B J
5	A D F I J
6	E G H I J

Stage Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Change

From Stage	To Stage						
		1	2	3	4	5	6
	1		9	8	0	9	9
	2	7		7	7	6	5
	3	8	10		8	8	10
	4	0	9	8		9	9
	5	8	10	7	8		10
	6	8	6	7	8	8	

Full Input Data And Results

Give-Way Lane Input Data

Junction: Wakefield Road - Laithes Lane											
Lane	Movement	Max Flow when Giving Way (PCU/Hr)	Min Flow when Giving Way (PCU/Hr)	Opposing Lane	Opp. Lane Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	Non-Blocking Storage (PCU)	RTF	Right Turn Move up (s)	Max Turns in Intergreen (PCU)
4/2 (Wakefield Road South Exit)	5/1 (Ahead)	1439	0	4/1	1.09	All	-	-	-	-	-

Full Input Data And Results

Lane Input Data

Junction: Wakefield Road - Laithes Lane												
Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (Wakefield Road South Entry)	U	A	2	3	22.6	Geom	-	3.25	0.00	Y	Arm 6 Ahead	Inf
1/2 (Wakefield Road South Entry)	U	D	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 7 Right	17.00
2/1 (Wakefield Road North Entry)	U	B	2	3	9.6	Geom	-	3.50	0.00	Y	Arm 4 Ahead	Inf
											Arm 7 Left	20.00
2/2 (Wakefield Road North Entry)	U	B	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 4 Ahead	Inf
3/1 (Laithes Lane Entry)	U	C	2	3	60.0	Geom	-	3.30	0.00	Y	Arm 4 Left	14.00
3/2 (Laithes Lane Entry)	U	C	2	3	6.1	Geom	-	3.30	0.00	Y	Arm 6 Right	18.00
4/1 (Wakefield Road South Exit)	U		2	3	17.4	Geom	-	3.20	0.00	Y	Arm 5 Ahead	Inf
4/2 (Wakefield Road South Exit)	O		2	3	17.4	Geom	-	3.20	0.00	Y	Arm 5 Ahead	Inf
5/1 (Wakefield Road Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1 (Wakefield Road North Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1 (Laithes Lane Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2017 Existing AM'	07:45	08:45	01:00	
2: '2017 Existing PM'	16:45	17:45	01:00	
3: '2017 Existing Saturday'	11:45	12:45	01:00	

Scenario 1: '2017 Existing AM' (FG1: '2017 Existing AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination				
Origin		A	B	C	Tot.
	A	0	318	689	1007
	B	329	0	121	450
	C	634	149	0	783
	Tot.	963	467	810	2240

Traffic Lane Flows

Lane	Scenario 1: 2017 Existing AM
Junction: Wakefield Road - Laithes Lane	
1/1 (short)	634
1/2 (with short)	783(In) 149(Out)
2/1 (short)	504
2/2 (with short)	1007(In) 503(Out)
3/1 (with short)	450(In) 121(Out)
3/2 (short)	329
4/1	246
4/2	564
5/1	810
6/1	963
7/1	467

Lane Saturation Flows

Junction: Wakefield Road - Laithes Lane								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Wakefield Road South Entry)	3.25	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1940	1940
1/2 (Wakefield Road South Entry)	3.25	0.00	Y	Arm 7 Right	17.00	100.0 %	1783	1783
2/1 (Wakefield Road North Entry)	3.50	0.00	Y	Arm 4 Ahead	Inf	36.9 %	1876	1876
				Arm 7 Left	20.00	63.1 %		
2/2 (Wakefield Road North Entry)	3.50	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1965	1965
3/1 (Laithes Lane Entry)	3.30	0.00	Y	Arm 4 Left	14.00	100.0 %	1757	1757
3/2 (Laithes Lane Entry)	3.30	0.00	Y	Arm 6 Right	18.00	100.0 %	1795	1795
4/1 (Wakefield Road South Exit)	3.20	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1935	1935
4/2 (Wakefield Road South Exit)	3.20	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1935	1935
5/1 (Wakefield Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Wakefield Road North Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Laithes Lane Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 2: '2017 Existing PM' (FG2: '2017 Existing PM', Plan 1: 'Network Control Plan 1')**Traffic Flows, Desired****Desired Flow :**

	Destination				
		A	B	C	Tot.
Origin	A	0	332	626	958
	B	350	0	141	491
	C	770	170	0	940
	Tot.	1120	502	767	2389

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: 2017 Existing PM
Junction: Wakefield Road - Laithes Lane	
1/1 (short)	770
1/2 (with short)	940(In) 170(Out)
2/1 (short)	479
2/2 (with short)	958(In) 479(Out)
3/1 (with short)	491(In) 141(Out)
3/2 (short)	350
4/1	217
4/2	550
5/1	767
6/1	1120
7/1	502

Lane Saturation Flows

Junction: Wakefield Road - Laithes Lane								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Wakefield Road South Entry)	3.25	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1940	1940
1/2 (Wakefield Road South Entry)	3.25	0.00	Y	Arm 7 Right	17.00	100.0 %	1783	1783
2/1 (Wakefield Road North Entry)	3.50	0.00	Y	Arm 4 Ahead	Inf	30.7 %	1868	1868
				Arm 7 Left	20.00	69.3 %		
2/2 (Wakefield Road North Entry)	3.50	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1965	1965
3/1 (Laithes Lane Entry)	3.30	0.00	Y	Arm 4 Left	14.00	100.0 %	1757	1757
3/2 (Laithes Lane Entry)	3.30	0.00	Y	Arm 6 Right	18.00	100.0 %	1795	1795
4/1 (Wakefield Road South Exit)	3.20	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1935	1935
4/2 (Wakefield Road South Exit)	3.20	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1935	1935
5/1 (Wakefield Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Wakefield Road North Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Laithes Lane Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 3: '2017 Existing Saturday' (FG3: '2017 Existing Saturday', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination				
Origin		A	B	C	Tot.
	A	0	271	666	937
	B	260	0	163	423
	C	694	188	0	882
	Tot.	954	459	829	2242

Traffic Lane Flows

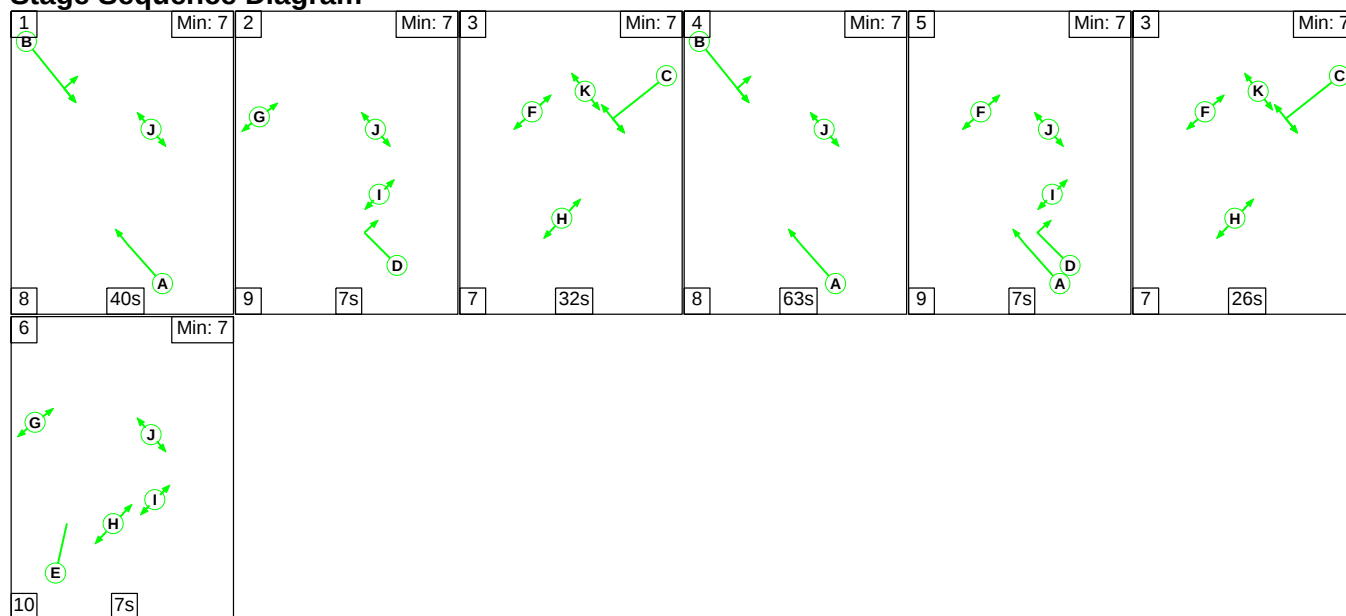
Lane	Scenario 3: 2017 Existing Saturday
Junction: Wakefield Road - Laithes Lane	
1/1 (short)	694
1/2 (with short)	882(In) 188(Out)
2/1 (short)	469
2/2 (with short)	937(In) 468(Out)
3/1 (with short)	423(In) 163(Out)
3/2 (short)	260
4/1	279
4/2	550
5/1	829
6/1	954
7/1	459

Lane Saturation Flows

Junction: Wakefield Road - Laithes Lane								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Wakefield Road South Entry)	3.25	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1940	1940
1/2 (Wakefield Road South Entry)	3.25	0.00	Y	Arm 7 Right	17.00	100.0 %	1783	1783
2/1 (Wakefield Road North Entry)	3.50	0.00	Y	Arm 4 Ahead Arm 7 Left	Inf 20.00	42.2 % 57.8 %	1883	1883
2/2 (Wakefield Road North Entry)	3.50	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1965	1965
3/1 (Laithes Lane Entry)	3.30	0.00	Y	Arm 4 Left	14.00	100.0 %	1757	1757
3/2 (Laithes Lane Entry)	3.30	0.00	Y	Arm 6 Right	18.00	100.0 %	1795	1795
4/1 (Wakefield Road South Exit)	3.20	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1935	1935
4/2 (Wakefield Road South Exit)	3.20	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1935	1935
5/1 (Wakefield Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Wakefield Road North Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Laithes Lane Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 1: '2017 Existing AM' (FG1: '2017 Existing AM', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

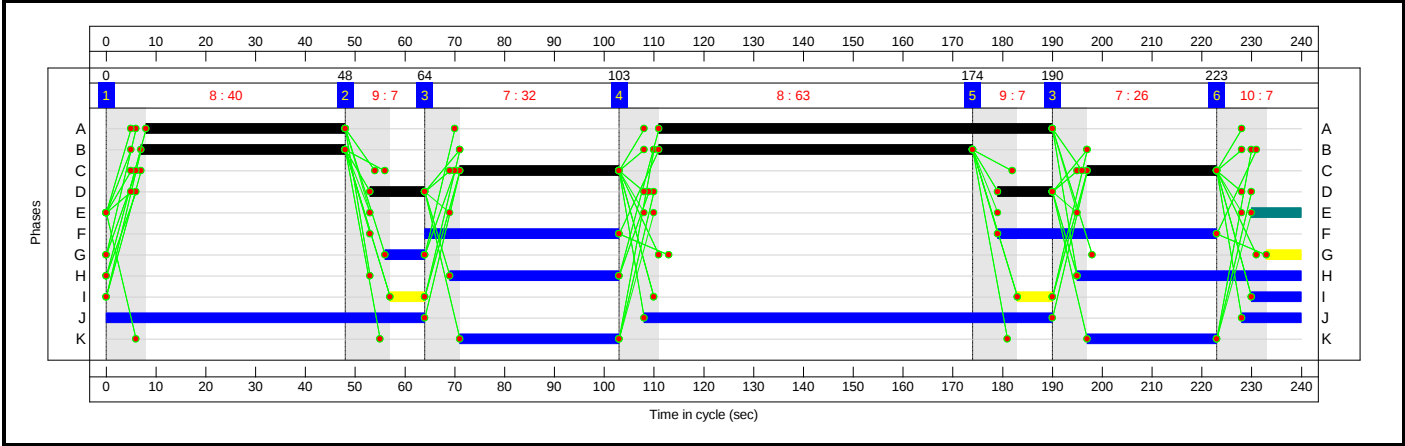


Full Input Data And Results

Stage Timings

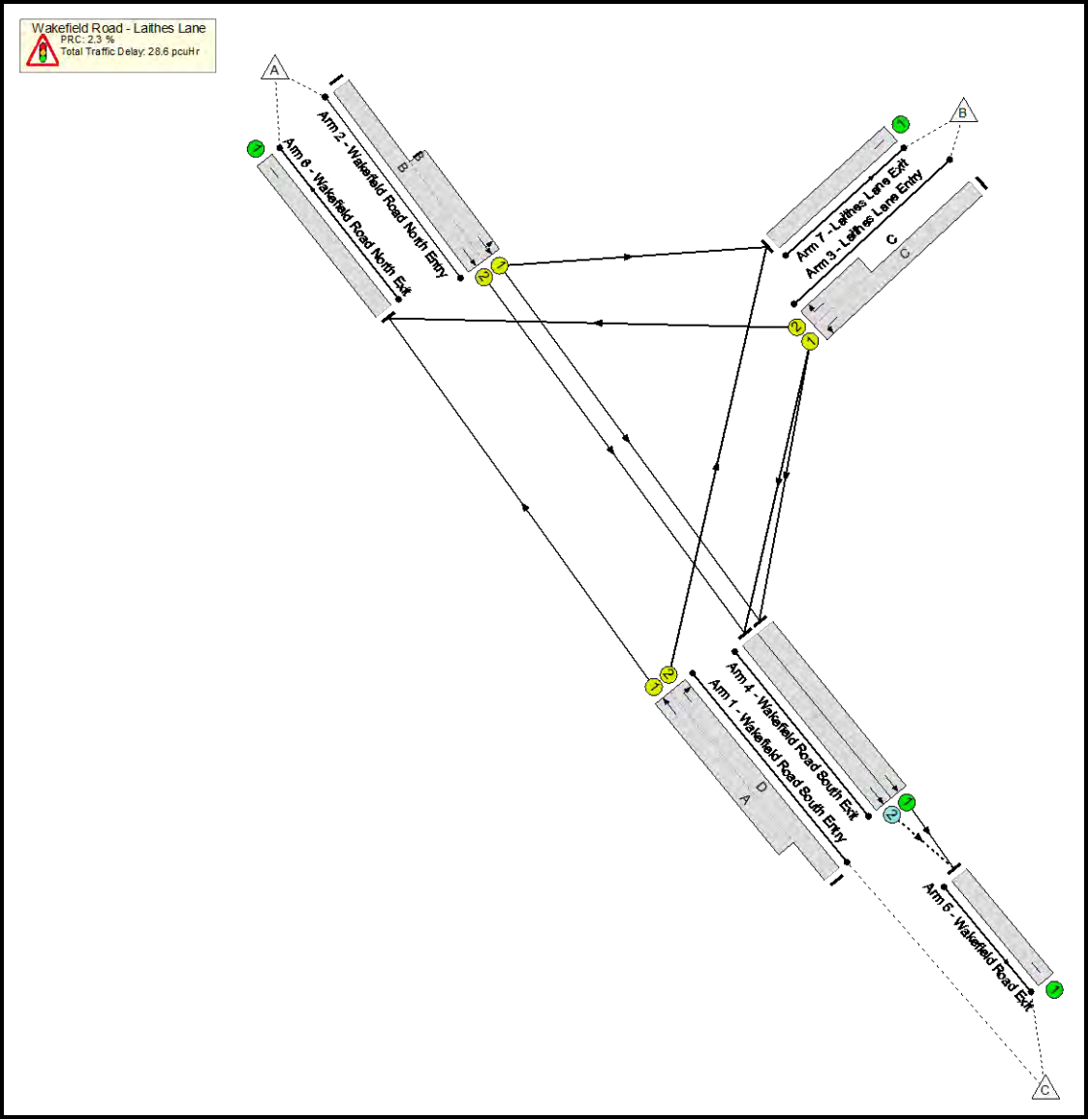
Stage	1	2	3	4	5	3	6
Duration	40	7	32	63	7	26	7
Change Point	0	48	64	103	174	190	223

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Wakefield Road - Laithes Lane	-	-	N/A	-	-		-	-	-	-	-	-	88.0%
Wakefield Road - Laithes Lane	-	-	N/A	-	-		-	-	-	-	-	-	88.0%
1/2+1/1	Wakefield Road South Entry Ahead Right	U	N/A	N/A	D A		2	22:119	-	783	1783:1940	1096	71.4%
2/2+2/1	Wakefield Road North Entry Ahead Left	U	N/A	N/A	B		2	104	-	1007	1965:1876	1144	88.0%
3/1+3/2	Laithes Lane Entry Left Right	U	N/A	N/A	C		2	58	-	450	1757:1795	517	87.1%
4/1	Wakefield Road South Exit Ahead	U	N/A	N/A	-		-	-	-	246	1935	1935	12.7%
4/2	Wakefield Road South Exit Ahead	O	N/A	N/A	-		-	-	-	564	1935	1171	48.2%
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Wakefield Road - Laithes Lane	-	-	564	0	0	20.3	8.3	0.0	28.6	-	-	-	-
Wakefield Road - Laithes Lane	-	-	564	0	0	20.3	8.3	0.0	28.6	-	-	-	-
1/2+1/1	783	783	-	-	-	6.1	1.2	-	7.3	33.6	16.2	1.2	17.4
2/2+2/1	1007	1007	-	-	-	7.3	3.5	-	10.8	38.7	21.7	3.5	25.2
3/1+3/2	450	450	-	-	-	5.2	3.1	-	8.2	66.0	12.4	3.1	15.5
4/1	246	246	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
4/2	564	564	564	0	0	1.7	0.5	-	2.1	13.7	16.0	0.5	16.4

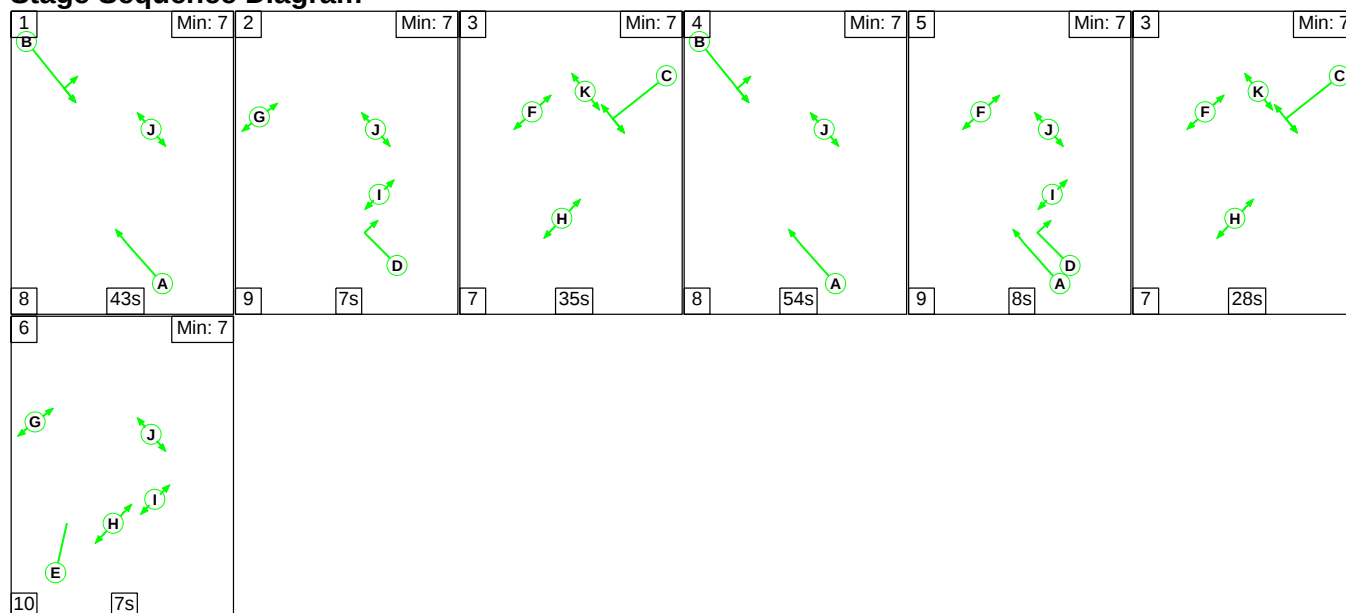
Full Input Data And Results

C1	PRC for Signalled Lanes (%):	2.3	Total Delay for Signalled Lanes (pcuHr):	26.38	Cycle Time (s):	240
	PRC Over All Lanes (%):	2.3	Total Delay Over All Lanes(pcuHr):	28.60		

Full Input Data And Results

Scenario 2: '2017 Existing PM' (FG2: '2017 Existing PM', Plan 1: 'Network Control Plan 1')

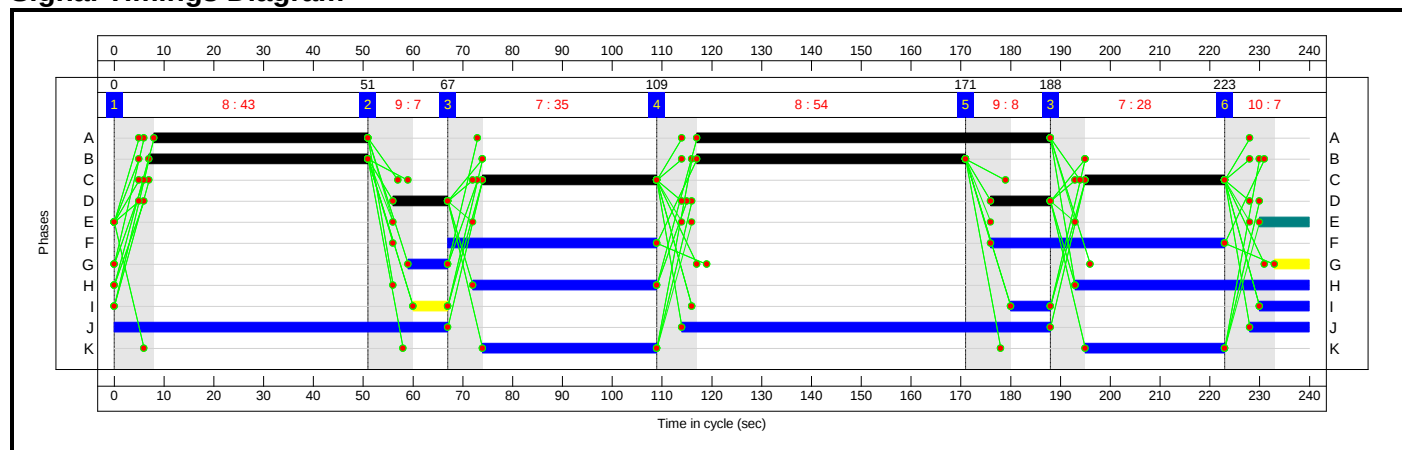
Stage Sequence Diagram



Stage Timings

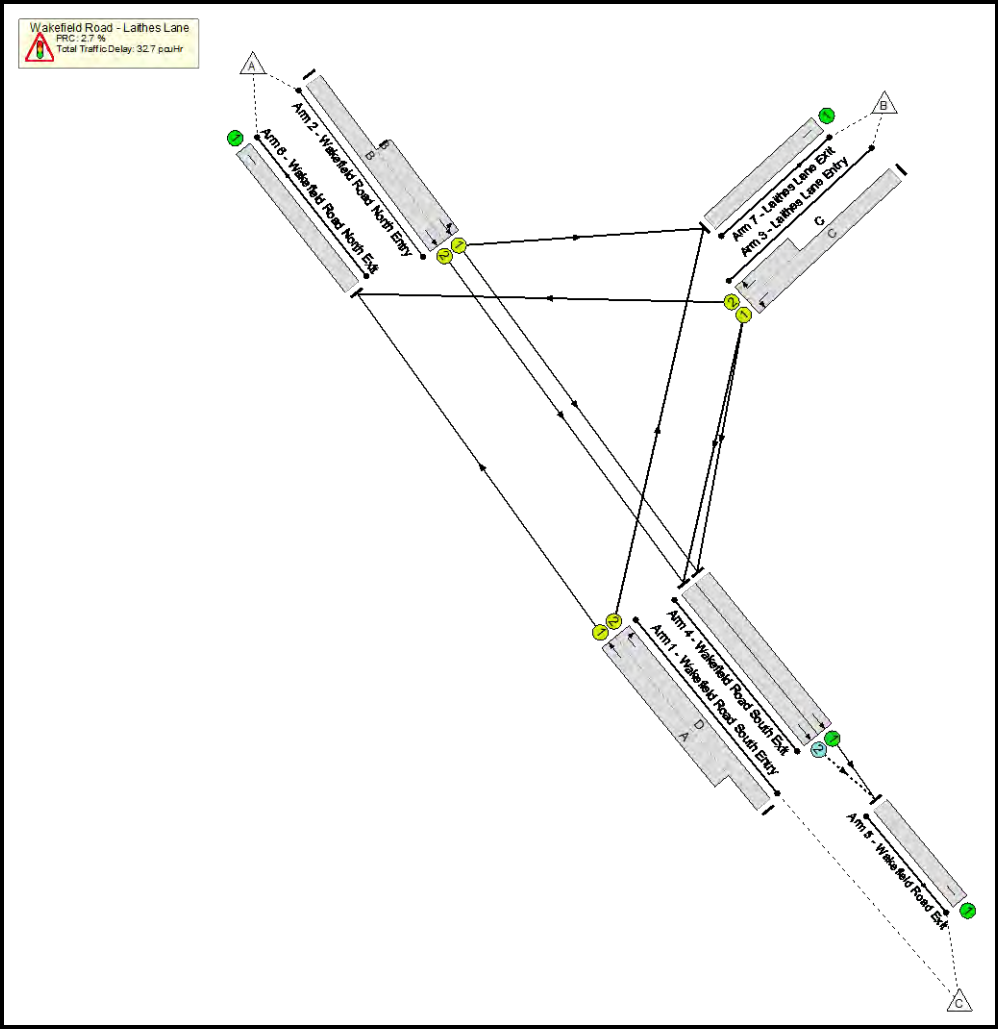
Stage	1	2	3	4	5	3	6
Duration	43	7	35	54	8	28	7
Change Point	0	51	67	109	171	188	223

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Wakefield Road - Laithes Lane	-	-	N/A	-	-		-	-	-	-	-	-	87.6%
Wakefield Road - Laithes Lane	-	-	N/A	-	-		-	-	-	-	-	-	87.6%
1/2+1/1	Wakefield Road South Entry Ahead Right	U	N/A	N/A	D A		2	23:114	-	940	1783:1940	1078	87.2%
2/2+2/1	Wakefield Road North Entry Ahead Left	U	N/A	N/A	B		2	98	-	958	1965:1868	1096	87.4%
3/1+3/2	Laithes Lane Entry Left Right	U	N/A	N/A	C		2	63	-	491	1757:1795	560	87.6%
4/1	Wakefield Road South Exit Ahead	U	N/A	N/A	-		-	-	-	217	1935	1935	11.2%
4/2	Wakefield Road South Exit Ahead	O	N/A	N/A	-		-	-	-	550	1935	1202	45.7%
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Wakefield Road - Laithes Lane	-	-	550	0	0	22.4	10.3	0.0	32.7	-	-	-	-
Wakefield Road - Laithes Lane	-	-	550	0	0	22.4	10.3	0.0	32.7	-	-	-	-
1/2+1/1	940	940	-	-	-	8.2	3.2	-	11.5	43.9	23.1	3.2	26.4
2/2+2/1	958	958	-	-	-	7.4	3.3	-	10.8	40.4	20.2	3.3	23.5
3/1+3/2	491	491	-	-	-	5.4	3.2	-	8.7	63.6	13.5	3.2	16.7
4/1	217	217	-	-	-	0.0	0.1	-	0.1	1.0	0.0	0.1	0.1
4/2	550	550	550	0	0	1.3	0.4	-	1.8	11.5	15.4	0.4	15.8

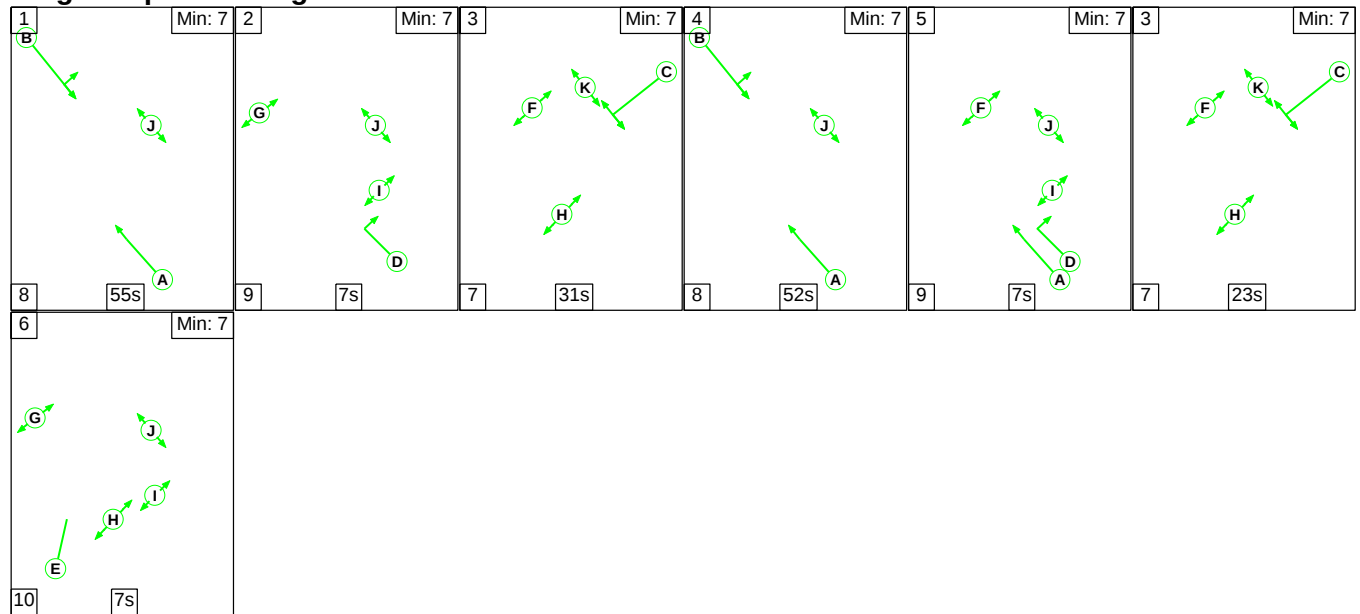
Full Input Data And Results

C1	PRC for Signalled Lanes (%):	2.7	Total Delay for Signalled Lanes (pcuHr):	30.88	Cycle Time (s):	240
	PRC Over All Lanes (%):	2.7	Total Delay Over All Lanes(pcuHr):	32.69		

Full Input Data And Results

Scenario 3: '2017 Existing Saturday' (FG3: '2017 Existing Saturday', Plan 1: 'Network Control Plan 1')

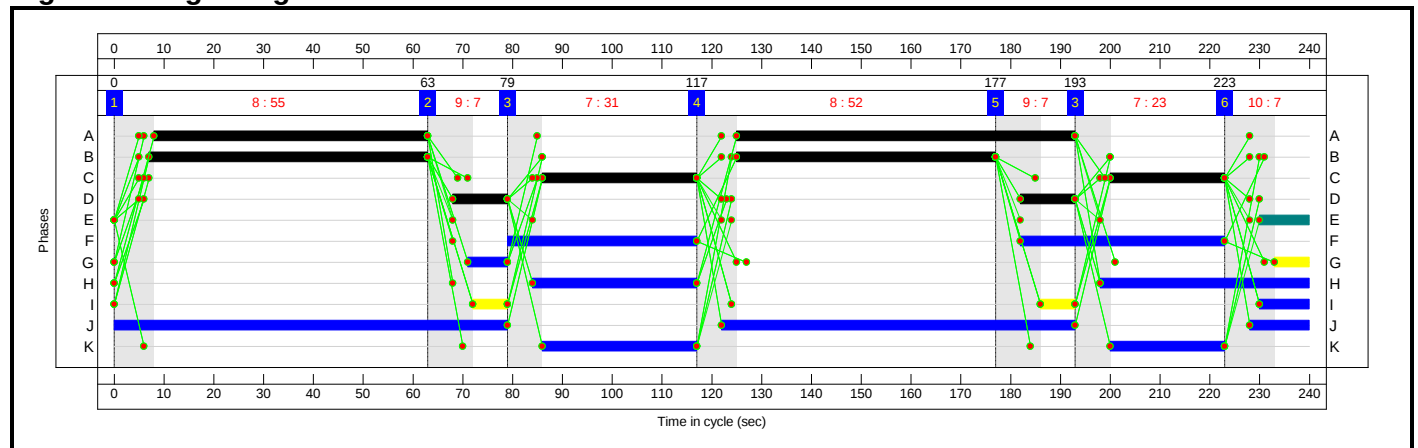
Stage Sequence Diagram



Stage Timings

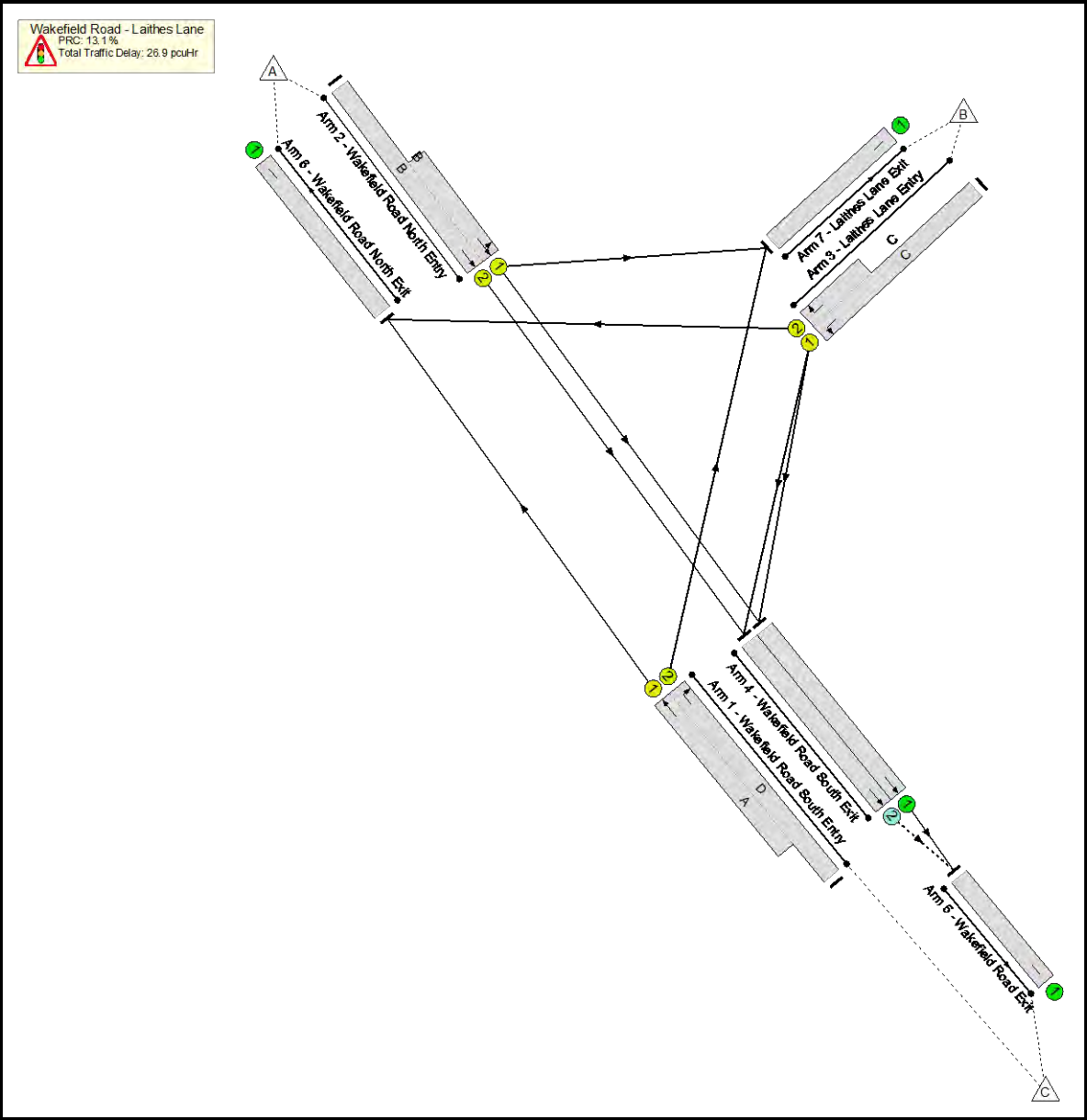
Stage	1	2	3	4	5	3	6
Duration	55	7	31	52	7	23	7
Change Point	0	63	79	117	177	193	223

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Wakefield Road - Laithes Lane	-	-	N/A	-	-		-	-	-	-	-	-	79.6%
Wakefield Road - Laithes Lane	-	-	N/A	-	-		-	-	-	-	-	-	79.6%
1/2+1/1	Wakefield Road South Entry Ahead Right	U	N/A	N/A	D A		2	22:123	-	882	1783:1940	1118	78.9%
2/2+2/1	Wakefield Road North Entry Ahead Left	U	N/A	N/A	B		2	108	-	937	1965:1883	1177	79.6%
3/1+3/2	Laithes Lane Entry Left Right	U	N/A	N/A	C		2	54	-	423	1757:1795	534	79.2%
4/1	Wakefield Road South Exit Ahead	U	N/A	N/A	-		-	-	-	279	1935	1935	14.4%
4/2	Wakefield Road South Exit Ahead	O	N/A	N/A	-		-	-	-	550	1935	1135	48.5%
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Wakefield Road - Laithes Lane	-	-	550	0	0	20.7	6.2	0.0	26.9	-	-	-	-
Wakefield Road - Laithes Lane	-	-	550	0	0	20.7	6.2	0.0	26.9	-	-	-	-
1/2+1/1	882	872	-	-	-	8.1	1.8	-	9.9	40.5	18.1	1.8	20.0
2/2+2/1	937	937	-	-	-	6.1	1.9	-	8.0	30.9	15.9	1.9	17.8
3/1+3/2	423	423	-	-	-	4.9	1.8	-	6.7	57.1	10.6	1.8	12.5
4/1	279	279	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
4/2	550	550	550	0	0	1.7	0.5	-	2.1	13.9	15.8	0.5	16.2

Full Input Data And Results

C1	PRC for Signalled Lanes (%):	13.1	Total Delay for Signalled Lanes (pcuHr):	24.66	Cycle Time (s):	240
	PRC Over All Lanes (%):	13.1	Total Delay Over All Lanes(pcuHr):	26.87		

Junctions 9					
ARCADY 9 - Roundabout Module					
Version: 9.0.1.4646 [] © Copyright TRL Limited, 2017					
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Filename: A61 Wakefield Road-A633 Rotherham Road mini-Roundabout.j9

Path: Y:\2014\14-101 to 14-125\14-114 Former William Freeman Works, Mapplewell\Technical\2017 Transport Assessment\Junction Modelling\Junctions 9

Report generation date: 30/11/2017 12:01:43

- »2017 Existing, AM
- »2017 Existing, PM
- »2017 Existing, Saturday

Summary of junction performance

	AM				PM				Saturday			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
2017 Existing												
1 - A61 North	1.0	3.87	0.50	A	0.9	3.71	0.47	A	1.1	4.01	0.52	A
2 - A633 Rotherham Road	3.0	24.32	0.76	C	1.3	11.29	0.56	B	1.6	14.85	0.62	B
3 - A61 South	0.9	7.02	0.49	A	2.7	12.89	0.73	B	1.7	9.42	0.64	A

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

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

File summary

File Description

Title	A61 Wakefield Road/A633 Rotherham Road
Location	Mapplewell, Barnsley
Site number	
Date	29/11/2017
Version	
Status	(new file)
Identifier	
Client	Netherton Building and Construction
Jobnumber	14-114
Enumerator	BRYANGHALL\design
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Mini-roundabout model	Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
JUNCTIONS 9			0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2017 Existing	AM	ONE HOUR	07:30	09:00	15
D2	2017 Existing	PM	ONE HOUR	16:30	18:00	15
D3	2017 Existing	Saturday	ONE HOUR	11:30	13:00	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2017 Existing, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	9.67	A

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Arm	Name	Description
1	A61 North	
2	A633 Rotherham Road	
3	A61 South	

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
1 - A61 North	4.50	4.50	6.50	27.0	20.00	20.00	0.0	✓
2 - A633 Rotherham Road	4.00	4.00	6.20	6.0	9.70	2.00	0.0	✓
3 - A61 South	4.20	4.20	5.10	1.5	20.00	20.00	0.0	✓

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - A61 North	0.901	1905
2 - A633 Rotherham Road	0.556	970
3 - A61 South	0.840	1381

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2017 Existing	AM	ONE HOUR	07:30	09:00	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A61 North		✓	851	100.000
2 - A633 Rotherham Road		✓	416	100.000
3 - A61 South		✓	439	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		1 - A61 North	2 - A633 Rotherham Road	3 - A61 South
From	1 - A61 North	0	253	598
	2 - A633 Rotherham Road	416	0	0
	3 - A61 South	401	38	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		1 - A61 North	2 - A633 Rotherham Road	3 - A61 South
From	1 - A61 North	0	0	0
	2 - A633 Rotherham Road	0	0	0
	3 - A61 South	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1 - A61 North	0.50	3.87	1.0	A
2 - A633 Rotherham Road	0.76	24.32	3.0	C
3 - A61 South	0.49	7.02	0.9	A

Main Results for each time segment

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	641	28	1880	0.341	639	0.5	2.896	A
2 - A633 Rotherham Road	313	449	721	0.435	310	0.8	8.711	A
3 - A61 South	331	310	1120	0.295	329	0.4	4.540	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	765	34	1874	0.408	764	0.7	3.241	A
2 - A633 Rotherham Road	374	537	671	0.557	372	1.2	11.949	B
3 - A61 South	395	372	1068	0.369	394	0.6	5.334	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	937	42	1868	0.502	936	1.0	3.859	A
2 - A633 Rotherham Road	458	658	605	0.758	452	2.8	22.620	C
3 - A61 South	483	452	1001	0.483	482	0.9	6.913	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	937	42	1867	0.502	937	1.0	3.868	A
2 - A633 Rotherham Road	458	658	604	0.758	457	3.0	24.324	C
3 - A61 South	483	457	996	0.485	483	0.9	7.016	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	765	34	1874	0.408	766	0.7	3.251	A
2 - A633 Rotherham Road	374	538	671	0.558	381	1.3	12.685	B
3 - A61 South	395	381	1061	0.372	396	0.6	5.426	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	641	29	1879	0.341	641	0.5	2.909	A
2 - A633 Rotherham Road	313	451	719	0.435	315	0.8	8.952	A
3 - A61 South	331	315	1116	0.296	331	0.4	4.591	A

2017 Existing, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	8.65	A

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2017 Existing	PM	ONE HOUR	16:30	18:00	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A61 North		✓	792	100.000
2 - A633 Rotherham Road		✓	367	100.000
3 - A61 South		✓	693	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		1 - A61 North	2 - A633 Rotherham Road	3 - A61 South
From	1 - A61 North	0	388	404
	2 - A633 Rotherham Road	367	0	0
	3 - A61 South	629	64	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		1 - A61 North	2 - A633 Rotherham Road	3 - A61 South
From	1 - A61 North	0	0	0
	2 - A633 Rotherham Road	0	0	0
	3 - A61 South	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1 - A61 North	0.47	3.71	0.9	A
2 - A633 Rotherham Road	0.56	11.29	1.3	B
3 - A61 South	0.73	12.89	2.7	B

Main Results for each time segment

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	596	48	1862	0.320	594	0.5	2.836	A
2 - A633 Rotherham Road	276	303	801	0.345	274	0.5	6.804	A
3 - A61 South	522	274	1150	0.454	518	0.8	5.667	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	712	57	1853	0.384	711	0.6	3.150	A
2 - A633 Rotherham Road	330	363	768	0.429	329	0.7	8.180	A
3 - A61 South	623	329	1104	0.564	621	1.3	7.423	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	872	70	1842	0.473	871	0.9	3.704	A
2 - A633 Rotherham Road	404	444	723	0.559	402	1.2	11.147	B
3 - A61 South	763	402	1043	0.732	758	2.6	12.393	B

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	872	70	1842	0.473	872	0.9	3.711	A
2 - A633 Rotherham Road	404	445	723	0.559	404	1.3	11.288	B
3 - A61 South	763	404	1041	0.733	763	2.7	12.886	B

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	712	58	1853	0.384	713	0.6	3.163	A
2 - A633 Rotherham Road	330	364	768	0.430	332	0.8	8.294	A
3 - A61 South	623	332	1102	0.565	628	1.3	7.686	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	596	48	1862	0.320	597	0.5	2.849	A
2 - A633 Rotherham Road	276	304	801	0.345	277	0.5	6.888	A
3 - A61 South	522	277	1148	0.455	524	0.8	5.786	A

2017 Existing, Saturday

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	7.90	A

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2017 Existing	Saturday	ONE HOUR	11:30	13:00	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A61 North		✓	870	100.000
2 - A633 Rotherham Road		✓	355	100.000
3 - A61 South		✓	609	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		1 - A61 North	2 - A633 Rotherham Road	3 - A61 South
From	1 - A61 North	0	319	551
	2 - A633 Rotherham Road	355	0	0
	3 - A61 South	560	49	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		1 - A61 North	2 - A633 Rotherham Road	3 - A61 South
From	1 - A61 North	0	0	0
	2 - A633 Rotherham Road	0	0	0
	3 - A61 South	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1 - A61 North	0.52	4.01	1.1	A
2 - A633 Rotherham Road	0.62	14.85	1.6	B
3 - A61 South	0.64	9.42	1.7	A

Main Results for each time segment

11:30 - 11:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	655	37	1872	0.350	653	0.5	2.947	A
2 - A633 Rotherham Road	267	413	740	0.361	265	0.6	7.543	A
3 - A61 South	458	265	1158	0.396	456	0.6	5.109	A

11:45 - 12:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	782	44	1866	0.419	781	0.7	3.319	A
2 - A633 Rotherham Road	319	495	695	0.459	318	0.8	9.523	A
3 - A61 South	547	318	1114	0.492	546	1.0	6.331	A

12:00 - 12:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	958	54	1857	0.516	957	1.1	3.993	A
2 - A633 Rotherham Road	391	606	633	0.617	388	1.5	14.506	B
3 - A61 South	671	388	1055	0.636	668	1.7	9.226	A

12:15 - 12:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	958	54	1857	0.516	958	1.1	4.005	A
2 - A633 Rotherham Road	391	607	633	0.618	391	1.6	14.848	B
3 - A61 South	671	391	1052	0.637	670	1.7	9.415	A

12:30 - 12:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	782	44	1865	0.419	783	0.7	3.333	A
2 - A633 Rotherham Road	319	496	694	0.460	322	0.9	9.746	A
3 - A61 South	547	322	1110	0.493	550	1.0	6.466	A

12:45 - 13:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	655	37	1872	0.350	656	0.5	2.963	A
2 - A633 Rotherham Road	267	415	739	0.362	268	0.6	7.669	A
3 - A61 South	458	268	1155	0.397	460	0.7	5.185	A

Junctions 8				
PICADY 8 - Priority Intersection Module				
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Filename: Left Turn from Rotherham Road to Wakefield Road.arc8

Path: Y:\2014\14-101 to 14-125\14-114 Former William Freeman Works, Mapplewell\Technical\2017 Transport Assessment\Junction Modelling\Junctions 8\Left Turn from Rotherham Road to Wakefield Road

Report generation date: 19/12/2017 09:51:04

« (Default Analysis Set) - 2017 Existing, AM

- » Junction Network
- » Arms
- » Traffic Flows
- » Entry Flows
- » Turning Proportions
- » Vehicle Mix
- » Results

Summary of junction performance

	AM			
	Queue (PCU)	Delay (s)	RFC	LOS
A1 - 2017 Existing				
Stream B-AC	0.32	8.14	0.24	A
Stream C-A	-	-	-	-
Stream C-B	0.00	0.00	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 - 2017 Existing, AM" model duration: 07:30 - 09:00

"D2 - 2017 Existing, PM" model duration: 16:30 - 18:00

"D3 - 2017 Existing, Saturday" model duration: 16:30 - 18:00

"D4 - 2023 Base, AM" model duration: 07:30 - 09:00

"D5 - 2023 Base, PM" model duration: 16:30 - 18:00

"D6 - 2023 Base, Saturday" model duration: 16:30 - 18:00

"D7 - 2023 Predicted, AM" model duration: 07:30 - 09:00

"D8 - 2023 Predicted, PM" model duration: 16:30 - 18:00

"D9 - 2023 Predicted, Saturday" model duration: 16:30 - 18:00

"D10 - 2023 Predicted with Lidl, AM" model duration: 07:30 - 09:00

"D11 - 2023 Predicted with Lidl, PM" model duration: 16:30 - 18:00

"D12 - 2023 Predicted with Lidl, Saturday" model duration: 16:30 - 18:00

Run using Junctions 8.0.5.523 at 19/12/2017 09:51:03

File summary

Title	Left Turn from Rotherham Road to Wakefield Road Southbound
Location	Mapplewell, Barnsley
Site Number	
Date	29/11/2017
Version	
Status	(new file)
Identifier	
Client	Netherton Building and Construction
Jobnumber	14-114
Enumerator	johnturner
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	-Min	perMin

(Default Analysis Set) - 2017 Existing, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2017 Existing, AM	2017 Existing	AM		ONE HOUR	07:30	09:00	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	A,B,C	8.14	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description	Arm Type
A61 North	A	A61 North		Major
Rotherham Road Left Turn	B	Rotherham Road Left Turn		Minor
A61 South	C	A61 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)
A61 South	8.00		0.00		2.20	0.00		

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)
Rotherham Road Left Turn	One lane	5.00										0	15

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	582.214	0.097	0.245	0.154	0.350
1	B-C	760.204	0.106	0.269	-	-
1	C-B	573.963	0.203	0.203	-	-

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 (%)
A61 North	ONE HOUR	✓	598.00	100.000
Rotherham Road Left Turn	ONE HOUR	✓	128.00	100.000
A61 South	ONE HOUR	✓	439.00	100.000

Turning Proportions

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

	To			
		A61 North	Rotherham Road Left Turn	A61 South
From	A61 North	0.000	0.000	598.000
	Rotherham Road Left Turn	0.000	0.000	128.000
	A61 South	439.000	0.000	0.000

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

	To			
		A61 North	Rotherham Road Left Turn	A61 South
From	A61 North	0.00	0.00	1.00
	Rotherham Road Left Turn	0.00	0.00	1.00
	A61 South	1.00	0.00	0.00

Vehicle Mix

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

	To			
		A61 North	Rotherham Road Left Turn	A61 South
From	A61 North	1.000	1.000	1.000
	Rotherham Road Left Turn	1.000	1.000	1.000
	A61 South	1.000	1.000	1.000

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

	To			
		A61 North	Rotherham Road Left Turn	A61 South
From	A61 North	0.0	0.0	0.0
	Rotherham Road Left Turn	0.0	0.0	0.0
	A61 South	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-A-C	0.24	8.14	0.32	A
C-A	-	-	-	-
C-B	0.00	0.00	0.00	A
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (07:30-07:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	96.37	95.66	0.00	639.14	0.151	0.18	6.616	A
C-A	330.50	330.50	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	482.56	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	450.21	450.21	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	115.07	114.86	0.00	615.64	0.187	0.23	7.185	A
C-A	394.65	394.65	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	464.81	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	537.59	537.59	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	140.93	140.58	0.00	583.15	0.242	0.32	8.127	A
C-A	483.35	483.35	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	440.28	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	658.41	658.41	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	140.93	140.92	0.00	583.15	0.242	0.32	8.140	A
C-A	483.35	483.35	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	440.28	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	658.41	658.41	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	115.07	115.41	0.00	615.64	0.187	0.23	7.203	A
C-A	394.65	394.65	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	464.81	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	537.59	537.59	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	96.37	96.58	0.00	639.14	0.151	0.18	6.639	A
C-A	330.50	330.50	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	482.56	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	450.21	450.21	0.00	-	-	-	-	-

Junctions 8				
PICADY 8 - Priority Intersection Module				
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Filename: Left Turn from Rotherham Road to Wakefield Road.arc8

Path: Y:\2014\14-101 to 14-125\14-114 Former William Freeman Works, Mapplewell\Technical\2017 Transport Assessment\Junction Modelling\Junctions 8\Left Turn from Rotherham Road to Wakefield Road

Report generation date: 19/12/2017 09:51:35

« (Default Analysis Set) - 2017 Existing, PM

- » Junction Network
- » Arms
- » Traffic Flows
- » Entry Flows
- » Turning Proportions
- » Vehicle Mix
- » Results

Summary of junction performance

	PM			
	Queue (PCU)	Delay (s)	RFC	LOS
A1 - 2017 Existing				
Stream B-AC	0.10	6.21	0.09	A
Stream C-A	-	-	-	-
Stream C-B	0.00	0.00	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 - 2017 Existing, AM" model duration: 07:30 - 09:00

"D2 - 2017 Existing, PM" model duration: 16:30 - 18:00

"D3 - 2017 Existing, Saturday" model duration: 16:30 - 18:00

"D4 - 2023 Base, AM" model duration: 07:30 - 09:00

"D5 - 2023 Base, PM" model duration: 16:30 - 18:00

"D6 - 2023 Base, Saturday" model duration: 16:30 - 18:00

"D7 - 2023 Predicted, AM" model duration: 07:30 - 09:00

"D8 - 2023 Predicted, PM" model duration: 16:30 - 18:00

"D9 - 2023 Predicted, Saturday" model duration: 16:30 - 18:00

"D10 - 2023 Predicted with Lidl, AM" model duration: 07:30 - 09:00

"D11 - 2023 Predicted with Lidl, PM" model duration: 16:30 - 18:00

"D12 - 2023 Predicted with Lidl, Saturday" model duration: 16:30 - 18:00

Run using Junctions 8.0.5.523 at 19/12/2017 09:51:34

File summary

Title	Left Turn from Rotherham Road to Wakefield Road Southbound
Location	Mapplewell, Barnsley
Site Number	
Date	29/11/2017
Version	
Status	(new file)
Identifier	
Client	Netherton Building and Construction
Jobnumber	14-114
Enumerator	johnturner
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	-Min	perMin

(Default Analysis Set) - 2017 Existing, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2017 Existing, PM	2017 Existing	PM		ONE HOUR	16:30	18:00	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	A,B,C	6.21	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description	Arm Type
A61 North	A	A61 North		Major
Rotherham Road Left Turn	B	Rotherham Road Left Turn		Minor
A61 South	C	A61 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)
A61 South	8.00		0.00		2.20	0.00		

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)
Rotherham Road Left Turn	One lane	5.00										0	15

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	582.214	0.097	0.245	0.154	0.350
1	B-C	760.204	0.106	0.269	-	-
1	C-B	573.963	0.203	0.203	-	-

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 (%)
A61 North	ONE HOUR	✓	404.00	100.000
Rotherham Road Left Turn	ONE HOUR	✓	55.00	100.000
A61 South	ONE HOUR	✓	693.00	100.000

Turning Proportions

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

	To			
		A61 North	Rotherham Road Left Turn	A61 South
From	A61 North	0.000	0.000	404.000
	Rotherham Road Left Turn	0.000	0.000	55.000
	A61 South	693.000	0.000	0.000

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

	To			
		A61 North	Rotherham Road Left Turn	A61 South
From	A61 North	0.00	0.00	1.00
	Rotherham Road Left Turn	0.00	0.00	1.00
	A61 South	1.00	0.00	0.00

Vehicle Mix

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

	To			
		A61 North	Rotherham Road Left Turn	A61 South
From	A61 North	1.000	1.000	1.000
	Rotherham Road Left Turn	1.000	1.000	1.000
	A61 South	1.000	1.000	1.000

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

	To			
		A61 North	Rotherham Road Left Turn	A61 South
From	A61 North	0.0	0.0	0.0
	Rotherham Road Left Turn	0.0	0.0	0.0
	A61 South	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-A-C	0.09	6.21	0.10	A
C-A	-	-	-	-
C-B	0.00	0.00	0.00	A
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (16:30-16:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	41.41	41.15	0.00	678.41	0.061	0.06	5.646	A
C-A	521.73	521.73	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	512.21	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	304.15	304.15	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	49.44	49.38	0.00	662.54	0.075	0.08	5.871	A
C-A	622.99	622.99	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	500.22	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	363.19	363.19	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	60.56	60.46	0.00	640.59	0.095	0.10	6.205	A
C-A	763.01	763.01	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	483.65	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	444.81	444.81	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	60.56	60.55	0.00	640.59	0.095	0.10	6.205	A
C-A	763.01	763.01	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	483.65	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	444.81	444.81	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	49.44	49.54	0.00	662.54	0.075	0.08	5.875	A
C-A	622.99	622.99	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	500.22	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	363.19	363.19	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	41.41	41.47	0.00	678.41	0.061	0.07	5.651	A
C-A	521.73	521.73	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	512.21	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	304.15	304.15	0.00	-	-	-	-	-

Junctions 8				
PICADY 8 - Priority Intersection Module				
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Filename: Left Turn from Rotherham Road to Wakefield Road.arc8

Path: Y:\2014\14-101 to 14-125\14-114 Former William Freeman Works, Mapplewell\Technical\2017 Transport Assessment\Junction Modelling\Junctions 8\Left Turn from Rotherham Road to Wakefield Road

Report generation date: 19/12/2017 09:51:59

« (Default Analysis Set) - 2017 Existing, Saturday

- » Junction Network
- » Arms
- » Traffic Flows
- » Entry Flows
- » Turning Proportions
- » Vehicle Mix
- » Results

Summary of junction performance

	Saturday			
	Queue (PCU)	Delay (s)	RFC	LOS
A1 - 2017 Existing				
Stream B-AC	0.13	6.83	0.12	A
Stream C-A	-	-	-	-
Stream C-B	0.00	0.00	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 - 2017 Existing, AM" model duration: 07:30 - 09:00

"D2 - 2017 Existing, PM" model duration: 16:30 - 18:00

"D3 - 2017 Existing, Saturday" model duration: 16:30 - 18:00

"D4 - 2023 Base, AM" model duration: 07:30 - 09:00

"D5 - 2023 Base, PM" model duration: 16:30 - 18:00

"D6 - 2023 Base, Saturday" model duration: 16:30 - 18:00

"D7 - 2023 Predicted, AM" model duration: 07:30 - 09:00

"D8 - 2023 Predicted, PM" model duration: 16:30 - 18:00

"D9 - 2023 Predicted, Saturday" model duration: 16:30 - 18:00

"D10 - 2023 Predicted with Lidl, AM" model duration: 07:30 - 09:00

"D11 - 2023 Predicted with Lidl, PM" model duration: 16:30 - 18:00

"D12 - 2023 Predicted with Lidl, Saturday" model duration: 16:30 - 18:00

Run using Junctions 8.0.5.523 at 19/12/2017 09:51:58

File summary

Title	Left Turn from Rotherham Road to Wakefield Road Southbound
Location	Mapplewell, Barnsley
Site Number	
Date	29/11/2017
Version	
Status	(new file)
Identifier	
Client	Netherton Building and Construction
Jobnumber	14-114
Enumerator	johnturner
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	-Min	perMin

(Default Analysis Set) - 2017 Existing, Saturday

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2017 Existing, Saturday	2017 Existing	Saturday		ONE HOUR	16:30	18:00	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	A,B,C	6.83	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description	Arm Type
A61 North	A	A61 North		Major
Rotherham Road Left Turn	B	Rotherham Road Left Turn		Minor
A61 South	C	A61 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)
A61 South	8.00		0.00		2.20	0.00		

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)
Rotherham Road Left Turn	One lane	5.00										0	15

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	582.214	0.097	0.245	0.154	0.350
1	B-C	760.204	0.106	0.269	-	-
1	C-B	573.963	0.203	0.203	-	-

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 (%)
A61 North	ONE HOUR	✓	551.00	100.000
Rotherham Road Left Turn	ONE HOUR	✓	64.00	100.000
A61 South	ONE HOUR	✓	609.00	100.000

Turning Proportions

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

	To			
		A61 North	Rotherham Road Left Turn	A61 South
From	A61 North	0.000	0.000	551.000
	Rotherham Road Left Turn	0.000	0.000	64.000
	A61 South	609.000	0.000	0.000

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

	To			
		A61 North	Rotherham Road Left Turn	A61 South
From	A61 North	0.00	0.00	1.00
	Rotherham Road Left Turn	0.00	0.00	1.00
	A61 South	1.00	0.00	0.00

Vehicle Mix

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

	To			
		A61 North	Rotherham Road Left Turn	A61 South
From	A61 North	1.000	1.000	1.000
	Rotherham Road Left Turn	1.000	1.000	1.000
	A61 South	1.000	1.000	1.000

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

	To			
		A61 North	Rotherham Road Left Turn	A61 South
From	A61 North	0.0	0.0	0.0
	Rotherham Road Left Turn	0.0	0.0	0.0
	A61 South	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-A-C	0.12	6.83	0.13	A
C-A	-	-	-	-
C-B	0.00	0.00	0.00	A
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (16:30-16:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	48.18	47.86	0.00	648.65	0.074	0.08	5.989	A
C-A	458.49	458.49	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	489.74	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	414.82	414.82	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	57.53	57.45	0.00	627.00	0.092	0.10	6.320	A
C-A	547.48	547.48	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	473.39	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	495.34	495.34	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	70.47	70.34	0.00	597.06	0.118	0.13	6.832	A
C-A	670.52	670.52	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	450.79	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	606.66	606.66	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	70.47	70.46	0.00	597.06	0.118	0.13	6.835	A
C-A	670.52	670.52	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	450.79	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	606.66	606.66	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	57.53	57.66	0.00	627.00	0.092	0.10	6.326	A
C-A	547.48	547.48	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	473.39	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	495.34	495.34	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	48.18	48.27	0.00	648.65	0.074	0.08	5.998	A
C-A	458.49	458.49	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	489.74	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	414.82	414.82	0.00	-	-	-	-	-

APPENDIX BGH 7

Growth Factors

Weekday AM Peak 2017 -2023

Level	Area	Local Growth Figure
E02001512	Barnsley 004	1.0954

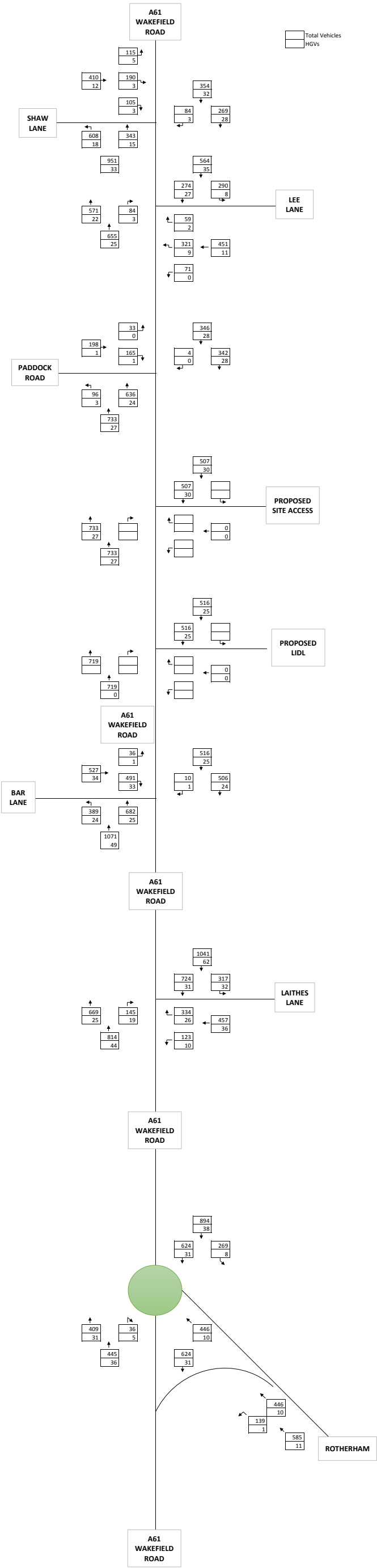
Weekday PM Peak 2017 - 2023

Level	Area	Local Growth Figure
E02001512	Barnsley 004	1.0917

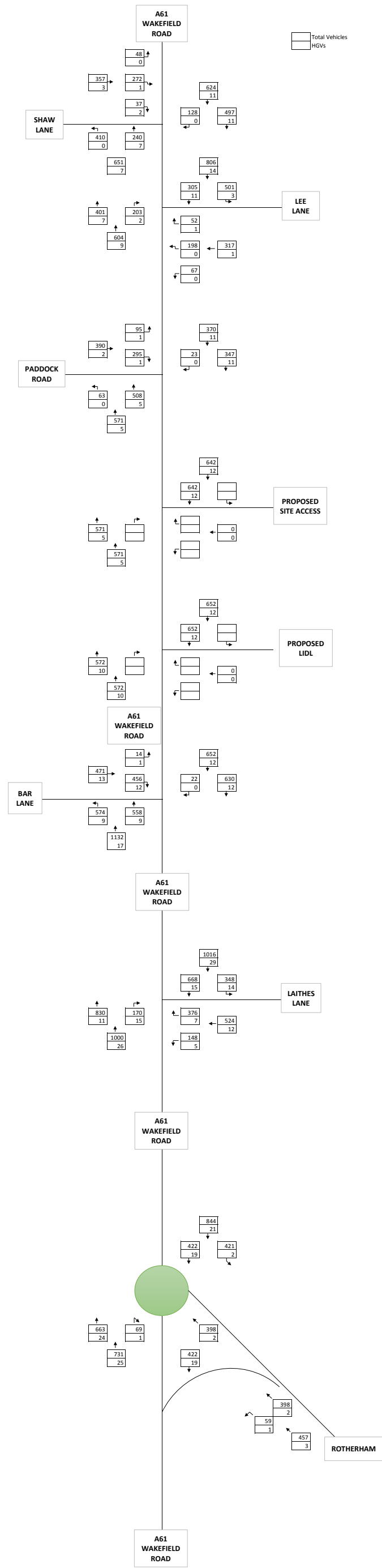
Saturday 2017 - 2023

Level	Area	Local Growth Figure
E02001512	Barnsley 004	1.0938

2023 GROWTHED FLOWS
PROPOSED RESIDENTIAL DEVELOPMENT, WAKEFIELD ROAD, MAPPLEWELL
FRIDAY 10 NOVEMBER 2017
07:45 - 08:45
AM PEAK



2023 GROWTHED FLOWS
PROPOSED RESIDENTIAL DEVELOPMENT, WAKEFIELD ROAD, MAPPLEWELL
FRIDAY 10 NOVEMBER 2017
16:45 - 17:45
PM PEAK



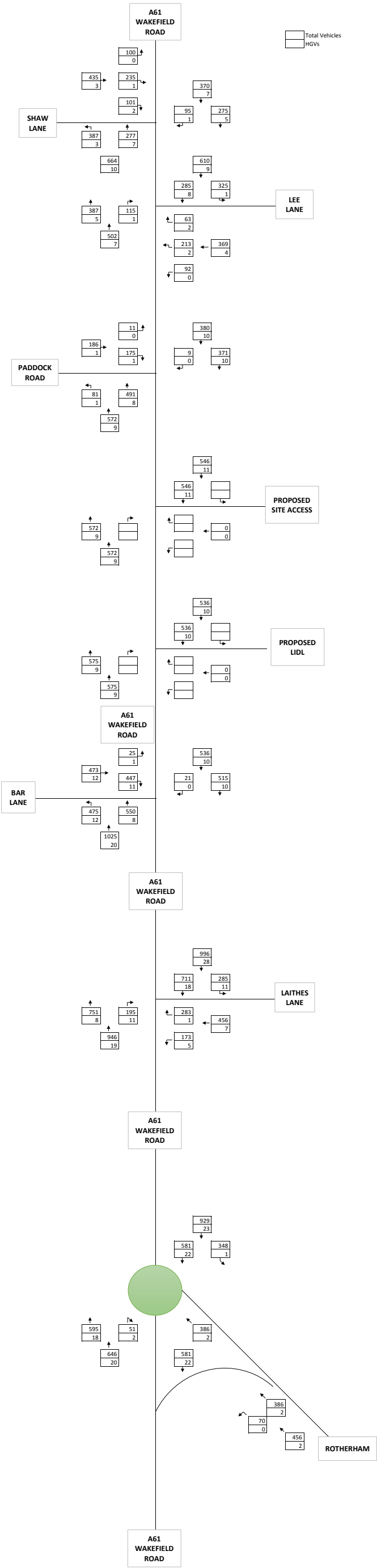
2023 GROWTHED FLOWS

PROPOSED RESIDENTIAL DEVELOPMENT, WAKEFIELD ROAD, MAPPLEWELL

SATURDAY 11 NOVEMBER 2017

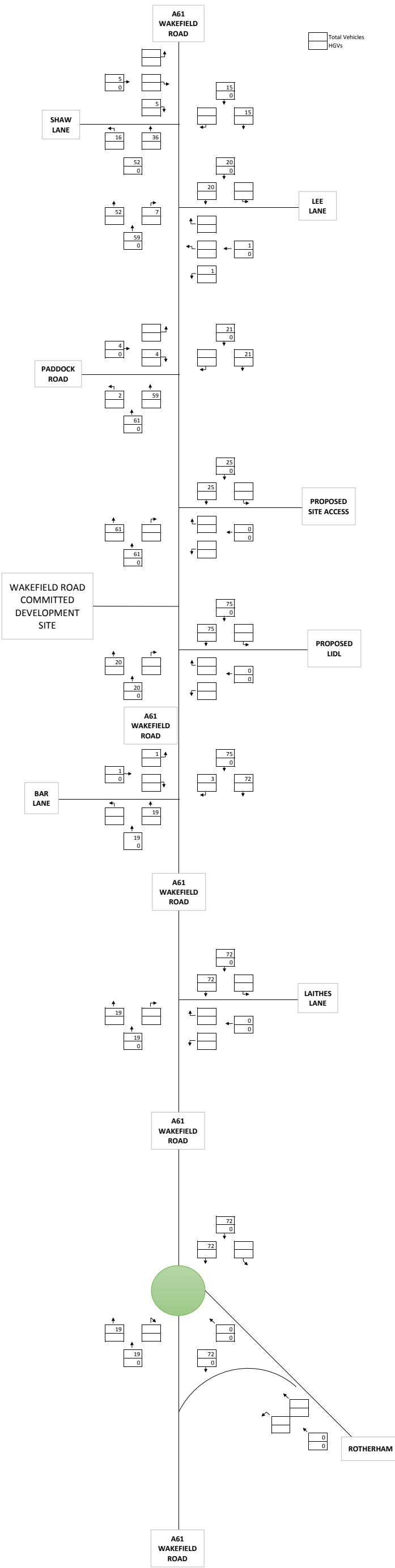
11:45 - 12:45

PM PEAK

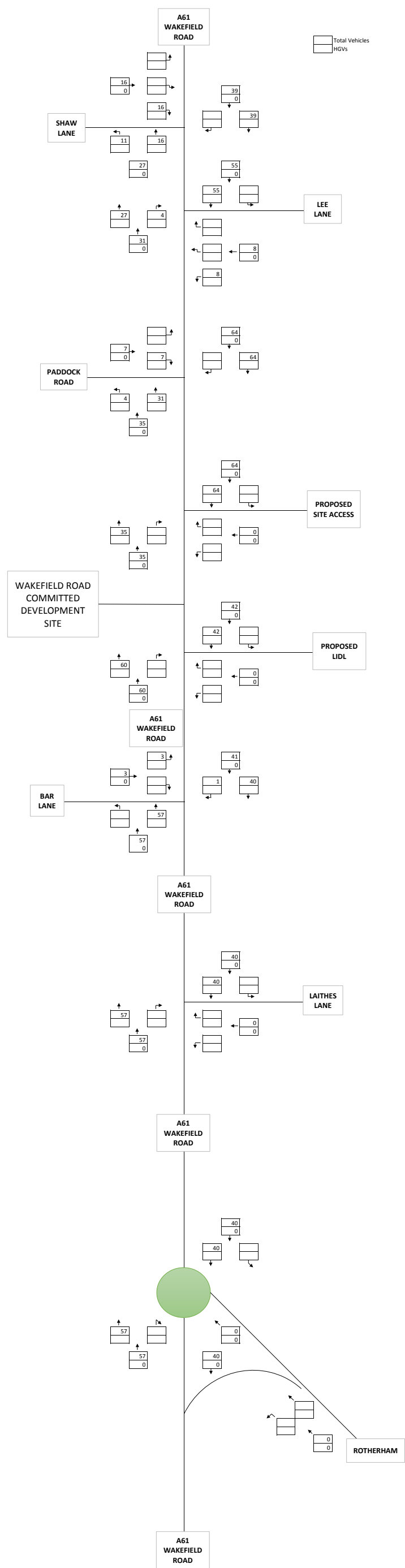


APPENDIX BGH 8

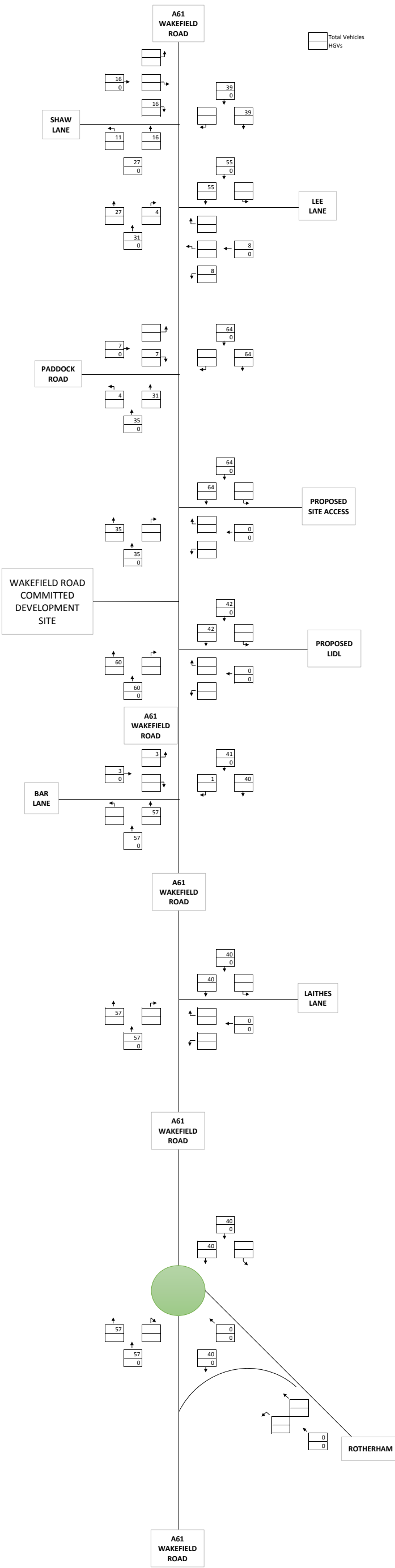
WAKEFIELD ROAD COMMITTED DEVELOPMENT
PROPOSED RESIDENTIAL DEVELOPMENT, WAKEFIELD ROAD, MAPPLEWELL
AM PEAK



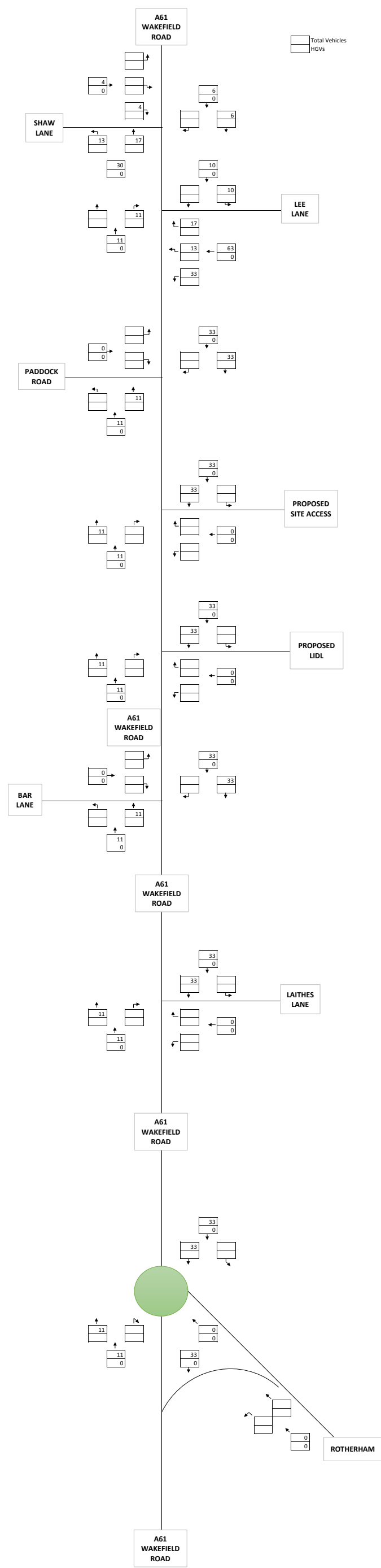
WAKEFIELD ROAD COMMITTED DEVELOPMENT
PROPOSED RESIDENTIAL DEVELOPMENT, WAKEFIELD ROAD, MAPPLEWELL
PM PEAK



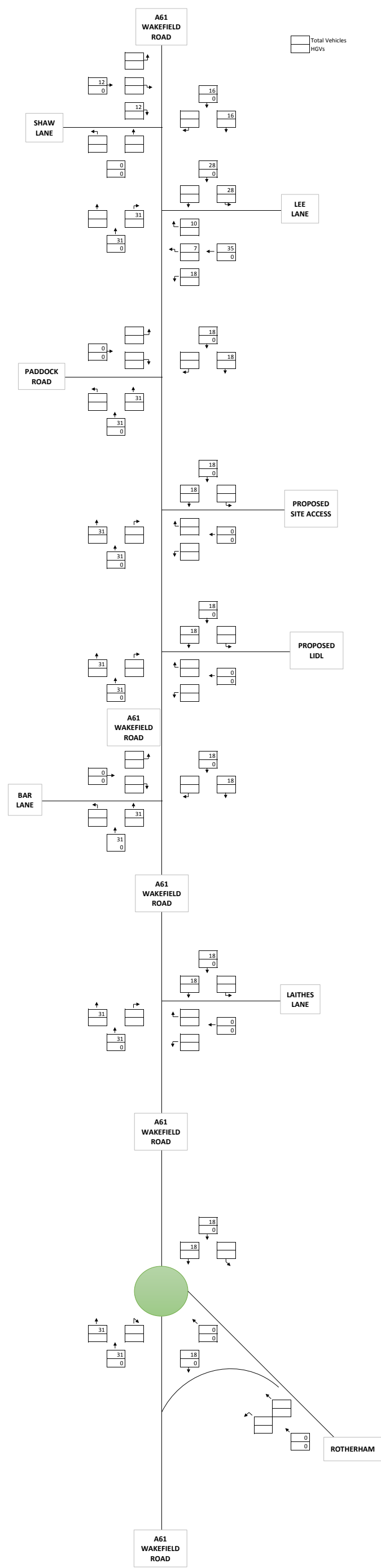
WAKEFIELD ROAD COMMITTED DEVELOPMENT
PROPOSED RESIDENTIAL DEVELOPMENT, WAKEFIELD ROAD, MAPPLEWELL
SATURDAY PEAK



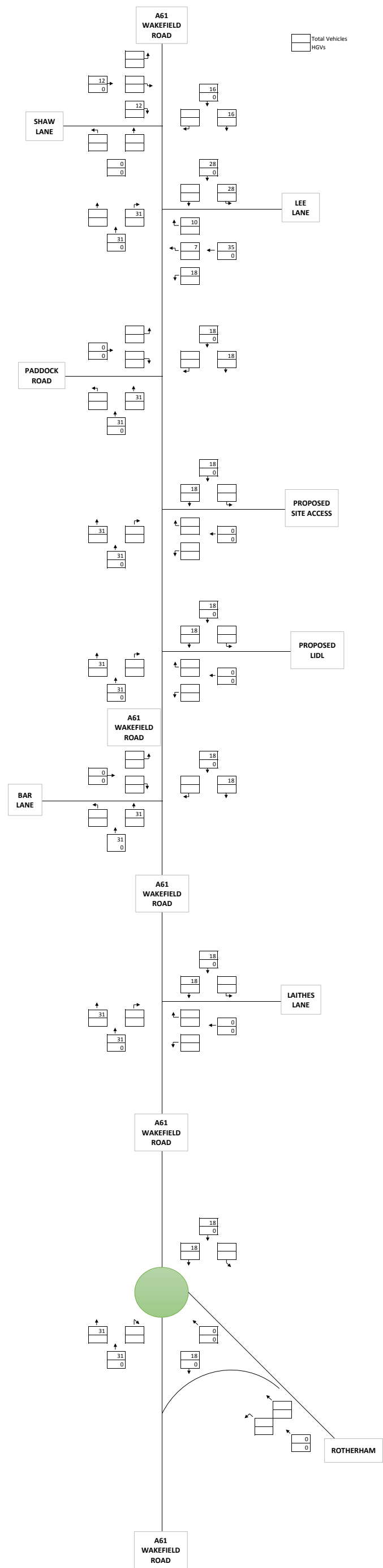
LEE LANE COMMITTED DEVELOPMENT
PROPOSED RESIDENTIAL DEVELOPMENT, WAKEFIELD ROAD, MAPPLEWELL
AM PEAK



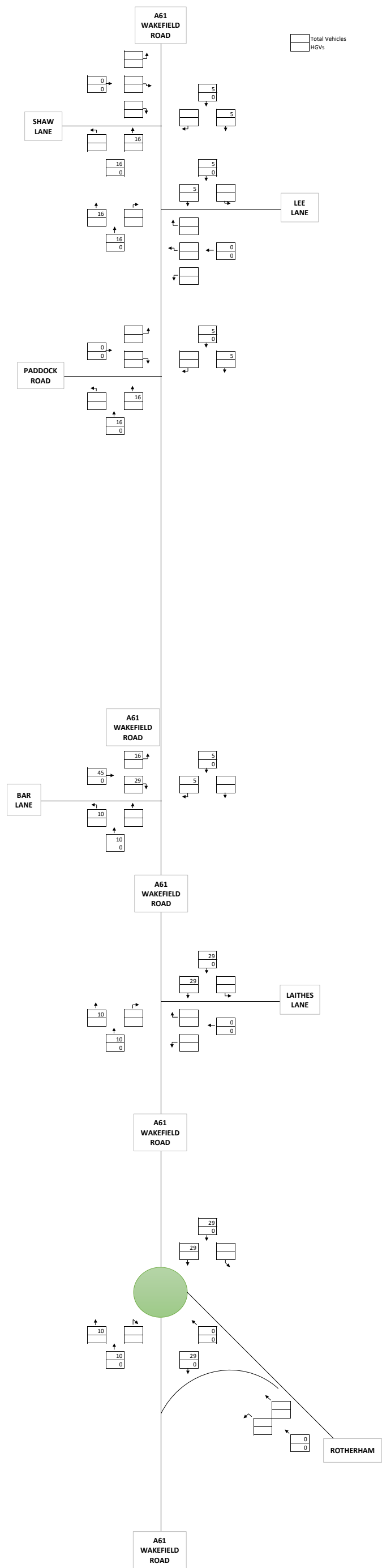
LEE LANE COMMITTED DEVELOPMENT
PROPOSED RESIDENTIAL DEVELOPMENT, WAKEFIELD ROAD, MAPPLEWELL
PM PEAK



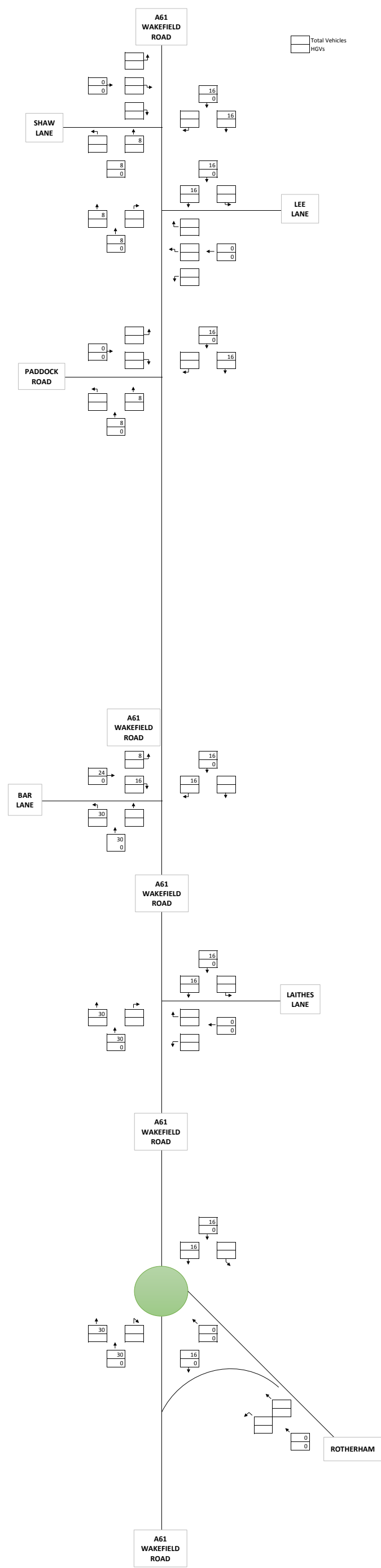
LEE LANE COMMITTED DEVELOPMENT
PROPOSED RESIDENTIAL DEVELOPMENT, WAKEFIELD ROAD, MAPPLEWELL
SATURDAY PEAK



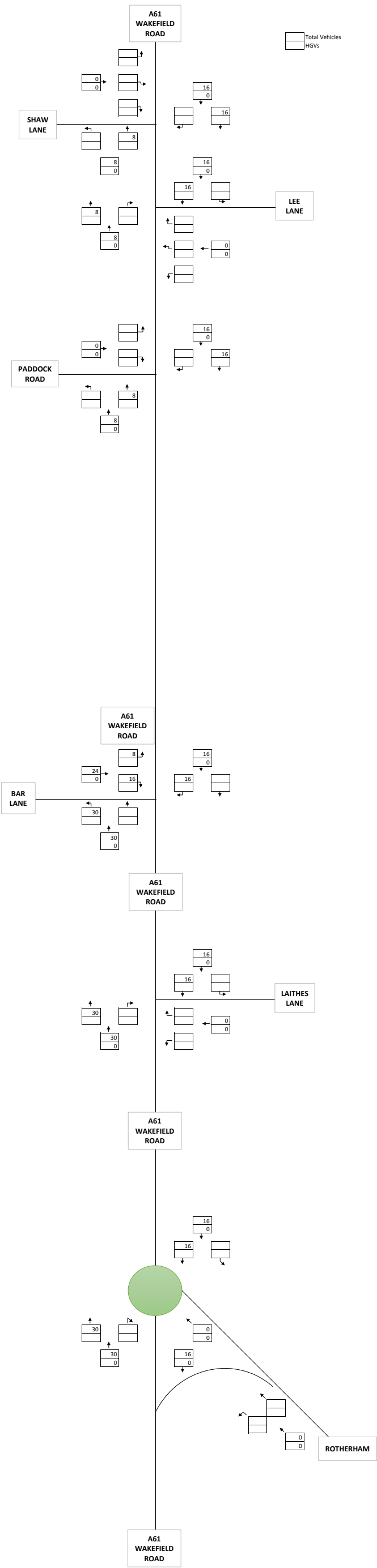
NORTH GAWBER COMMITTED DEVELOPMENT FLOWS
PROPOSED RESIDENTIAL DEVELOPMENT, WAKEFIELD ROAD, MAPPLEWELL
AM PEAK



NORTH GAWBER COMMITTED DEVELOPMENT FLOWS
PROPOSED RESIDENTIAL DEVELOPMENT, WAKEFIELD ROAD, MAPPLEWELL
PM PEAK

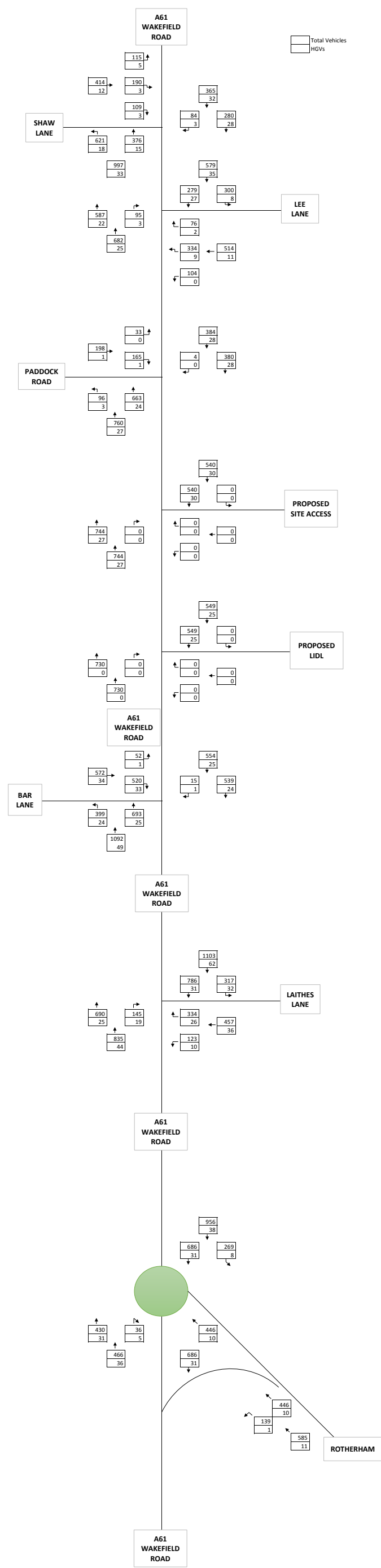


NORTH GAWBER COMMITTED DEVELOPMENT FLOWS
PROPOSED RESIDENTIAL DEVELOPMENT, WAKEFIELD ROAD, MAPPLEWELL
SATURDAY PEAK

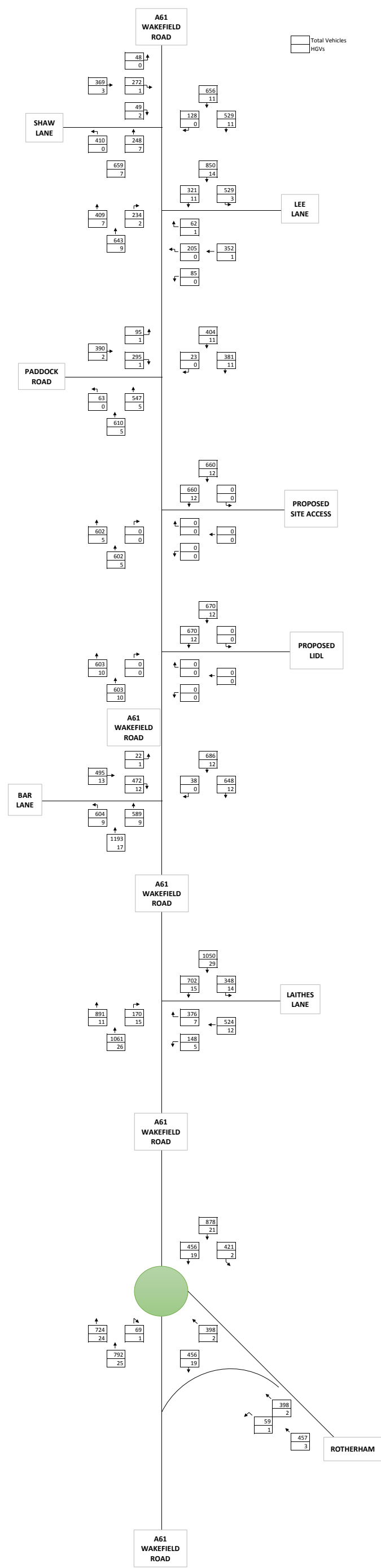


APPENDIX BGH 9

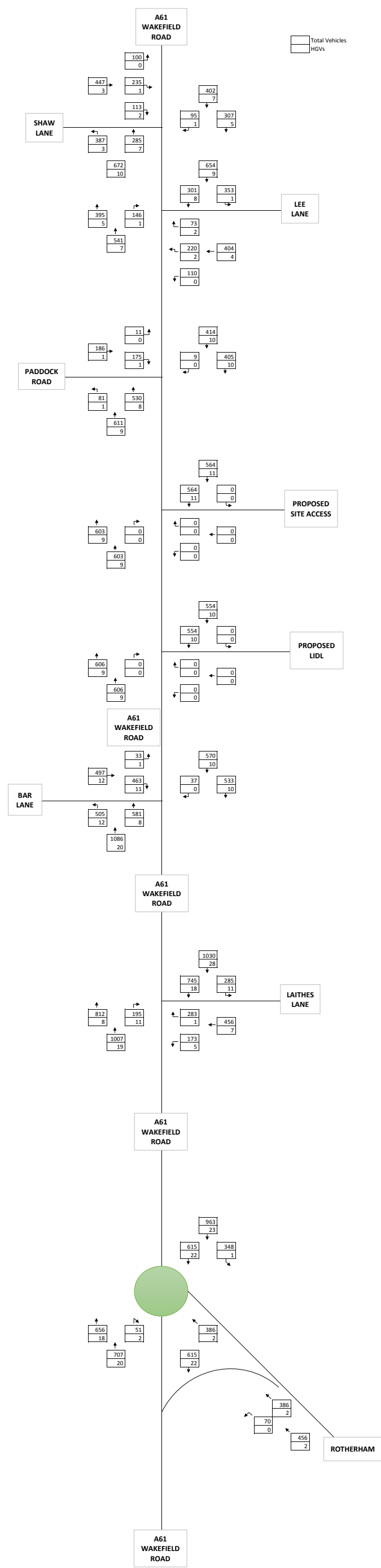
2023 BASE FLOWS
PROPOSED RESIDENTIAL DEVELOPMENT, WAKEFIELD ROAD, MAPPLEWELL
AM PEAK



2023 BASE FLOWS
PROPOSED RESIDENTIAL DEVELOPMENT, WAKEFIELD ROAD, MAPPLEWELL
PM PEAK



2023 BASE FLOWS
PROPOSED RESIDENTIAL DEVELOPMENT, WAKEFIELD ROAD, MAPPLEWELL
SATURDAY PEAK



APPENDIX BGH 10

Junctions 8				
PICADY 8 - Priority Intersection Module				
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Filename: Wakefield Road - Lee Lane - Shaw Lane - Committed Scheme.arc8

Path: Y:\2014\14-101 to 14-125\14-114 Former William Freeman Works, Mapplewell\Technical\2017 Transport Assessment\Junction Modelling\Junctions 8\Wakefield Road - Lee Lane - Shaw Lane Committed Scheme

Report generation date: 08/01/2018 08:03:20

« Committed Layout - 2023 Base, AM

» Junction Network

» Arms

» Traffic Flows

» Entry Flows

» Turning Proportions

» Vehicle Mix

» Results

Summary of junction performance

	AM			
	Queue (PCU)	Delay (s)	RFC	LOS
Committed Layout - 2023 Base				
Stream B-C	0.57	15.80	0.37	C
Stream B-AD	40.86	521.14	1.32	F
Stream A-B	-	-	-	-
Stream A-C	-	-	-	-
Stream A-D	0.28	9.24	0.22	A
Stream D-A	0.36	11.30	0.26	B
Stream D-BC	115.25	1189.19	1.62	F
Stream C-D	-	-	-	-
Stream C-A	-	-	-	-
Stream C-B	0.35	13.19	0.26	B

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

"D4 - 2023 Base, AM" model duration: 07:30 - 09:00

"D5 - 2023 Base, PM" model duration: 16:30 - 18:00

"D6 - 2023 Base, Saturday" model duration: 11:30 - 13:00

"D7 - 2023 Predicted, AM" model duration: 07:30 - 09:00

"D8 - 2023 Predicted, PM" model duration: 16:30 - 18:00

"D9 - 2023 Predicted, Saturday" model duration: 11:30 - 13:00

"D10 - 2023 Predicted with Lidl, AM" model duration: 07:30 - 09:00

"D11 - 2023 Predicted with Lidl, PM" model duration: 16:30 - 18:00

"D12 - 2023 Predicted with Lidl, Saturday" model duration: 11:30 - 13:00

Run using Junctions 8.0.5.523 at 08/01/2018 08:03:18

File summary

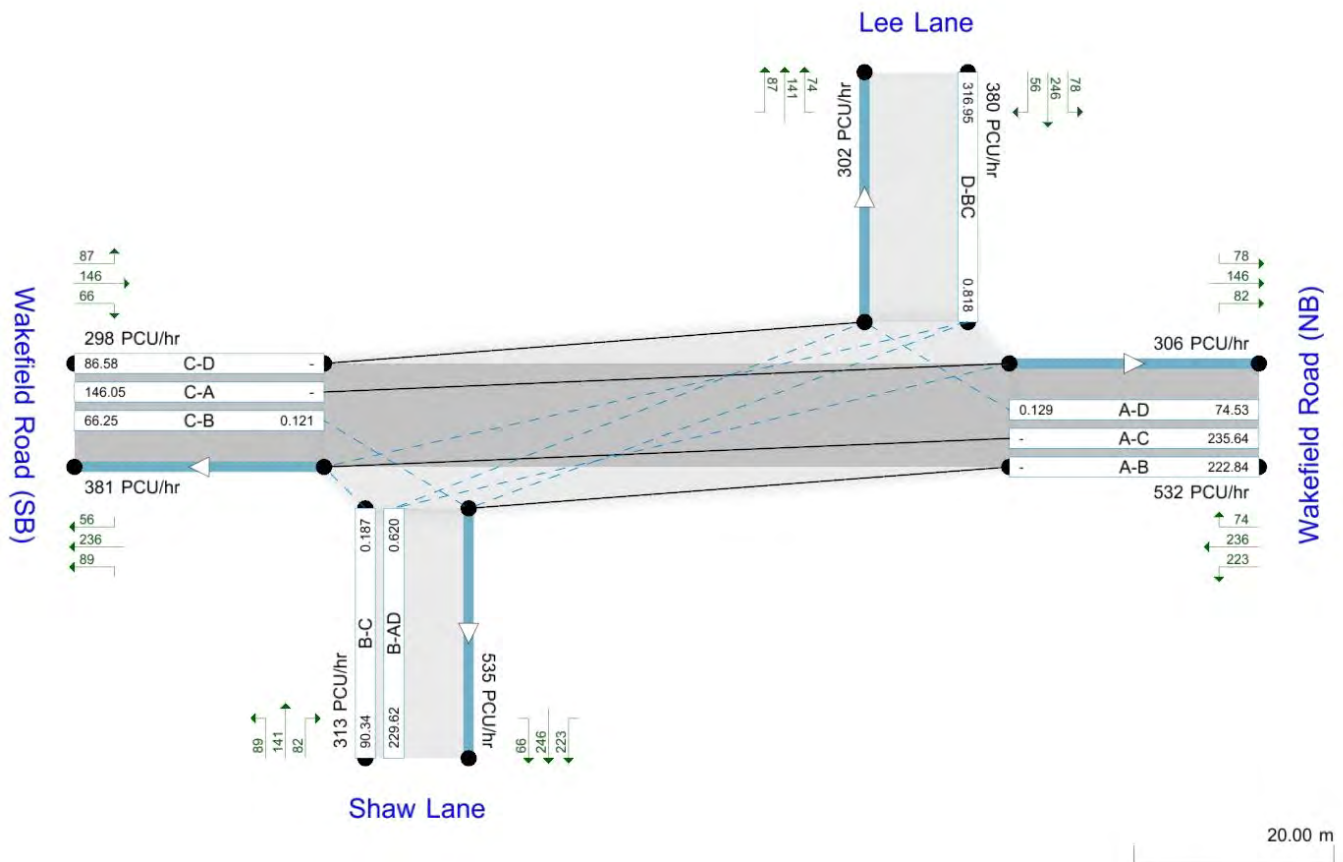
Title	Mapplewell, Barnsley
Location	Wakefield Road, Lee Lane, Shaw Lane Stagger
Site Number	
Date	29/11/2017
Version	
Status	(new file)
Identifier	
Client	Netherton Building and Construction
Jobnumber	14-114
Enumerator	BRYANGHALL\JTurner
Description	

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	-Min	perMin



Showing modelled flow through junction (PCU/hr).
Streams (upstreams) show Total Demand (PCU/hr); Streams (downstreams) show RfC (I)
Time Segment: (07:30-07:45)
Showing Analysis Set "A1 - Committed Layout"; Demand Set "D4 - 2023 Base, AM"

The junction diagram reflects the last run of ARCADY.

Committed Layout - 2023 Base, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Committed Layout	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2023 Base, AM	2023 Base	AM		ONE HOUR	07:30	09:00	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	Wakefield Road - Lee Lane - Shaw Lane	OS-NS Stagger (UK RL Stagger)	Two-way	A,B,C,D	584.65	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description	Arm Type
Wakefield Road (NB)	A	Wakefield Road (NB)		Major
Shaw Lane	B	Shaw Lane		Minor
Wakefield Road (SB)	C	Wakefield Road (SB)		Major
Lee Lane	D	Lee Lane		Minor

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)
Wakefield Road (NB)	6.00		0.00	✓	3.00	130.00		
Wakefield Road (SB)	6.00		0.00	✓	3.00	250.00		

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)
Shaw Lane	Two lanes		3.90	3.85						✓		55	35
Lee Lane	Two lanes		3.88	4.06						✓		40	65

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
1	A-D	705.776	-	-	-	0.273	0.273	0.273	-	0.273	-	-
1	B-AD	556.295	0.101	0.256	-	-	-	0.161	0.366	0.161	0.101	0.256
1	B-C	704.176	0.108	0.273	-	-	-	-	-	-	0.108	0.273
1	C-B	781.320	0.303	0.303	-	-	-	-	-	-	0.303	0.303
1	D-A	723.432	-	-	-	0.280	0.111	0.280	-	0.111	-	-
1	D-BC	578.082	0.167	0.167	0.380	0.266	0.105	0.266	-	0.105	-	-

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 (%)
Wakefield Road (NB)	ONE HOUR	✓	708.00	100.000
Shaw Lane	ONE HOUR	✓	425.00	100.000
Wakefield Road (SB)	ONE HOUR	✓	397.00	100.000
Lee Lane	ONE HOUR	✓	525.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Wakefield Road - Lee Lane - Shaw Lane (for whole period)

		To			
		Wakefield Road (NB)	Shaw Lane	Wakefield Road (SB)	Lee Lane
From	Wakefield Road (NB)	0.000	296.000	313.000	99.000
	Shaw Lane	112.000	0.000	120.000	193.000
	Wakefield Road (SB)	194.000	88.000	0.000	115.000
	Lee Lane	104.000	343.000	78.000	0.000

Turning Proportions (PCU) - Wakefield Road - Lee Lane - Shaw Lane (for whole period)

	To				
		Wakefield Road (NB)	Shaw Lane	Wakefield Road (SB)	Lee Lane
From	Wakefield Road (NB)	0.00	0.42	0.44	0.14
	Shaw Lane	0.26	0.00	0.28	0.45
	Wakefield Road (SB)	0.49	0.22	0.00	0.29
	Lee Lane	0.20	0.65	0.15	0.00

Vehicle Mix

Average PCU Per Vehicle - Wakefield Road - Lee Lane - Shaw Lane (for whole period)

	To				
		Wakefield Road (NB)	Shaw Lane	Wakefield Road (SB)	Lee Lane
From	Wakefield Road (NB)	1.000	1.010	1.022	1.000
	Shaw Lane	1.010	1.000	1.000	1.006
	Wakefield Road (SB)	1.028	1.000	1.000	1.000
	Lee Lane	1.000	1.010	1.000	1.000

Heavy Vehicle Percentages - Wakefield Road - Lee Lane - Shaw Lane (for whole period)

	To				
		Wakefield Road (NB)	Shaw Lane	Wakefield Road (SB)	Lee Lane
From	Wakefield Road (NB)	0.0	1.0	2.2	0.0
	Shaw Lane	1.0	0.0	0.0	0.6
	Wakefield Road (SB)	2.8	0.0	0.0	0.0
	Lee Lane	0.0	1.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.37	15.80	0.57	C
B-AD	1.32	521.14	40.86	F
A-B	-	-	-	-
A-C	-	-	-	-
A-D	0.22	9.24	0.28	A
D-A	0.26	11.30	0.36	B
D-BC	1.62	1189.19	115.25	F
C-D	-	-	-	-
C-A	-	-	-	-
C-B	0.26	13.19	0.35	B

Main Results for each time segment

Main results: (07:30-07:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	90.34	89.43	0.00	483.31	0.187	0.23	9.119	A
B-AD	229.62	223.49	0.00	370.45	0.620	1.53	23.804	C
A-B	222.84	222.84	0.00	-	-	-	-	-
A-C	235.64	235.64	0.00	-	-	-	-	-
A-D	74.53	73.95	0.00	579.37	0.129	0.15	7.116	A
D-A	78.30	77.57	0.00	503.60	0.155	0.18	8.436	A
D-BC	316.95	302.55	0.00	387.26	0.818	3.60	38.166	E
C-D	86.58	86.58	0.00	-	-	-	-	-
C-A	146.05	146.05	0.00	-	-	-	-	-
C-B	66.25	65.70	0.00	546.58	0.121	0.14	7.479	A

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	107.88	107.47	0.00	429.49	0.251	0.33	11.164	B
B-AD	274.19	265.66	0.00	332.30	0.825	3.67	49.015	E
A-B	266.10	266.10	0.00	-	-	-	-	-
A-C	281.38	281.38	0.00	-	-	-	-	-
A-D	89.00	88.82	0.00	553.16	0.161	0.19	7.753	A
D-A	93.49	93.22	0.00	460.92	0.203	0.25	9.783	A
D-BC	378.47	333.97	0.00	348.99	1.084	14.72	126.003	F
C-D	103.38	103.38	0.00	-	-	-	-	-
C-A	174.40	174.40	0.00	-	-	-	-	-
C-B	79.11	78.91	0.00	496.65	0.159	0.19	8.613	A

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	132.12	131.34	0.00	376.97	0.350	0.53	14.607	B
B-AD	335.81	269.24	0.00	276.57	1.214	20.31	191.710	F
A-B	325.90	325.90	0.00	-	-	-	-	-
A-C	344.62	344.62	0.00	-	-	-	-	-
A-D	109.00	108.70	0.00	516.90	0.211	0.26	8.813	A
D-A	114.51	114.13	0.00	441.64	0.259	0.34	10.983	B
D-BC	463.53	295.51	0.00	296.31	1.564	56.73	464.033	F
C-D	126.62	126.62	0.00	-	-	-	-	-
C-A	213.60	213.60	0.00	-	-	-	-	-
C-B	96.89	96.46	0.00	420.19	0.231	0.30	11.106	B

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	132.12	131.96	0.00	359.52	0.368	0.57	15.803	C
B-AD	335.81	253.59	0.00	254.57	1.319	40.86	444.624	F
A-B	325.90	325.90	0.00	-	-	-	-	-
A-C	344.62	344.62	0.00	-	-	-	-	-
A-D	109.00	108.95	0.00	498.70	0.219	0.28	9.235	A
D-A	114.51	114.46	0.00	433.00	0.264	0.36	11.300	B
D-BC	463.53	285.14	0.00	285.26	1.625	101.33	946.244	F
C-D	126.62	126.62	0.00	-	-	-	-	-
C-A	213.60	213.60	0.00	-	-	-	-	-
C-B	96.89	96.67	0.00	369.32	0.262	0.35	13.192	B

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	107.88	108.46	0.00	367.61	0.293	0.42	13.922	B
B-AD	274.19	274.20	0.00	281.18	0.975	40.86	521.138	F
A-B	266.10	266.10	0.00	-	-	-	-	-
A-C	281.38	281.38	0.00	-	-	-	-	-
A-D	89.00	89.25	0.00	510.14	0.174	0.21	8.559	A
D-A	93.49	93.82	0.00	440.50	0.212	0.27	10.396	B
D-BC	378.47	322.77	0.00	322.94	1.172	115.25	1189.190	F
C-D	103.38	103.38	0.00	-	-	-	-	-
C-A	174.40	174.40	0.00	-	-	-	-	-
C-B	79.11	79.43	0.00	378.32	0.209	0.27	12.057	B

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	90.34	90.77	0.00	381.07	0.237	0.32	12.421	B
B-AD	229.62	302.66	0.00	310.13	0.740	22.60	382.945	F
A-B	222.84	222.84	0.00	-	-	-	-	-
A-C	235.64	235.64	0.00	-	-	-	-	-
A-D	74.53	74.73	0.00	534.68	0.139	0.16	7.830	A
D-A	78.30	78.54	0.00	453.64	0.173	0.21	9.603	A
D-BC	316.95	356.95	0.00	360.07	0.880	105.25	1112.567	F
C-D	86.58	86.58	0.00	-	-	-	-	-
C-A	146.05	146.05	0.00	-	-	-	-	-
C-B	66.25	66.54	0.00	407.02	0.163	0.20	10.581	B

Junctions 8				
PICADY 8 - Priority Intersection Module				
Version: 8.0.5.523 [19102,19/06/2015] © Copyright TRL Limited, 2018				
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Filename: Wakefield Road - Lee Lane - Shaw Lane - Committed Scheme.arc8

Path: Y:\2014\14-101 to 14-125\14-114 Former William Freeman Works, Mapplewell\Technical\2017 Transport Assessment\Junction Modelling\Junctions 8\Wakefield Road - Lee Lane - Shaw Lane Committed Scheme

Report generation date: 08/01/2018 08:07:58

« Committed Layout - 2023 Base, PM

- » Junction Network
- » Arms
- » Traffic Flows
- » Entry Flows
- » Turning Proportions
- » Vehicle Mix
- » Results

Summary of junction performance

	PM			
	Queue (PCU)	Delay (s)	RFC	LOS
Committed Layout - 2023 Base				
Stream B-C	0.14	9.63	0.12	A
Stream B-AD	41.79	437.53	1.27	F
Stream A-B	-	-	-	-
Stream A-C	-	-	-	-
Stream A-D	1.54	22.08	0.62	C
Stream D-A	0.29	11.45	0.23	B
Stream D-BC	33.48	401.36	1.26	F
Stream C-D	-	-	-	-
Stream C-A	-	-	-	-
Stream C-B	0.35	9.06	0.26	A

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

"D4 - 2023 Base, AM" model duration: 07:30 - 09:00

"D5 - 2023 Base, PM" model duration: 16:30 - 18:00

"D6 - 2023 Base, Saturday" model duration: 11:30 - 13:00

"D7 - 2023 Predicted, AM" model duration: 07:30 - 09:00

"D8 - 2023 Predicted, PM" model duration: 16:30 - 18:00

"D9 - 2023 Predicted, Saturday" model duration: 11:30 - 13:00

"D10 - 2023 Predicted with Lidl, AM" model duration: 07:30 - 09:00

"D11 - 2023 Predicted with Lidl, PM" model duration: 16:30 - 18:00

"D12 - 2023 Predicted with Lidl, Saturday" model duration: 11:30 - 13:00

Run using Junctions 8.0.5.523 at 08/01/2018 08:07:57

File summary

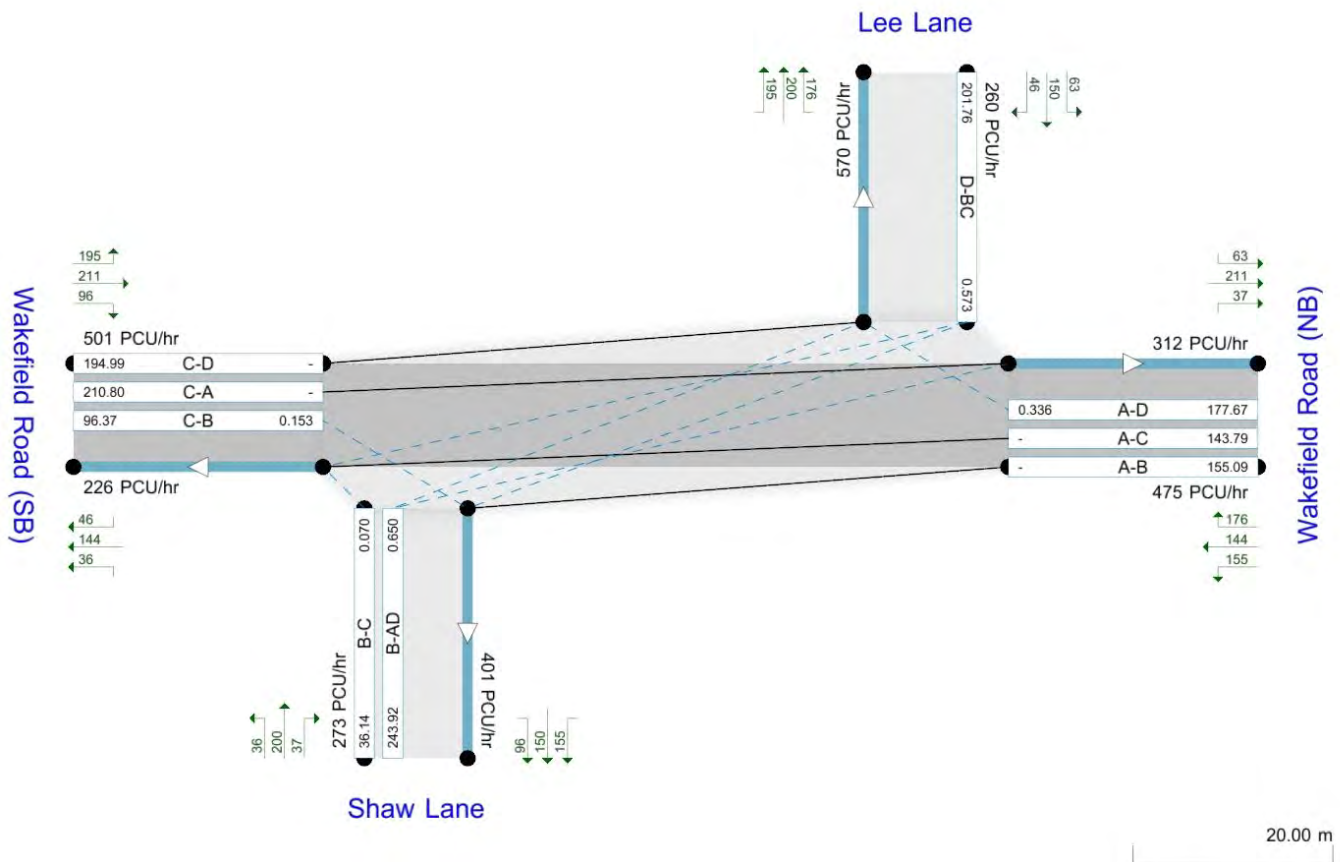
Title	Mapplewell, Barnsley
Location	Wakefield Road, Lee Lane, Shaw Lane Stagger
Site Number	
Date	29/11/2017
Version	
Status	(new file)
Identifier	
Client	Netherton Building and Construction
Jobnumber	14-114
Enumerator	BRYANGHALL\JTurner
Description	

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	-Min	perMin



Showing modelled flow through junction (PCU/hr).
Streams (upstreams) show Total Demand (PCU/hr); Streams (downstreams) show R/C (l)
Time Segment: (16:30-16:45)
Showing Analysis Set "A1 - Committed Layout"; Demand Set "D5 - 2023 Base, PM"

The junction diagram reflects the last run of ARCADY.

Committed Layout - 2023 Base, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Committed Layout	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2023 Base, PM	2023 Base	PM		ONE HOUR	16:30	18:00	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	Wakefield Road - Lee Lane - Shaw Lane	OS-NS Stagger (UK RL Stagger)	Two-way	A,B,C,D	236.12	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description	Arm Type
Wakefield Road (NB)	A	Wakefield Road (NB)		Major
Shaw Lane	B	Shaw Lane		Minor
Wakefield Road (SB)	C	Wakefield Road (SB)		Major
Lee Lane	D	Lee Lane		Minor

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)
Wakefield Road (NB)	6.00		0.00	✓	3.00	130.00		
Wakefield Road (SB)	6.00		0.00	✓	3.00	250.00		

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)
Shaw Lane	Two lanes		3.90	3.85						✓		55	35
Lee Lane	Two lanes		3.88	4.06						✓		40	65

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
1	A-D	705.776	-	-	-	0.273	0.273	0.273	-	0.273	-	-
1	B-AD	556.295	0.101	0.256	-	-	-	0.161	0.366	0.161	0.101	0.256
1	B-C	704.176	0.108	0.273	-	-	-	-	-	-	0.108	0.273
1	C-B	781.320	0.303	0.303	-	-	-	-	-	-	0.303	0.303
1	D-A	723.432	-	-	-	0.280	0.111	0.280	-	0.111	-	-
1	D-BC	578.082	0.167	0.167	0.380	0.266	0.105	0.266	-	0.105	-	-

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 (%)
Wakefield Road (NB)	ONE HOUR	✓	633.00	100.000
Shaw Lane	ONE HOUR	✓	372.00	100.000
Wakefield Road (SB)	ONE HOUR	✓	667.00	100.000
Lee Lane	ONE HOUR	✓	353.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Wakefield Road - Lee Lane - Shaw Lane (for whole period)

	To				
		Wakefield Road (NB)	Shaw Lane	Wakefield Road (SB)	Lee Lane
From	Wakefield Road (NB)	0.000	206.000	191.000	236.000
	Shaw Lane	51.000	0.000	48.000	273.000
	Wakefield Road (SB)	280.000	128.000	0.000	259.000
	Lee Lane	85.000	205.000	63.000	0.000

Turning Proportions (PCU) - Wakefield Road - Lee Lane - Shaw Lane (for whole period)

	To				
		Wakefield Road (NB)	Shaw Lane	Wakefield Road (SB)	Lee Lane
From	Wakefield Road (NB)	0.00	0.33	0.30	0.37
	Shaw Lane	0.14	0.00	0.13	0.73
	Wakefield Road (SB)	0.42	0.19	0.00	0.39
	Lee Lane	0.24	0.58	0.18	0.00

Vehicle Mix

Average PCU Per Vehicle - Wakefield Road - Lee Lane - Shaw Lane (for whole period)

	To				
		Wakefield Road (NB)	Shaw Lane	Wakefield Road (SB)	Lee Lane
From	Wakefield Road (NB)	1.000	1.010	1.022	1.000
	Shaw Lane	1.010	1.000	1.000	1.006
	Wakefield Road (SB)	1.028	1.000	1.000	1.000
	Lee Lane	1.000	1.010	1.000	1.000

Heavy Vehicle Percentages - Wakefield Road - Lee Lane - Shaw Lane (for whole period)

	To				
		Wakefield Road (NB)	Shaw Lane	Wakefield Road (SB)	Lee Lane
From	Wakefield Road (NB)	0.0	1.0	2.2	0.0
	Shaw Lane	1.0	0.0	0.0	0.6
	Wakefield Road (SB)	2.8	0.0	0.0	0.0
	Lee Lane	0.0	1.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.12	9.63	0.14	A
B-AD	1.27	437.53	41.79	F
A-B	-	-	-	-
A-C	-	-	-	-
A-D	0.62	22.08	1.54	C
D-A	0.23	11.45	0.29	B
D-BC	1.26	401.36	33.48	F
C-D	-	-	-	-
C-A	-	-	-	-
C-B	0.26	9.06	0.35	A

Main Results for each time segment

Main results: (16:30-16:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	36.14	35.84	0.00	518.10	0.070	0.07	7.459	A
B-AD	243.92	237.02	0.00	375.34	0.650	1.73	25.113	D
A-B	155.09	155.09	0.00	-	-	-	-	-
A-C	143.79	143.79	0.00	-	-	-	-	-
A-D	177.67	175.68	0.00	528.11	0.336	0.50	10.160	B
D-A	63.99	63.44	0.00	521.88	0.123	0.14	7.843	A
D-BC	201.76	196.66	0.00	352.01	0.573	1.28	22.687	C
C-D	194.99	194.99	0.00	-	-	-	-	-
C-A	210.80	210.80	0.00	-	-	-	-	-
C-B	96.37	95.65	0.00	629.76	0.153	0.18	6.732	A

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	43.15	43.05	0.00	469.14	0.092	0.10	8.447	A
B-AD	291.27	280.82	0.00	339.25	0.859	4.34	54.137	F
A-B	185.19	185.19	0.00	-	-	-	-	-
A-C	171.71	171.71	0.00	-	-	-	-	-
A-D	212.16	211.19	0.00	491.74	0.431	0.74	12.785	B
D-A	76.41	76.20	0.00	468.43	0.163	0.19	9.173	A
D-BC	240.93	233.97	0.00	306.47	0.786	3.01	46.107	E
C-D	232.84	232.84	0.00	-	-	-	-	-
C-A	251.71	251.71	0.00	-	-	-	-	-
C-B	115.07	114.84	0.00	598.80	0.192	0.24	7.435	A

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	52.85	52.70	0.00	432.95	0.122	0.14	9.460	A
B-AD	356.73	283.36	0.00	289.64	1.232	22.68	200.156	F
A-B	226.81	226.81	0.00	-	-	-	-	-
A-C	210.29	210.29	0.00	-	-	-	-	-
A-D	259.84	257.35	0.00	441.20	0.589	1.36	19.316	C
D-A	93.59	93.21	0.00	415.46	0.225	0.29	11.154	B
D-BC	295.07	236.12	0.00	244.06	1.209	17.75	190.468	F
C-D	285.16	285.16	0.00	-	-	-	-	-
C-A	308.29	308.29	0.00	-	-	-	-	-
C-B	140.93	140.53	0.00	556.02	0.253	0.34	8.658	A

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	52.85	52.84	0.00	426.46	0.124	0.14	9.635	A
B-AD	356.73	280.31	0.00	281.38	1.268	41.79	419.990	F
A-B	226.81	226.81	0.00	-	-	-	-	-
A-C	210.29	210.29	0.00	-	-	-	-	-
A-D	259.84	259.15	0.00	421.14	0.617	1.54	22.080	C
D-A	93.59	93.55	0.00	407.89	0.229	0.29	11.451	B
D-BC	295.07	232.19	0.00	233.53	1.264	33.48	401.363	F
C-D	285.16	285.16	0.00	-	-	-	-	-
C-A	308.29	308.29	0.00	-	-	-	-	-
C-B	140.93	140.87	0.00	538.17	0.262	0.35	9.061	A

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	43.15	43.27	0.00	436.77	0.099	0.11	9.151	A
B-AD	291.27	313.70	0.00	321.26	0.907	36.18	437.532	F
A-B	185.19	185.19	0.00	-	-	-	-	-
A-C	171.71	171.71	0.00	-	-	-	-	-
A-D	212.16	214.60	0.00	447.92	0.474	0.93	15.586	C
D-A	76.41	76.70	0.00	423.00	0.181	0.22	10.405	B
D-BC	240.93	275.66	0.00	283.96	0.848	24.79	374.380	F
C-D	232.84	232.84	0.00	-	-	-	-	-
C-A	251.71	251.71	0.00	-	-	-	-	-
C-B	115.07	115.43	0.00	559.81	0.206	0.26	8.107	A

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	36.14	36.23	0.00	453.04	0.080	0.09	8.638	A
B-AD	243.92	351.52	0.00	361.30	0.675	9.28	242.886	F
A-B	155.09	155.09	0.00	-	-	-	-	-
A-C	143.79	143.79	0.00	-	-	-	-	-
A-D	177.67	179.05	0.00	488.54	0.364	0.58	11.682	B
D-A	63.99	64.23	0.00	455.61	0.140	0.17	9.204	A
D-BC	201.76	293.36	0.00	331.70	0.608	1.89	139.113	F
C-D	194.99	194.99	0.00	-	-	-	-	-
C-A	210.80	210.80	0.00	-	-	-	-	-
C-B	96.37	96.64	0.00	599.74	0.161	0.19	7.158	A

Junctions 8				
PICADY 8 - Priority Intersection Module				
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Filename: Wakefield Road - Lee Lane - Shaw Lane - Committed Scheme.arc8

Path: Y:\2014\14-101 to 14-125\14-114 Former William Freeman Works, Mapplewell\Technical\2017 Transport Assessment\Junction Modelling\Junctions 8\Wakefield Road - Lee Lane - Shaw Lane Committed Scheme

Report generation date: 08/01/2018 08:08:39

« Committed Layout - 2023 Base, Saturday

- » Junction Network
- » Arms
- » Traffic Flows
- » Entry Flows
- » Turning Proportions
- » Vehicle Mix
- » Results

Summary of junction performance

	Saturday			
	Queue (PCU)	Delay (s)	RFC	LOS
Committed Layout - 2023 Base				
Stream B-C	0.35	11.52	0.26	B
Stream B-AD	34.14	308.74	1.17	F
Stream A-B	-	-	-	-
Stream A-C	-	-	-	-
Stream A-D	0.49	11.14	0.33	B
Stream D-A	0.39	11.69	0.28	B
Stream D-BC	19.72	211.01	1.09	F
Stream C-D	-	-	-	-
Stream C-A	-	-	-	-
Stream C-B	0.24	8.29	0.20	A

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

"D4 - 2023 Base, AM" model duration: 07:30 - 09:00

"D5 - 2023 Base, PM" model duration: 16:30 - 18:00

"D6 - 2023 Base, Saturday" model duration: 11:30 - 13:00

"D7 - 2023 Predicted, AM" model duration: 07:30 - 09:00

"D8 - 2023 Predicted, PM" model duration: 16:30 - 18:00

"D9 - 2023 Predicted, Saturday" model duration: 11:30 - 13:00

"D10 - 2023 Predicted with Lidl, AM" model duration: 07:30 - 09:00

"D11 - 2023 Predicted with Lidl, PM" model duration: 16:30 - 18:00

"D12 - 2023 Predicted with Lidl, Saturday" model duration: 11:30 - 13:00

Run using Junctions 8.0.5.523 at 08/01/2018 08:08:38

File summary

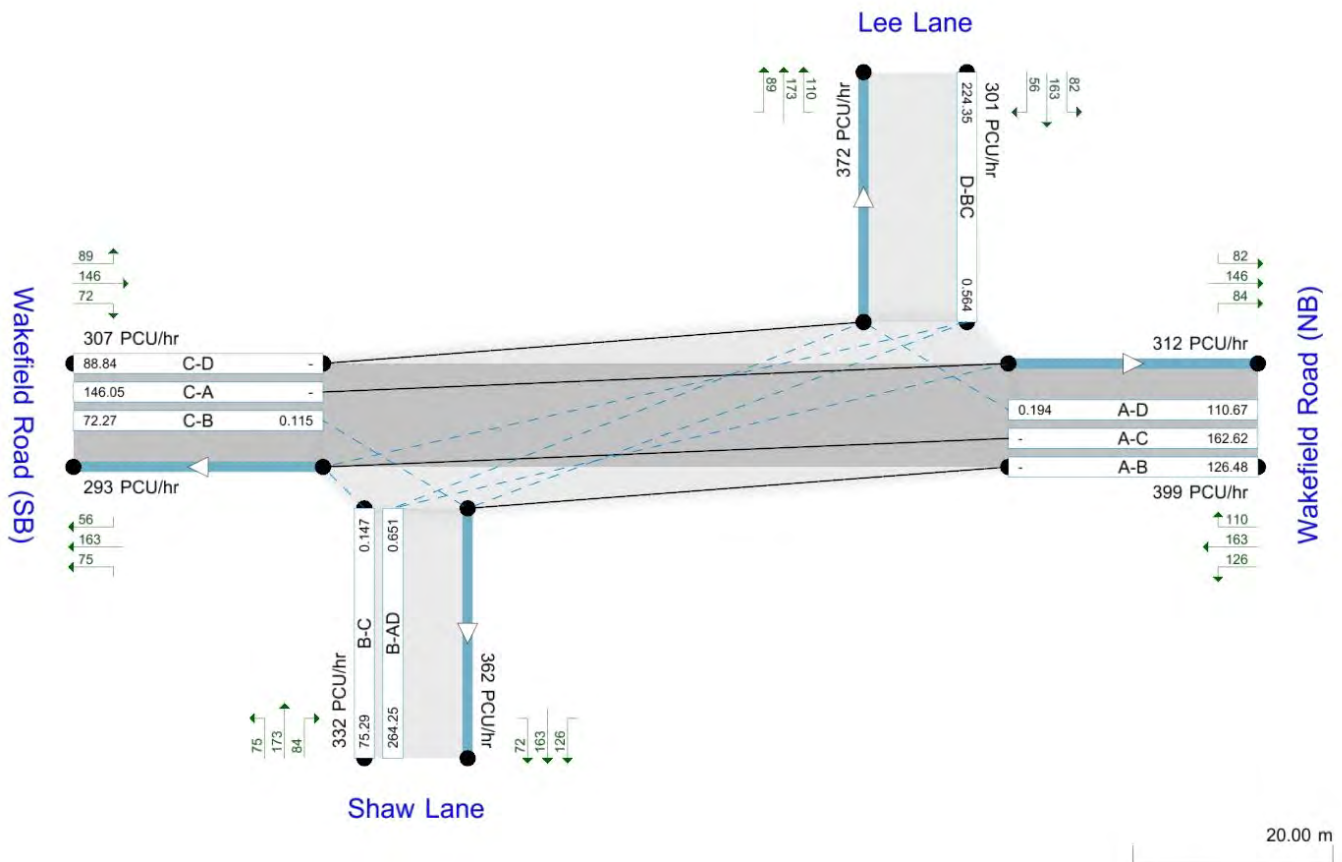
Title	Mapplewell, Barnsley
Location	Wakefield Road, Lee Lane, Shaw Lane Stagger
Site Number	
Date	29/11/2017
Version	
Status	(new file)
Identifier	
Client	Netherton Building and Construction
Jobnumber	14-114
Enumerator	BRYANGHALL\JTurner
Description	

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	-Min	perMin



Showing modelled flow through junction (PCU/hr).
 Streams (upstreams) show Total Demand (PCU/hr). Streams (downstreams) show RFC (l).
 Time Segment: (11:30-11:45)
 Showing Analysis Set "A1 - Committed Layout"; Demand Set "D6 - 2023 Base, Saturday"

The junction diagram reflects the last run of ARCADY.

Committed Layout - 2023 Base, Saturday

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Committed Layout	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2023 Base, Saturday	2023 Base	Saturday		ONE HOUR	11:30	13:00	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	Wakefield Road - Lee Lane - Shaw Lane	OS-NS Stagger (UK RL Stagger)	Two-way	A,B,C,D	159.82	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description	Arm Type
Wakefield Road (NB)	A	Wakefield Road (NB)		Major
Shaw Lane	B	Shaw Lane		Minor
Wakefield Road (SB)	C	Wakefield Road (SB)		Major
Lee Lane	D	Lee Lane		Minor

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)
Wakefield Road (NB)	6.00		0.00	✓	3.00	130.00		
Wakefield Road (SB)	6.00		0.00	✓	3.00	250.00		

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)
Shaw Lane	Two lanes		3.90	3.85						✓		55	35
Lee Lane	Two lanes		3.88	4.06						✓		40	65

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
1	A-D	705.776	-	-	-	0.273	0.273	0.273	-	0.273	-	-
1	B-AD	556.295	0.101	0.256	-	-	-	0.161	0.366	0.161	0.101	0.256
1	B-C	704.176	0.108	0.273	-	-	-	-	-	-	0.108	0.273
1	C-B	781.320	0.303	0.303	-	-	-	-	-	-	0.303	0.303
1	D-A	723.432	-	-	-	0.280	0.111	0.280	-	0.111	-	-
1	D-BC	578.082	0.167	0.167	0.380	0.266	0.105	0.266	-	0.105	-	-

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 (%)
Wakefield Road (NB)	ONE HOUR	✓	531.00	100.000
Shaw Lane	ONE HOUR	✓	451.00	100.000
Wakefield Road (SB)	ONE HOUR	✓	408.00	100.000
Lee Lane	ONE HOUR	✓	408.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Wakefield Road - Lee Lane - Shaw Lane (for whole period)

	To				
		Wakefield Road (NB)	Shaw Lane	Wakefield Road (SB)	Lee Lane
From	Wakefield Road (NB)	0.000	168.000	216.000	147.000
	Shaw Lane	115.000	0.000	100.000	236.000
	Wakefield Road (SB)	194.000	96.000	0.000	118.000
	Lee Lane	110.000	222.000	76.000	0.000

Turning Proportions (PCU) - Wakefield Road - Lee Lane - Shaw Lane (for whole period)

	To				
		Wakefield Road (NB)	Shaw Lane	Wakefield Road (SB)	Lee Lane
From	Wakefield Road (NB)	0.00	0.32	0.41	0.28
	Shaw Lane	0.25	0.00	0.22	0.52
	Wakefield Road (SB)	0.48	0.24	0.00	0.29
	Lee Lane	0.27	0.54	0.19	0.00

Vehicle Mix

Average PCU Per Vehicle - Wakefield Road - Lee Lane - Shaw Lane (for whole period)

	To				
		Wakefield Road (NB)	Shaw Lane	Wakefield Road (SB)	Lee Lane
From	Wakefield Road (NB)	1.000	1.010	1.022	1.000
	Shaw Lane	1.010	1.000	1.000	1.006
	Wakefield Road (SB)	1.028	1.000	1.000	1.000
	Lee Lane	1.000	1.010	1.000	1.000

Heavy Vehicle Percentages - Wakefield Road - Lee Lane - Shaw Lane (for whole period)

	To				
		Wakefield Road (NB)	Shaw Lane	Wakefield Road (SB)	Lee Lane
From	Wakefield Road (NB)	0.0	1.0	2.2	0.0
	Shaw Lane	1.0	0.0	0.0	0.6
	Wakefield Road (SB)	2.8	0.0	0.0	0.0
	Lee Lane	0.0	1.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.26	11.52	0.35	B
B-AD	1.17	308.74	34.14	F
A-B	-	-	-	-
A-C	-	-	-	-
A-D	0.33	11.14	0.49	B
D-A	0.28	11.69	0.39	B
D-BC	1.09	211.01	19.72	F
C-D	-	-	-	-
C-A	-	-	-	-
C-B	0.20	8.29	0.24	A

Main Results for each time segment

Main results: (11:30-11:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	75.29	74.60	0.00	512.83	0.147	0.17	8.203	A
B-AD	264.25	257.28	0.00	405.96	0.651	1.74	23.427	C
A-B	126.48	126.48	0.00	-	-	-	-	-
A-C	162.62	162.62	0.00	-	-	-	-	-
A-D	110.67	109.71	0.00	569.28	0.194	0.24	7.817	A
D-A	82.81	82.10	0.00	540.00	0.153	0.18	7.850	A
D-BC	224.35	219.39	0.00	397.63	0.564	1.24	19.845	C
C-D	88.84	88.84	0.00	-	-	-	-	-
C-A	146.05	146.05	0.00	-	-	-	-	-
C-B	72.27	71.76	0.00	625.89	0.115	0.13	6.491	A

Main results: (11:45-12:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	89.90	89.64	0.00	466.56	0.193	0.24	9.544	A
B-AD	315.54	306.39	0.00	375.89	0.839	4.03	46.818	E
A-B	151.03	151.03	0.00	-	-	-	-	-
A-C	194.18	194.18	0.00	-	-	-	-	-
A-D	132.15	131.83	0.00	540.88	0.244	0.32	8.793	A
D-A	98.89	98.62	0.00	494.07	0.200	0.25	9.096	A
D-BC	267.90	262.72	0.00	361.15	0.742	2.53	35.069	E
C-D	106.08	106.08	0.00	-	-	-	-	-
C-A	174.40	174.40	0.00	-	-	-	-	-
C-B	86.30	86.15	0.00	594.22	0.145	0.17	7.084	A

Main results: (12:00-12:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	110.10	109.68	0.00	426.44	0.258	0.34	11.347	B
B-AD	386.46	325.07	0.00	334.76	1.154	19.38	155.495	F
A-B	184.97	184.97	0.00	-	-	-	-	-
A-C	237.82	237.82	0.00	-	-	-	-	-
A-D	161.85	161.25	0.00	501.75	0.323	0.47	10.553	B
D-A	121.11	120.59	0.00	436.63	0.277	0.38	11.371	B
D-BC	328.10	292.21	0.00	311.15	1.054	11.51	112.611	F
C-D	129.92	129.92	0.00	-	-	-	-	-
C-A	213.60	213.60	0.00	-	-	-	-	-
C-B	105.70	105.43	0.00	550.94	0.192	0.23	8.075	A

Main results: (12:15-12:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	110.10	110.08	0.00	422.41	0.261	0.35	11.524	B
B-AD	386.46	327.41	0.00	329.61	1.172	34.14	308.742	F
A-B	184.97	184.97	0.00	-	-	-	-	-
A-C	237.82	237.82	0.00	-	-	-	-	-
A-D	161.85	161.75	0.00	484.96	0.334	0.49	11.137	B
D-A	121.11	121.07	0.00	428.97	0.282	0.39	11.687	B
D-BC	328.10	295.24	0.00	301.23	1.089	19.72	211.013	F
C-D	129.92	129.92	0.00	-	-	-	-	-
C-A	213.60	213.60	0.00	-	-	-	-	-
C-B	105.70	105.67	0.00	540.07	0.196	0.24	8.287	A

Main results: (12:30-12:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	89.90	90.24	0.00	437.16	0.206	0.26	10.387	B
B-AD	315.54	354.85	0.00	365.32	0.864	24.31	296.418	F
A-B	151.03	151.03	0.00	-	-	-	-	-
A-C	194.18	194.18	0.00	-	-	-	-	-
A-D	132.15	132.69	0.00	505.45	0.261	0.36	9.673	A
D-A	98.89	99.27	0.00	440.67	0.224	0.29	10.558	B
D-BC	267.90	323.68	0.00	340.29	0.787	5.78	154.146	F
C-D	106.08	106.08	0.00	-	-	-	-	-
C-A	174.40	174.40	0.00	-	-	-	-	-
C-B	86.30	86.55	0.00	571.83	0.151	0.18	7.424	A

Main results: (12:45-13:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	75.29	75.57	0.00	472.27	0.159	0.19	9.082	A
B-AD	264.25	352.37	0.00	402.44	0.657	2.28	109.126	F
A-B	126.48	126.48	0.00	-	-	-	-	-
A-C	162.62	162.62	0.00	-	-	-	-	-
A-D	110.67	111.07	0.00	542.69	0.204	0.26	8.348	A
D-A	82.81	83.21	0.00	513.23	0.161	0.19	8.380	A
D-BC	224.35	241.36	0.00	381.73	0.588	1.53	28.500	D
C-D	88.84	88.84	0.00	-	-	-	-	-
C-A	146.05	146.05	0.00	-	-	-	-	-
C-B	72.27	72.46	0.00	618.89	0.117	0.13	6.589	A

Junctions 8				
PICADY 8 - Priority Intersection Module				
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Filename: Wakefield Road - Paddock Road.arc8

Path: Y:\2014\14-101 to 14-125\14-114 Former William Freeman Works, Mapplewell\Technical\2017 Transport Assessment\Junction Modelling\Junctions 8\Wakefield Road - Paddock Road

Report generation date: 08/01/2018 08:23:14

« Existing Layout - 2023 Base, AM

» Junction Network

» Arms

» Traffic Flows

» Entry Flows

» Turning Proportions

» Vehicle Mix

» Results

Summary of junction performance

	AM			
	Queue (PCU)	Delay (s)	RFC	LOS
Existing Layout - 2023 Base				
Stream B-C	0.13	13.49	0.12	B
Stream B-A	1.39	28.23	0.59	D
Stream C-AB	0.01	4.73	0.01	A
Stream C-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 - 2017 Existing, AM" model duration: 07:30 - 09:00

"D2 - 2017 Existing, PM" model duration: 16:30 - 18:00

"D3 - 2017 Existing, Saturday" model duration: 11:30 - 13:00

"D4 - 2023 Base, AM " model duration: 07:30 - 09:00

"D5 - 2023 Base, PM" model duration: 16:30 - 18:00

"D6 - 2023 Base, Saturday" model duration: 11:30 - 13:00

"D7 - 2023 Predicted, AM" model duration: 07:30 - 09:00

"D8 - 2023 Predicted, PM" model duration: 16:30 - 18:00

"D9 - 2023 Predicted, Saturday" model duration: 11:30 - 13:00

"D10 - 2023 Predicted with Lidl, AM" model duration: 07:30 - 09:00

"D11 - 2023 Predicted with Lidl, PM" model duration: 16:30 - 18:00

"D12 - 2023 Predicted with Lidl, Saturday" model duration: 11:30 - 13:00

Run using Junctions 8.0.5.523 at 08/01/2018 08:23:13

File summary

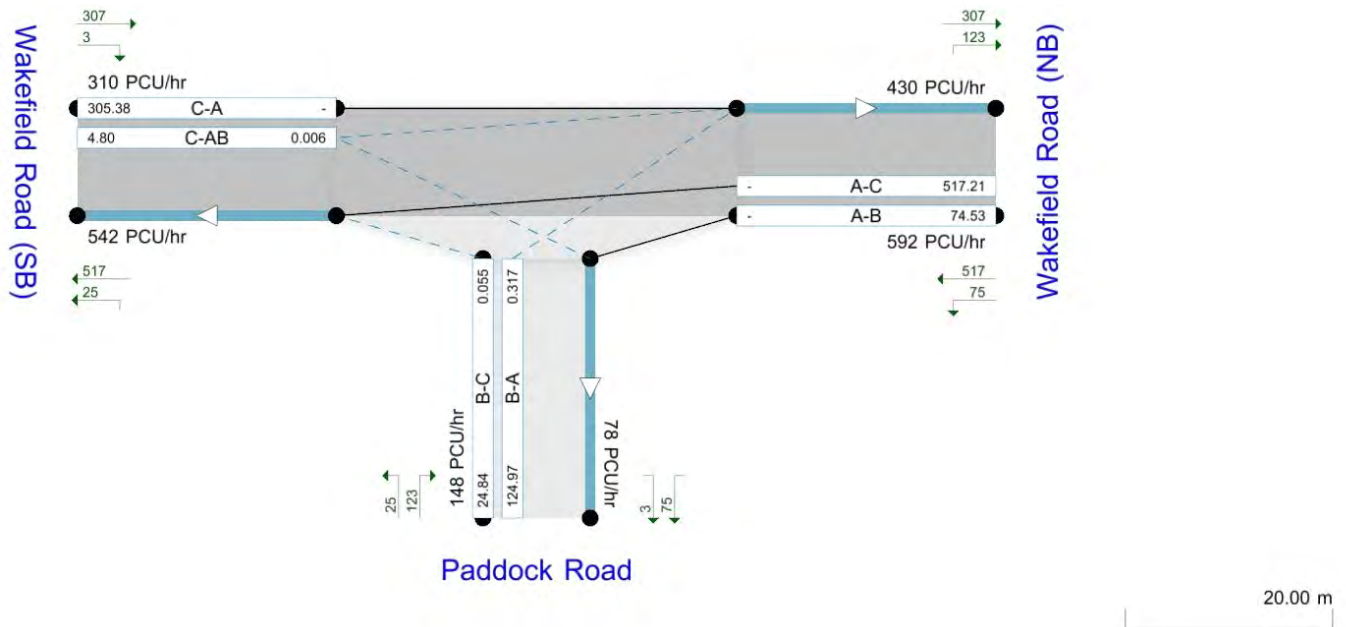
Title	Mapplewell, Barnsley
Location	Wakefield Road - Paddock Road
Site Number	
Date	29/11/2017
Version	
Status	(new file)
Identifier	
Client	Netherton Building and Construction
Jobnumber	14/114
Enumerator	BRYANGHALLJTurner
Description	

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	-Min	perMin



Value Comparison Overlay Boxes Enabled
Showing modelled flow through junction (PCU/hr).
Streams (upstreams) show Total Demand (PCU/hr). Streams (downstreams) show RFC (i)
Time Segment: (07:30-07:45)
Showing Analysis Set "A1 - Existing Layout", Demand Set "D4 - 2023 Base, AM"

The junction diagram reflects the last run of ARCADY.

Existing Layout - 2023 Base, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Existing Layout	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2023 Base, AM	2023 Base	AM		ONE HOUR	07:30	09:00	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	Site Access	T-Junction	Two-way	A,B,C	25.04	D

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description	Arm Type
Wakefield Road (NB)	A	Wakefield Road (NB)		Major
Paddock Road	B	Paddock Road		Minor
Wakefield Road (SB)	C	Wakefield Road (SB)		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)
Wakefield Road (SB)	7.90		0.00		2.20	250.00	✓	0.00

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)
Paddock Road	One lane plus flare				10.00	6.00	4.40	3.00	3.00		1.00	30	80

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	575.887	0.096	0.243	0.153	0.347
1	B-C	623.210	0.088	0.222	-	-
1	C-B	718.741	0.255	0.255	-	-

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 (%)
Wakefield Road (NB)	ONE HOUR	✓	786.00	100.000
Paddock Road	ONE HOUR	✓	199.00	100.000
Wakefield Road (SB)	ONE HOUR	✓	412.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Site Access (for whole period)

	To			
		Wakefield Road (NB)	Paddock Road	Wakefield Road (SB)
From	Wakefield Road (NB)	0.000	99.000	687.000
	Paddock Road	166.000	0.000	33.000
	Wakefield Road (SB)	408.000	4.000	0.000

Turning Proportions (PCU) - Site Access (for whole period)

	To			
		Wakefield Road (NB)	Paddock Road	Wakefield Road (SB)
From	Wakefield Road (NB)	0.00	0.13	0.87
	Paddock Road	0.83	0.00	0.17
	Wakefield Road (SB)	0.99	0.01	0.00

Vehicle Mix

Average PCU Per Vehicle - Site Access (for whole period)

	To			
		Wakefield Road (NB)	Paddock Road	Wakefield Road (SB)
From	Wakefield Road (NB)	1.000	1.000	1.016
	Paddock Road	1.000	1.000	1.000
	Wakefield Road (SB)	1.022	1.000	1.000

Heavy Vehicle Percentages - Site Access (for whole period)

From	To			
		Wakefield Road (NB)	Paddock Road	Wakefield Road (SB)
	Wakefield Road (NB)	0.0	0.0	1.6
	Paddock Road	0.0	0.0	0.0
	Wakefield Road (SB)	2.2	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.12	13.49	0.13	B
B-A	0.59	28.23	1.39	D
C-AB	0.01	4.73	0.01	A
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (07:30-07:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	24.84	24.61	0.00	449.23	0.055	0.06	8.474	A
B-A	124.97	123.16	0.00	394.56	0.317	0.45	13.180	B
C-AB	4.80	4.77	0.00	772.78	0.006	0.01	4.725	A
C-A	305.38	305.38	0.00	-	-	-	-	-
A-B	74.53	74.53	0.00	-	-	-	-	-
A-C	517.21	517.21	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	29.67	29.58	0.00	399.85	0.074	0.08	9.720	A
B-A	149.23	148.29	0.00	359.10	0.416	0.69	16.997	C
C-AB	6.34	6.33	0.00	786.78	0.008	0.01	4.653	A
C-A	364.04	364.04	0.00	-	-	-	-	-
A-B	89.00	89.00	0.00	-	-	-	-	-
A-C	617.60	617.60	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	36.33	36.12	0.00	307.18	0.118	0.13	13.260	B
B-A	182.77	180.15	0.00	309.63	0.590	1.35	27.254	D
C-AB	8.95	8.93	0.00	807.26	0.011	0.01	4.555	A
C-A	444.67	444.67	0.00	-	-	-	-	-
A-B	109.00	109.00	0.00	-	-	-	-	-
A-C	756.40	756.40	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	36.33	36.32	0.00	303.26	0.120	0.13	13.486	B
B-A	182.77	182.59	0.00	309.61	0.590	1.39	28.234	D
C-AB	8.95	8.95	0.00	807.27	0.011	0.01	4.558	A
C-A	444.67	444.67	0.00	-	-	-	-	-
A-B	109.00	109.00	0.00	-	-	-	-	-
A-C	756.40	756.40	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	29.67	29.88	0.00	396.40	0.075	0.08	9.827	A
B-A	149.23	151.86	0.00	359.12	0.416	0.73	17.579	C
C-AB	6.35	6.36	0.00	786.79	0.008	0.01	4.662	A
C-A	364.03	364.03	0.00	-	-	-	-	-
A-B	89.00	89.00	0.00	-	-	-	-	-
A-C	617.60	617.60	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	24.84	24.93	0.00	447.28	0.056	0.06	8.526	A
B-A	124.97	126.01	0.00	394.58	0.317	0.47	13.455	B
C-AB	4.81	4.82	0.00	772.79	0.006	0.01	4.728	A
C-A	305.36	305.36	0.00	-	-	-	-	-
A-B	74.53	74.53	0.00	-	-	-	-	-
A-C	517.21	517.21	0.00	-	-	-	-	-

Junctions 8				
PICADY 8 - Priority Intersection Module				
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Filename: Wakefield Road - Paddock Road.arc8

Path: Y:\2014\14-101 to 14-125\14-114 Former William Freeman Works, Mapplewell\Technical\2017 Transport Assessment\Junction Modelling\Junctions 8\Wakefield Road - Paddock Road

Report generation date: 08/01/2018 08:23:41

« Existing Layout - 2023 Base, PM

» Junction Network

» Arms

» Traffic Flows

» Entry Flows

» Turning Proportions

» Vehicle Mix

» Results

Summary of junction performance

	PM			
	Queue (PCU)	Delay (s)	RFC	LOS
Existing Layout - 2023 Base				
Stream B-C	6.53	230.10	1.03	F
Stream B-A	14.67	163.05	1.03	F
Stream C-AB	0.10	4.74	0.06	A
Stream C-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 - 2017 Existing, AM" model duration: 07:30 - 09:00

"D2 - 2017 Existing, PM" model duration: 16:30 - 18:00

"D3 - 2017 Existing, Saturday" model duration: 11:30 - 13:00

"D4 - 2023 Base, AM" model duration: 07:30 - 09:00

"D5 - 2023 Base, PM" model duration: 16:30 - 18:00

"D6 - 2023 Base, Saturday" model duration: 11:30 - 13:00

"D7 - 2023 Predicted, AM" model duration: 07:30 - 09:00

"D8 - 2023 Predicted, PM" model duration: 16:30 - 18:00

"D9 - 2023 Predicted, Saturday" model duration: 11:30 - 13:00

"D10 - 2023 Predicted with Lidl, AM" model duration: 07:30 - 09:00

"D11 - 2023 Predicted with Lidl, PM" model duration: 16:30 - 18:00

"D12 - 2023 Predicted with Lidl, Saturday" model duration: 11:30 - 13:00

Run using Junctions 8.0.5.523 at 08/01/2018 08:23:40

File summary

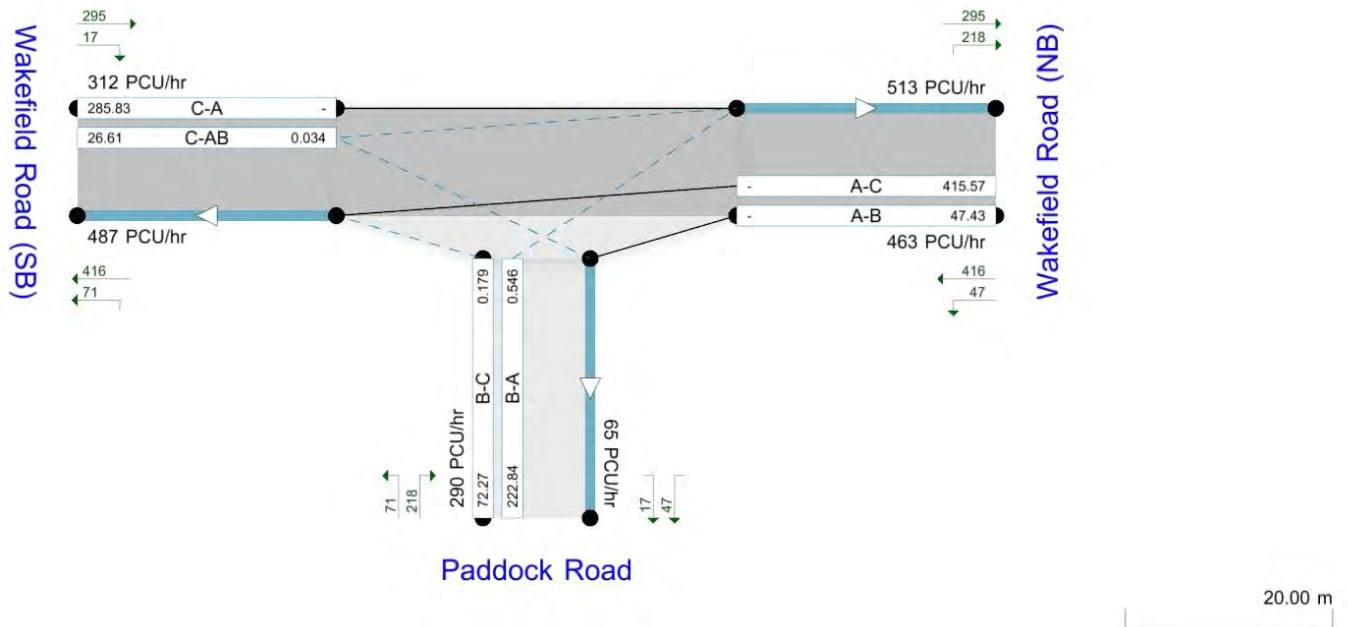
Title	Mapplewell, Barnsley
Location	Wakefield Road - Paddock Road
Site Number	
Date	29/11/2017
Version	
Status	(new file)
Identifier	
Client	Netherton Building and Construction
Jobnumber	14/114
Enumerator	BRYANGHALLJTurner
Description	

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	-Min	perMin



The junction diagram reflects the last run of ARCADY.

Existing Layout - 2023 Base, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Existing Layout	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2023 Base, PM	2023 Base	PM		ONE HOUR	16:30	18:00	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	Site Access	T-Junction	Two-way	A,B,C	162.99	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description	Arm Type
Wakefield Road (NB)	A	Wakefield Road (NB)		Major
Paddock Road	B	Paddock Road		Minor
Wakefield Road (SB)	C	Wakefield Road (SB)		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)
Wakefield Road (SB)	7.90		0.00		2.20	250.00	✓	0.00

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)
Paddock Road	One lane plus flare				10.00	6.00	4.40	3.00	3.00		1.00	30	80

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	567.269	0.095	0.240	0.151	0.342
1	B-C	641.601	0.090	0.228	-	-
1	C-B	718.741	0.255	0.255	-	-

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 (%)
Wakefield Road (NB)	ONE HOUR	✓	615.00	100.000
Paddock Road	ONE HOUR	✓	392.00	100.000
Wakefield Road (SB)	ONE HOUR	✓	415.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Site Access (for whole period)

	To			
		Wakefield Road (NB)	Paddock Road	Wakefield Road (SB)
From	Wakefield Road (NB)	0.000	63.000	552.000
	Paddock Road	296.000	0.000	96.000
	Wakefield Road (SB)	392.000	23.000	0.000

Turning Proportions (PCU) - Site Access (for whole period)

	To			
		Wakefield Road (NB)	Paddock Road	Wakefield Road (SB)
From	Wakefield Road (NB)	0.00	0.10	0.90
	Paddock Road	0.76	0.00	0.24
	Wakefield Road (SB)	0.94	0.06	0.00

Vehicle Mix

Average PCU Per Vehicle - Site Access (for whole period)

	To			
		Wakefield Road (NB)	Paddock Road	Wakefield Road (SB)
From	Wakefield Road (NB)	1.000	1.000	1.016
	Paddock Road	1.000	1.000	1.000
	Wakefield Road (SB)	1.022	1.000	1.000

Heavy Vehicle Percentages - Site Access (for whole period)

From	To			
		Wakefield Road (NB)	Paddock Road	Wakefield Road (SB)
	Wakefield Road (NB)	0.0	0.0	1.6
	Paddock Road	0.0	0.0	0.0
	Wakefield Road (SB)	2.2	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	1.03	230.10	6.53	F
B-A	1.03	163.05	14.67	F
C-AB	0.06	4.74	0.10	A
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (16:30-16:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	72.27	71.42	0.00	404.39	0.179	0.21	10.787	B
B-A	222.84	218.25	0.00	408.16	0.546	1.15	18.543	C
C-AB	26.61	26.43	0.00	792.69	0.034	0.05	4.734	A
C-A	285.83	285.83	0.00	-	-	-	-	-
A-B	47.43	47.43	0.00	-	-	-	-	-
A-C	415.57	415.57	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	86.30	85.56	0.00	296.76	0.291	0.40	16.986	C
B-A	266.10	261.76	0.00	373.12	0.713	2.23	31.129	D
C-AB	34.73	34.66	0.00	809.45	0.043	0.06	4.684	A
C-A	338.34	338.34	0.00	-	-	-	-	-
A-B	56.64	56.64	0.00	-	-	-	-	-
A-C	496.24	496.24	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	105.70	86.96	0.00	102.64	1.030	5.08	159.409	F
B-A	325.90	296.18	0.00	320.32	1.017	9.67	96.657	F
C-AB	50.91	50.76	0.00	843.41	0.060	0.10	4.587	A
C-A	406.01	406.01	0.00	-	-	-	-	-
A-B	69.36	69.36	0.00	-	-	-	-	-
A-C	607.76	607.76	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	105.70	99.90	0.00	109.47	0.966	6.53	230.096	F
B-A	325.90	305.87	0.00	316.65	1.029	14.67	163.045	F
C-AB	50.96	50.96	0.00	843.47	0.060	0.10	4.595	A
C-A	405.96	405.96	0.00	-	-	-	-	-
A-B	69.36	69.36	0.00	-	-	-	-	-
A-C	607.76	607.76	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	86.30	108.83	0.00	189.80	0.455	0.90	54.412	F
B-A	266.10	311.13	0.00	360.74	0.738	3.42	88.883	F
C-AB	34.79	34.93	0.00	809.53	0.043	0.06	4.697	A
C-A	338.29	338.29	0.00	-	-	-	-	-
A-B	56.64	56.64	0.00	-	-	-	-	-
A-C	496.24	496.24	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	72.27	74.96	0.00	387.73	0.186	0.23	11.606	B
B-A	222.84	231.45	0.00	407.35	0.547	1.26	21.363	C
C-AB	26.69	26.76	0.00	792.76	0.034	0.05	4.741	A
C-A	285.75	285.75	0.00	-	-	-	-	-
A-B	47.43	47.43	0.00	-	-	-	-	-
A-C	415.57	415.57	0.00	-	-	-	-	-

Junctions 8				
PICADY 8 - Priority Intersection Module				
Version: 8.0.5.523 [19102,19/06/2015] © Copyright TRL Limited, 2018				
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Filename: Wakefield Road - Paddock Road.arc8

Path: Y:\2014\14-101 to 14-125\14-114 Former William Freeman Works, Mapplewell\Technical\2017 Transport Assessment\Junction Modelling\Junctions 8\Wakefield Road - Paddock Road

Report generation date: 08/01/2018 08:24:16

« Existing Layout - 2023 Base, Saturday

- » Junction Network
- » Arms
- » Traffic Flows
- » Entry Flows
- » Turning Proportions
- » Vehicle Mix
- » Results

Summary of junction performance

	Saturday			
	Queue (PCU)	Delay (s)	RFC	LOS
Existing Layout - 2023 Base				
Stream B-C	0.04	11.00	0.04	B
Stream B-A	1.19	22.60	0.55	C
Stream C-AB	0.03	4.58	0.02	A
Stream C-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 - 2017 Existing, AM" model duration: 07:30 - 09:00

"D2 - 2017 Existing, PM" model duration: 16:30 - 18:00

"D3 - 2017 Existing, Saturday" model duration: 11:30 - 13:00

"D4 - 2023 Base, AM" model duration: 07:30 - 09:00

"D5 - 2023 Base, PM" model duration: 16:30 - 18:00

"D6 - 2023 Base, Saturday" model duration: 11:30 - 13:00

"D7 - 2023 Predicted, AM" model duration: 07:30 - 09:00

"D8 - 2023 Predicted, PM" model duration: 16:30 - 18:00

"D9 - 2023 Predicted, Saturday" model duration: 11:30 - 13:00

"D10 - 2023 Predicted with Lidl, AM" model duration: 07:30 - 09:00

"D11 - 2023 Predicted with Lidl, PM" model duration: 16:30 - 18:00

"D12 - 2023 Predicted with Lidl, Saturday" model duration: 11:30 - 13:00

Run using Junctions 8.0.5.523 at 08/01/2018 08:24:15

File summary

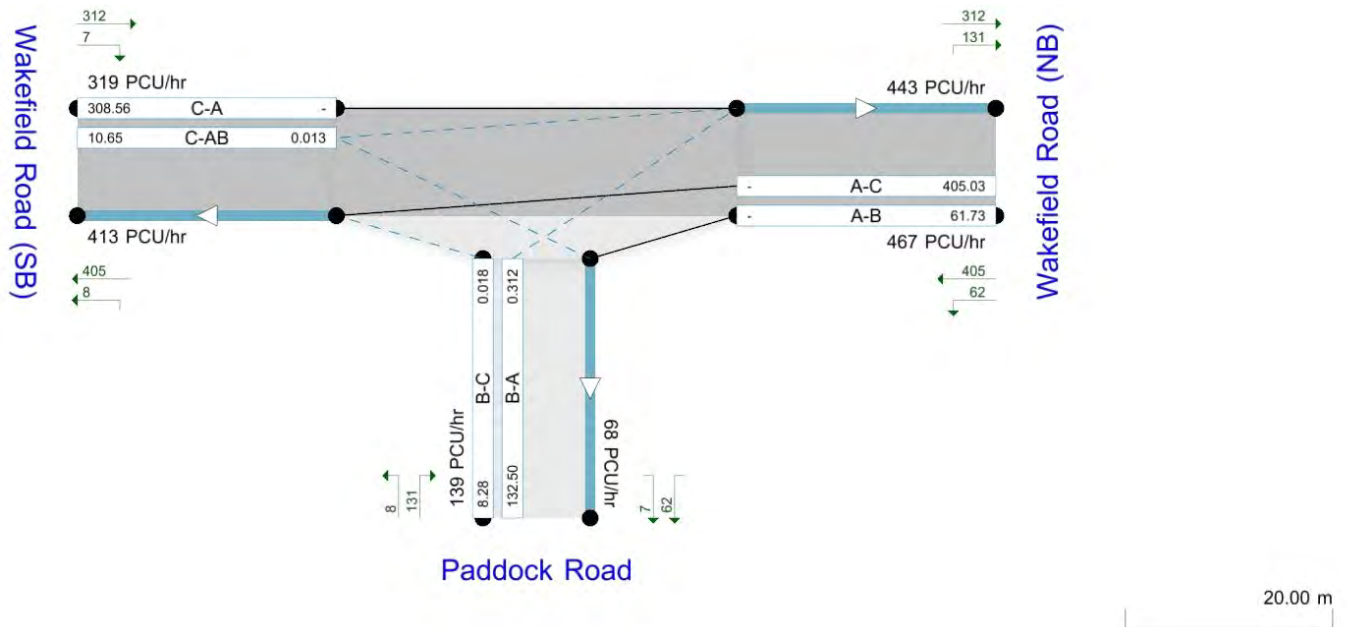
Title	Mapplewell, Barnsley
Location	Wakefield Road - Paddock Road
Site Number	
Date	29/11/2017
Version	
Status	(new file)
Identifier	
Client	Netherton Building and Construction
Jobnumber	14/114
Enumerator	BRYANGHALLJTurner
Description	

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	-Min	perMin



The junction diagram reflects the last run of ARCADY.

Existing Layout - 2023 Base, Saturday

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Existing Layout	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2023 Base, Saturday	2023 Base	Saturday		ONE HOUR	11:30	13:00	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	Site Access	T-Junction	Two-way	A,B,C	20.56	C

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description	Arm Type
Wakefield Road (NB)	A	Wakefield Road (NB)		Major
Paddock Road	B	Paddock Road		Minor
Wakefield Road (SB)	C	Wakefield Road (SB)		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)
Wakefield Road (SB)	7.90		0.00		2.20	250.00	✓	0.00

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)
Paddock Road	One lane plus flare				10.00	6.00	4.40	3.00	3.00		1.00	30	80

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	580.852	0.097	0.245	0.154	0.350
1	B-C	612.615	0.086	0.218	-	-
1	C-B	718.741	0.255	0.255	-	-

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 (%)
Wakefield Road (NB)	ONE HOUR	✓	620.00	100.000
Paddock Road	ONE HOUR	✓	187.00	100.000
Wakefield Road (SB)	ONE HOUR	✓	424.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Site Access (for whole period)

	To			
		Wakefield Road (NB)	Paddock Road	Wakefield Road (SB)
From	Wakefield Road (NB)	0.000	82.000	538.000
	Paddock Road	176.000	0.000	11.000
	Wakefield Road (SB)	415.000	9.000	0.000

Turning Proportions (PCU) - Site Access (for whole period)

	To			
		Wakefield Road (NB)	Paddock Road	Wakefield Road (SB)
From	Wakefield Road (NB)	0.00	0.13	0.87
	Paddock Road	0.94	0.00	0.06
	Wakefield Road (SB)	0.98	0.02	0.00

Vehicle Mix

Average PCU Per Vehicle - Site Access (for whole period)

	To			
		Wakefield Road (NB)	Paddock Road	Wakefield Road (SB)
From	Wakefield Road (NB)	1.000	1.000	1.016
	Paddock Road	1.000	1.000	1.000
	Wakefield Road (SB)	1.022	1.000	1.000

Heavy Vehicle Percentages - Site Access (for whole period)

From	To			
		Wakefield Road (NB)	Paddock Road	Wakefield Road (SB)
	Wakefield Road (NB)	0.0	0.0	1.6
	Paddock Road	0.0	0.0	0.0
	Wakefield Road (SB)	2.2	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.04	11.00	0.04	B
B-A	0.55	22.60	1.19	C
C-AB	0.02	4.58	0.03	A
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (11:30-11:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	8.28	8.21	0.00	464.81	0.018	0.02	7.883	A
B-A	132.50	130.72	0.00	424.88	0.312	0.44	12.167	B
C-AB	10.65	10.59	0.00	802.66	0.013	0.02	4.580	A
C-A	308.56	308.56	0.00	-	-	-	-	-
A-B	61.73	61.73	0.00	-	-	-	-	-
A-C	405.03	405.03	0.00	-	-	-	-	-

Main results: (11:45-12:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	9.89	9.87	0.00	421.56	0.023	0.02	8.744	A
B-A	158.22	157.39	0.00	394.56	0.401	0.65	15.124	C
C-AB	13.95	13.93	0.00	821.27	0.017	0.02	4.497	A
C-A	367.22	367.22	0.00	-	-	-	-	-
A-B	73.72	73.72	0.00	-	-	-	-	-
A-C	483.65	483.65	0.00	-	-	-	-	-

Main results: (12:00-12:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	12.11	12.06	0.00	342.18	0.035	0.04	10.904	B
B-A	193.78	191.75	0.00	352.62	0.550	1.16	22.094	C
C-AB	19.39	19.35	0.00	847.54	0.023	0.03	4.390	A
C-A	447.44	447.44	0.00	-	-	-	-	-
A-B	90.28	90.28	0.00	-	-	-	-	-
A-C	592.35	592.35	0.00	-	-	-	-	-

Main results: (12:15-12:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	12.11	12.11	0.00	339.47	0.036	0.04	10.996	B
B-A	193.78	193.67	0.00	352.62	0.550	1.19	22.604	C
C-AB	19.40	19.40	0.00	847.55	0.023	0.03	4.394	A
C-A	447.43	447.43	0.00	-	-	-	-	-
A-B	90.28	90.28	0.00	-	-	-	-	-
A-C	592.35	592.35	0.00	-	-	-	-	-

Main results: (12:30-12:45)

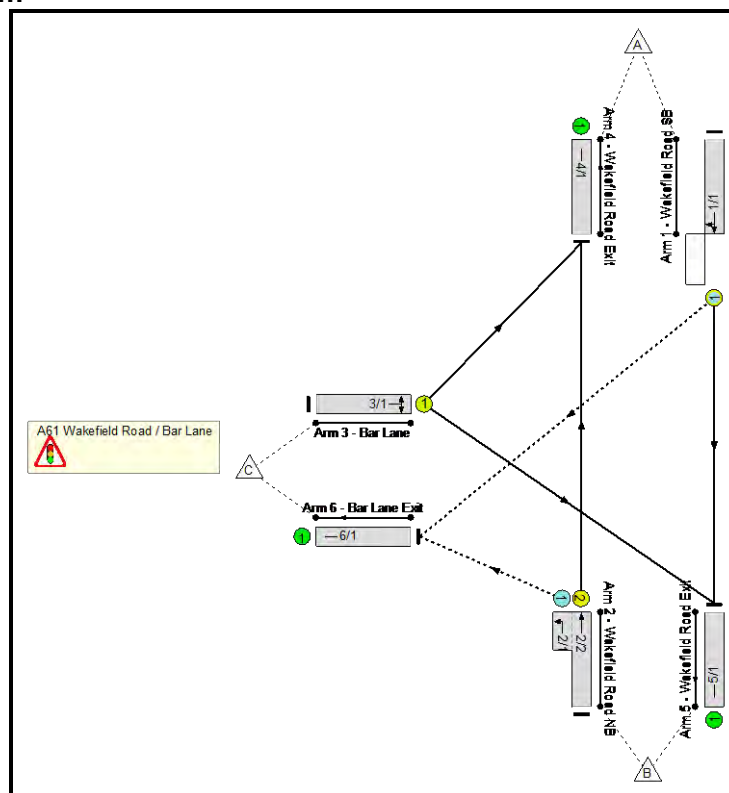
Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	9.89	9.94	0.00	419.00	0.024	0.02	8.801	A
B-A	158.22	160.22	0.00	394.57	0.401	0.69	15.490	C
C-AB	13.96	13.99	0.00	821.29	0.017	0.02	4.505	A
C-A	367.21	367.21	0.00	-	-	-	-	-
A-B	73.72	73.72	0.00	-	-	-	-	-
A-C	483.65	483.65	0.00	-	-	-	-	-

Main results: (12:45-13:00)

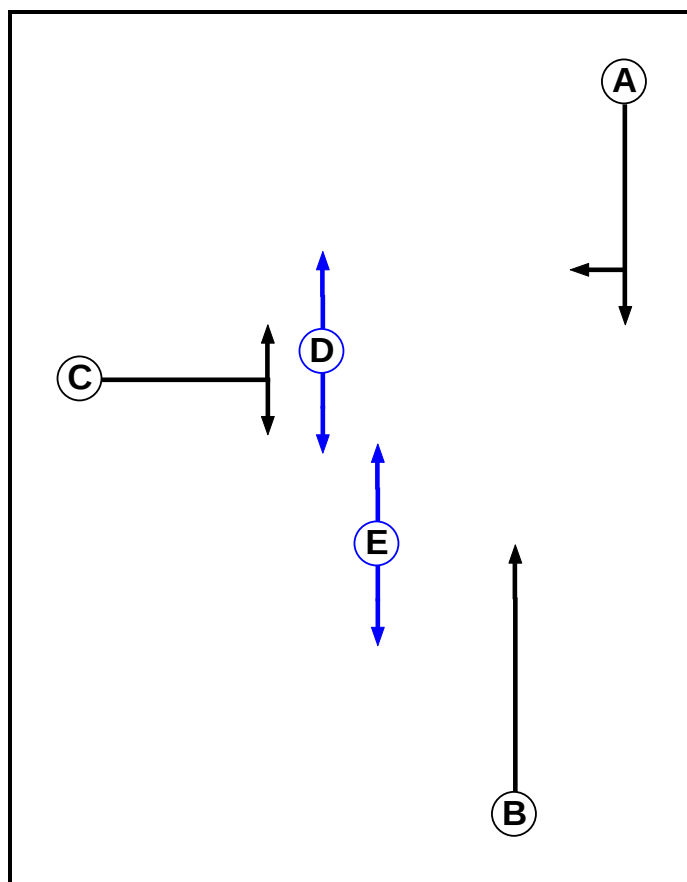
Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	8.28	8.31	0.00	463.07	0.018	0.02	7.916	A
B-A	132.50	133.40	0.00	424.87	0.312	0.46	12.391	B
C-AB	10.67	10.69	0.00	802.68	0.013	0.02	4.584	A
C-A	308.54	308.54	0.00	-	-	-	-	-
A-B	61.73	61.73	0.00	-	-	-	-	-
A-C	405.03	405.03	0.00	-	-	-	-	-

Full Input Data And Results**User and Project Details**

Project:	Wakefield Road, Mapplewell
Title:	2017 Existing
Location:	
File name:	Wakefield Road - Bar Lane.lsg3x
Author:	John Turner
Company:	Bryan G Hall
Address:	
Notes:	Wakefield Road/Bar Lane

Network Layout Diagram

Phase Diagram



Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Pedestrian		6	6
E	Pedestrian		6	6

Phase Intergreens Matrix

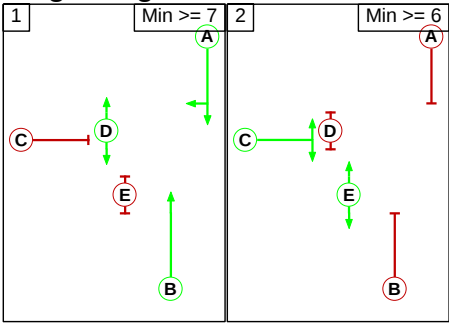
	Starting Phase					
Terminating Phase		A	B	C	D	E
	A	-	5	-	9	
	B	-	6	-	-	
	C	5	5	5	-	
	D	-	-	7	-	
	E	8	-	-	-	

Phases in Stage

Stage No.	Phases in Stage
1	A B D
2	C E

Full Input Data And Results

Stage Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Change

From Stage	To Stage	
	1	2
	1	9
2	8	

Full Input Data And Results

Give-Way Lane Input Data

Junction: A61 Wakefield Road / Bar Lane											
Lane	Movement	Max Flow when Giving Way (PCU/Hr)	Min Flow when Giving Way (PCU/Hr)	Opposing Lane	Opp. Lane Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	Non-Blocking Storage (PCU)	RTF	Right Turn Move up (s)	Max Turns in Intergreen (PCU)
1/1 (Wakefield Road SB)	6/1 (Right)	1439	0	2/2	1.09	All	4.00	4.00	0.50	4	2.00
2/1 (Wakefield Road NB)	6/1 (Left)	1439	0	1/1	1.09	To 6/1 (Right)	-	-	-	-	-

Full Input Data And Results

Lane Input Data

Junction: A61 Wakefield Road / Bar Lane												
Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (Wakefield Road SB)	O	A	2	3	60.0	Geom	-	3.40	0.00	Y	Arm 5 Ahead	Inf
											Arm 6 Right	12.50
2/1 (Wakefield Road NB)	O		2	3	3.0	Geom	-	4.00	0.00	Y	Arm 6 Left	100.00
2/2 (Wakefield Road NB)	U	B	2	3	60.0	Geom	-	3.80	0.00	Y	Arm 4 Ahead	Inf
3/1 (Bar Lane)	U	C	2	3	60.0	Geom	-	3.70	0.00	Y	Arm 4 Left	12.50
											Arm 5 Right	8.00
4/1 (Wakefield Road Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
5/1 (Wakefield Road Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1 (Bar Lane Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
4: '2023 Base AM'	07:45	08:45	01:00	
5: '2023 Base PM'	16:45	17:45	01:00	
6: '2023 Base Saturday'	11:45	12:45	01:00	

Scenario 4: '2023 Base AM' (FG4: '2023 Base AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination				
Origin	A	A	B	C	Tot.
	A	0	563	16	579
	B	719	0	423	1142
	C	53	553	0	606
	Tot.	772	1116	439	2327

Traffic Lane Flows

Lane	Scenario 4: 2023 Base AM
Junction: A61 Wakefield Road / Bar Lane	
1/1	579
2/1 (short)	423
2/2 (with short)	1142(In) 719(Out)
3/1	606
4/1	772
5/1	1116
6/1	439

Lane Saturation Flows

Junction: A61 Wakefield Road / Bar Lane								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Wakefield Road SB)	3.40	0.00	Y	Arm 5 Ahead Arm 6 Right	Inf 12.50	97.2 % 2.8 %	1949	1949
2/1 (Wakefield Road NB)	4.00	0.00	Y	Arm 6 Left	100.00	100.0 %	1985	1985
2/2 (Wakefield Road NB)	3.80	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1995	1995
3/1 (Bar Lane)	3.70	0.00	Y	Arm 4 Left Arm 5 Right	12.50 8.00	8.7 % 91.3 %	1680	1680
4/1 (Wakefield Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Wakefield Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Bar Lane Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 5: '2023 Base PM' (FG5: '2023 Base PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination				
Origin		A	B	C	Tot.
	A	0	660	38	698
	B	598	0	613	1211
	C	23	484	0	507
	Tot.	621	1144	651	2416

Traffic Lane Flows

Lane	Scenario 5: 2023 Base PM
Junction: A61 Wakefield Road / Bar Lane	
1/1	698
2/1 (short)	613
2/2 (with short)	1211(In) 598(Out)
3/1	507
4/1	621
5/1	1144
6/1	651

Lane Saturation Flows

Junction: A61 Wakefield Road / Bar Lane								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Wakefield Road SB)	3.40	0.00	Y	Arm 5 Ahead Arm 6 Right	Inf 12.50	94.6 % 5.4 %	1942	1942
2/1 (Wakefield Road NB)	4.00	0.00	Y	Arm 6 Left	100.00	100.0 %	1985	1985
2/2 (Wakefield Road NB)	3.80	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1995	1995
3/1 (Bar Lane)	3.70	0.00	Y	Arm 4 Left Arm 5 Right	12.50 8.00	4.5 % 95.5 %	1676	1676
4/1 (Wakefield Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Wakefield Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Bar Lane Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 6: '2023 Base Saturday' (FG6: '2023 Base Saturday', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination				
Origin		A	B	C	Tot.
	A	0	543	37	580
	B	589	0	517	1106
	C	34	474	0	508
	Tot.	623	1017	554	2194

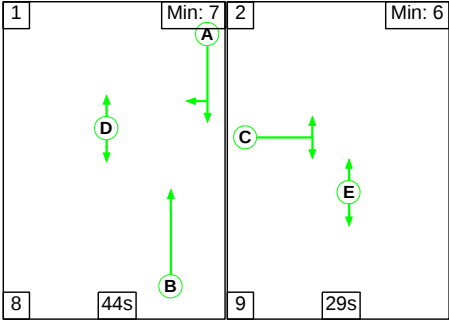
Traffic Lane Flows

Lane	Scenario 6: 2023 Base Saturday
Junction: A61 Wakefield Road / Bar Lane	
1/1	580
2/1 (short)	517
2/2 (with short)	1106(In) 589(Out)
3/1	508
4/1	623
5/1	1017
6/1	554

Lane Saturation Flows

Junction: A61 Wakefield Road / Bar Lane								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Wakefield Road SB)	3.40	0.00	Y	Arm 5 Ahead Arm 6 Right	Inf 12.50	93.6 % 6.4 %	1940	1940
2/1 (Wakefield Road NB)	4.00	0.00	Y	Arm 6 Left	100.00	100.0 %	1985	1985
2/2 (Wakefield Road NB)	3.80	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1995	1995
3/1 (Bar Lane)	3.70	0.00	Y	Arm 4 Left Arm 5 Right	12.50 8.00	6.7 % 93.3 %	1678	1678
4/1 (Wakefield Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Wakefield Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Bar Lane Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

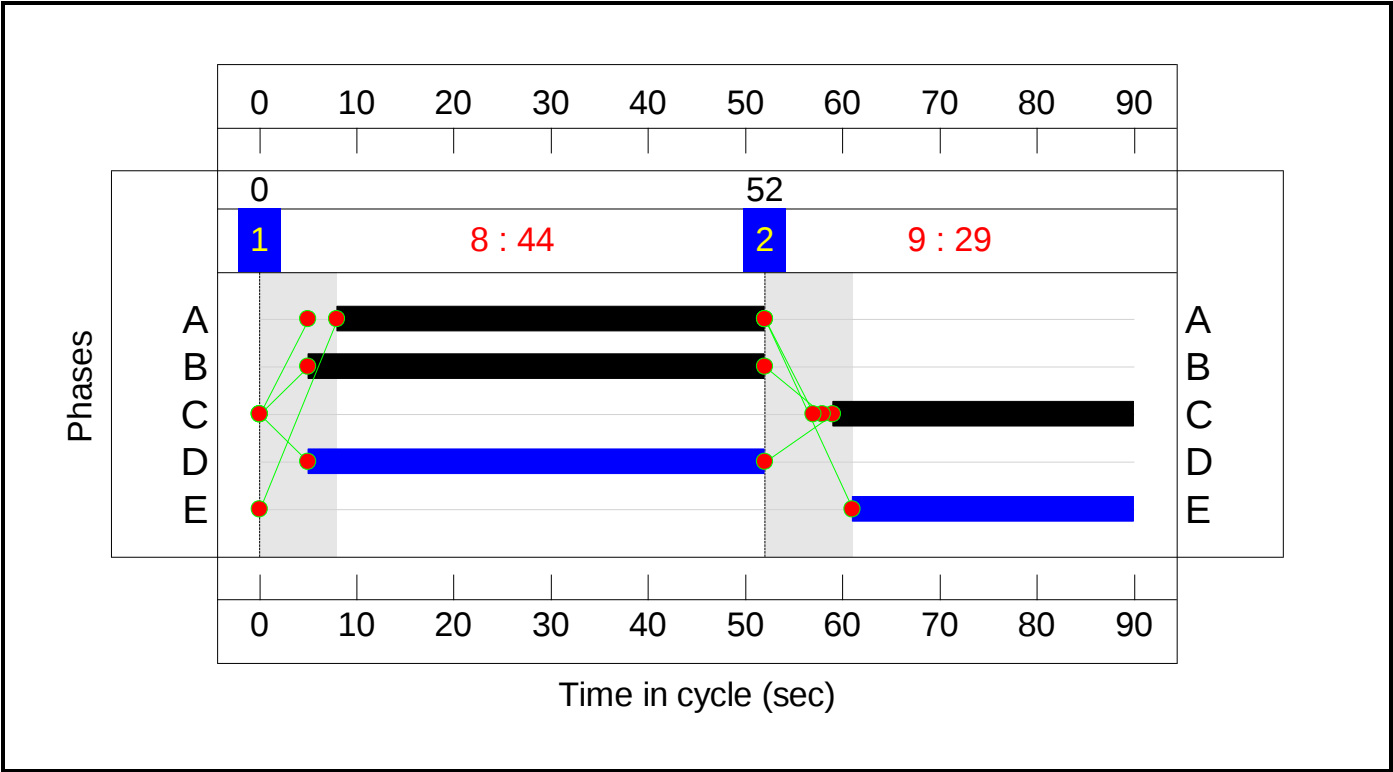
Scenario 4: '2023 Base AM' (FG4: '2023 Base AM', Plan 1: 'Network Control Plan 1')
Stage Sequence Diagram

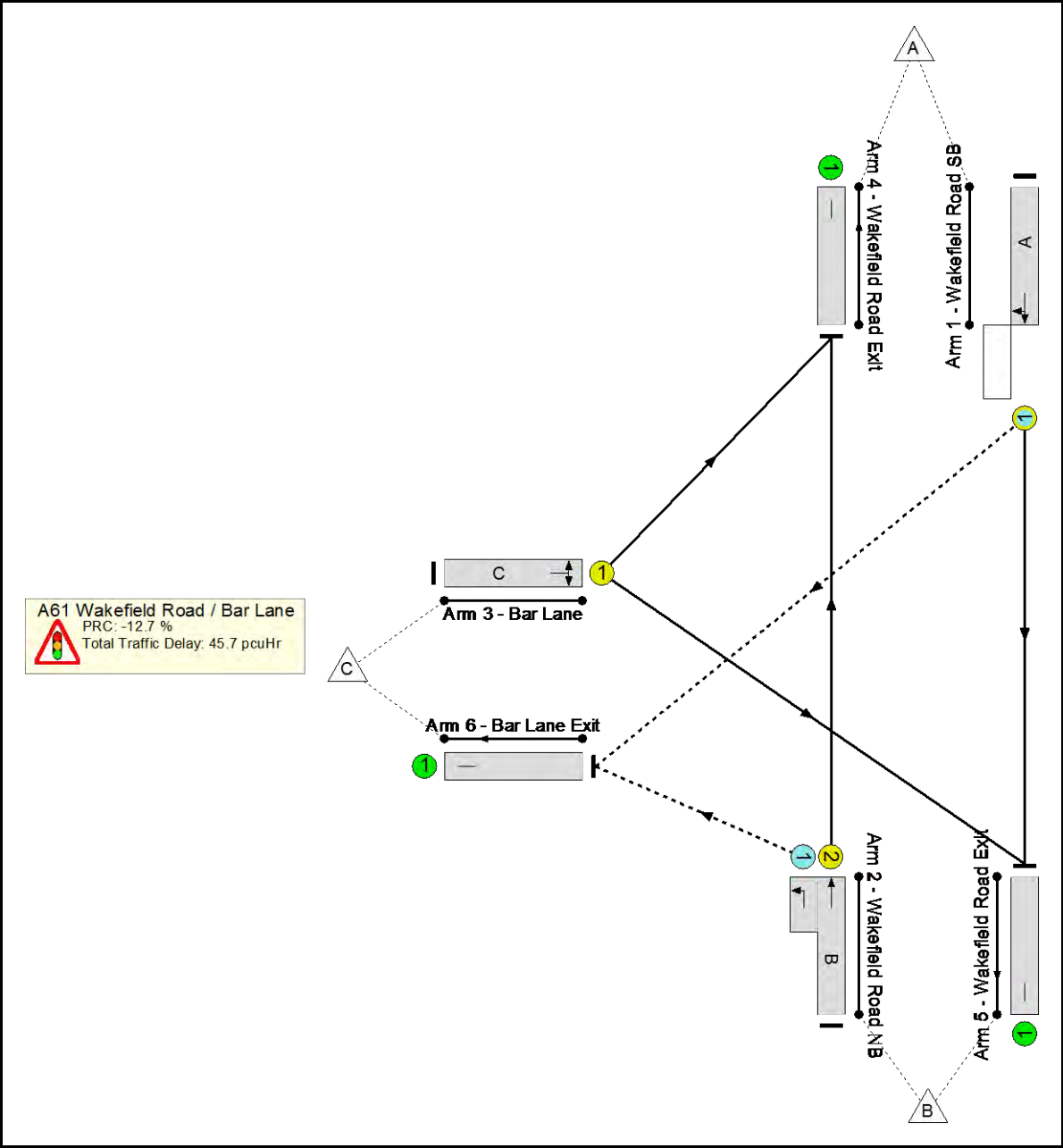


Stage Timings

Stage	1	2
Duration	44	29
Change Point	0	52

Signal Timings Diagram



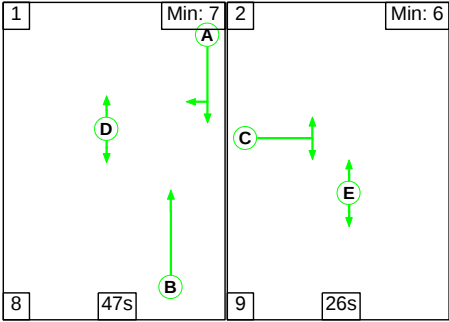


Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: 2017 Existing	-	-	N/A	-	-		-	-	-	-	-	-	101.5%
A61 Wakefield Road / Bar Lane	-	-	N/A	-	-		-	-	-	-	-	-	101.5%
1/1	Wakefield Road SB Ahead Right	O	N/A	N/A	A		1	44	-	579	1949	975	59.4%
2/2+2/1	Wakefield Road NB Ahead Left	U+O	N/A	N/A	B -		1	47	-	1142	1995:1985	1142	100.0%
3/1	Bar Lane Left Right	U	N/A	N/A	C		1	31	-	606	1680	597	101.5%
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: 2017 Existing	-	-	377	61	0	13.4	32.3	0.0	45.7	-	-	-	-
A61 Wakefield Road / Bar Lane	-	-	377	61	0	13.4	32.3	0.0	45.7	-	-	-	-
1/1	579	579	16	0	0	2.6	0.7	0.0	3.3	20.5	10.3	0.7	11.0
2/2+2/1	1142	1142	362	61	0	5.5	16.9	-	22.4	70.5	27.1	16.9	44.0
3/1	606	597	-	-	-	5.3	14.7	-	20.0	118.9	15.4	14.7	30.0
C1 PRC for Signalled Lanes (%): -12.7 Total Delay for Signalled Lanes (pcuHr): 45.68 Cycle Time (s): 90 PRC Over All Lanes (%): -12.7 Total Delay Over All Lanes(pcuHr): 45.68													

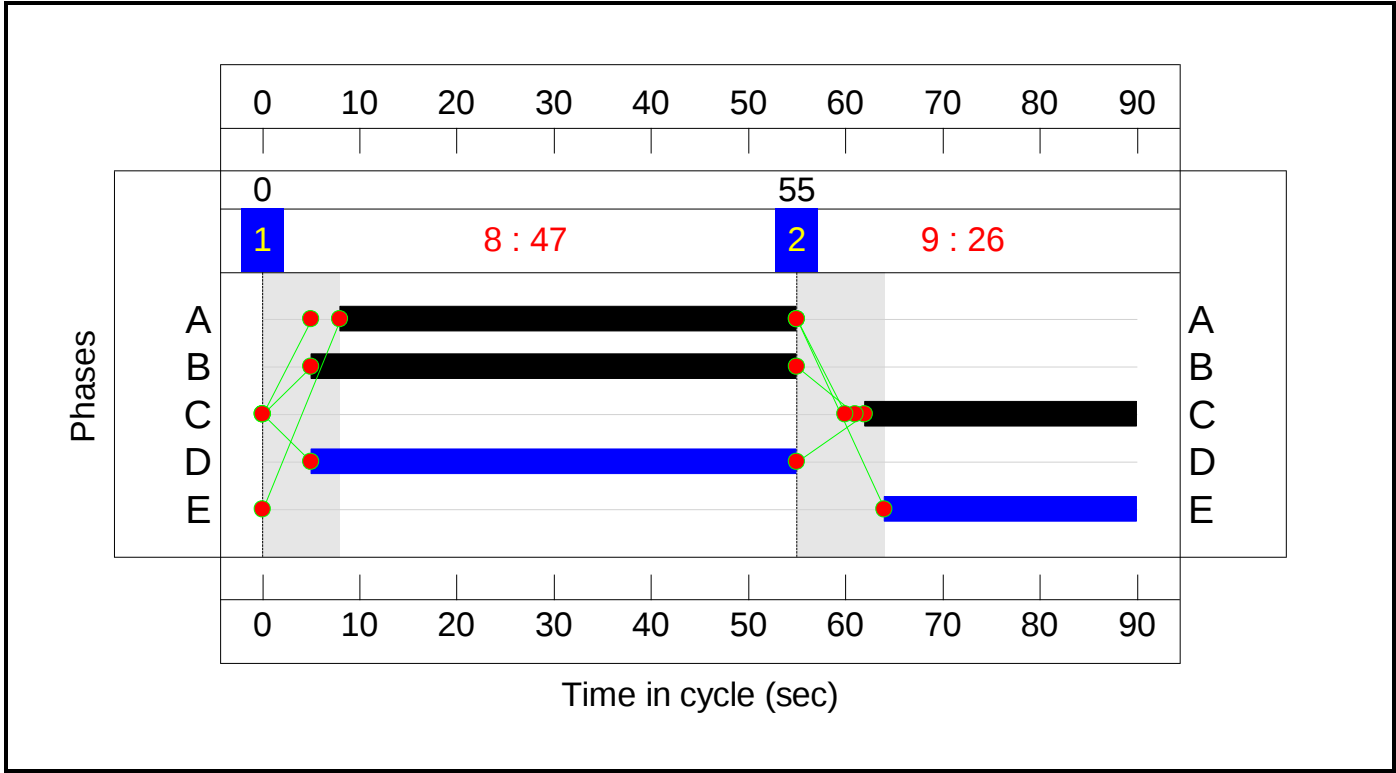
Stage Sequence Diagram



Stage Timings

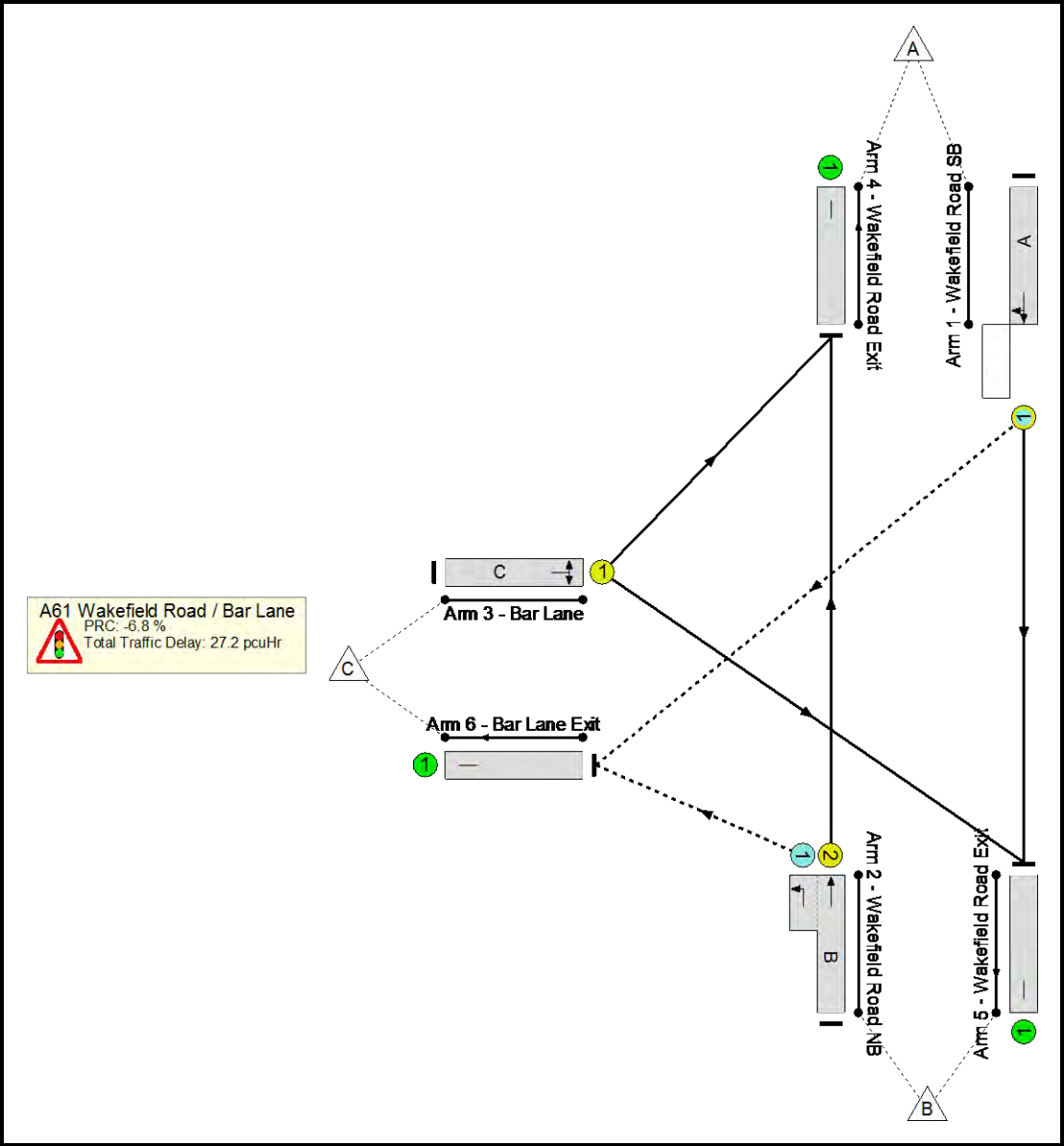
Stage	1	2
Duration	47	26
Change Point	0	55

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

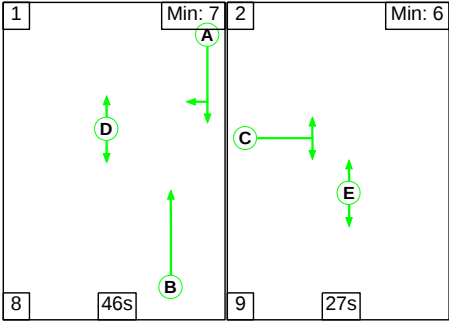


Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: 2017 Existing	-	-	N/A	-	-		-	-	-	-	-	-	96.1%
A61 Wakefield Road / Bar Lane	-	-	N/A	-	-		-	-	-	-	-	-	96.1%
1/1	Wakefield Road SB Ahead Right	O	N/A	N/A	A		1	47	-	698	1942	1036	67.4%
2/2+2/1	Wakefield Road NB Ahead Left	U+O	N/A	N/A	B -		1	50	-	1211	1995:1985	1260	96.1%
3/1	Bar Lane Left Right	U	N/A	N/A	C		1	28	-	507	1676	540	93.9%
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: 2017 Existing	-	-	541	109	1	11.4	15.8	0.0	27.2	-	-	-	-
A61 Wakefield Road / Bar Lane	-	-	541	109	1	11.4	15.8	0.0	27.2	-	-	-	-
1/1	698	698	37	0	1	3.0	1.0	0.0	4.0	20.6	12.6	1.0	13.6
2/2+2/1	1211	1211	504	109	0	4.3	9.0	-	13.3	39.6	25.5	9.0	34.6
3/1	507	507	-	-	-	4.2	5.7	-	9.9	70.1	12.3	5.7	18.0
C1 PRC for Signalled Lanes (%): -6.8 Total Delay for Signalled Lanes (pcuHr): 27.20 Cycle Time (s): 90 PRC Over All Lanes (%): -6.8 Total Delay Over All Lanes(pcuHr): 27.20													

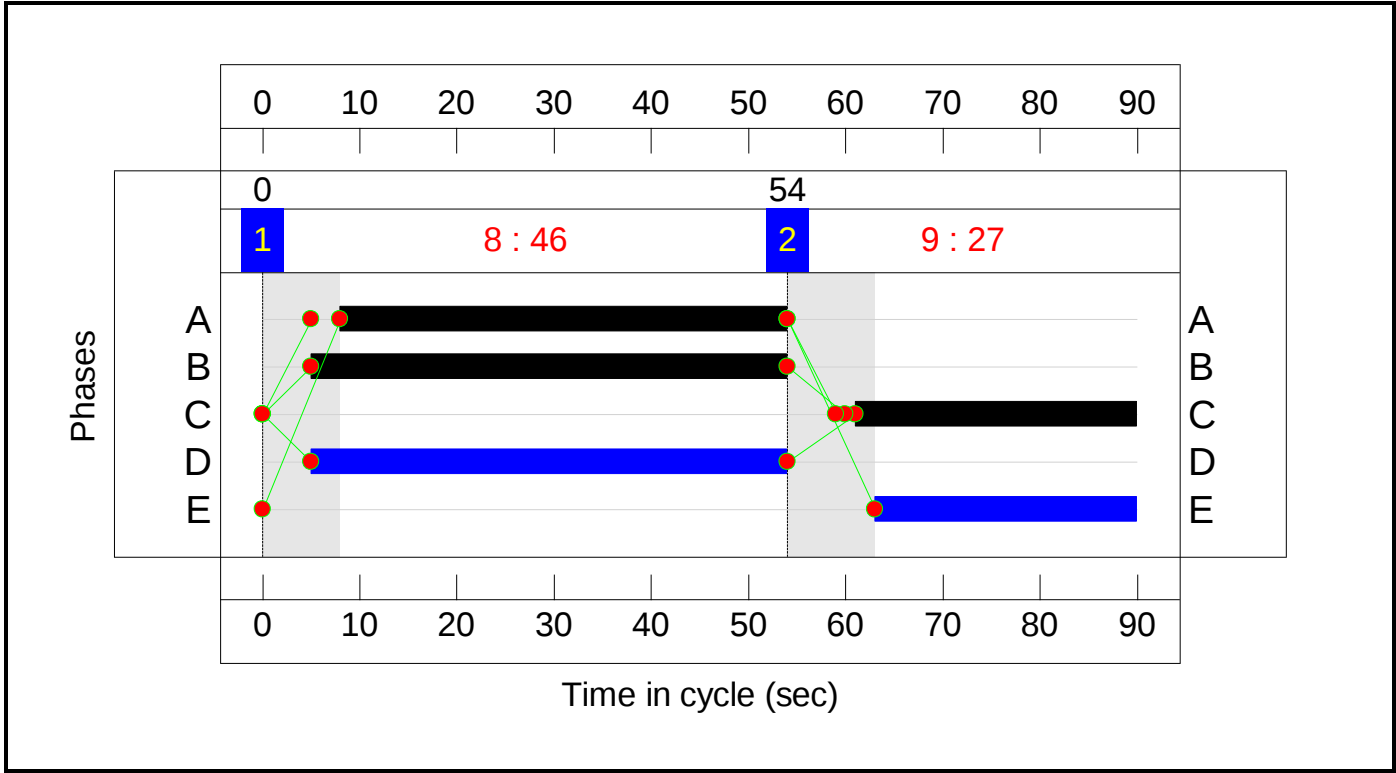
Stage Sequence Diagram

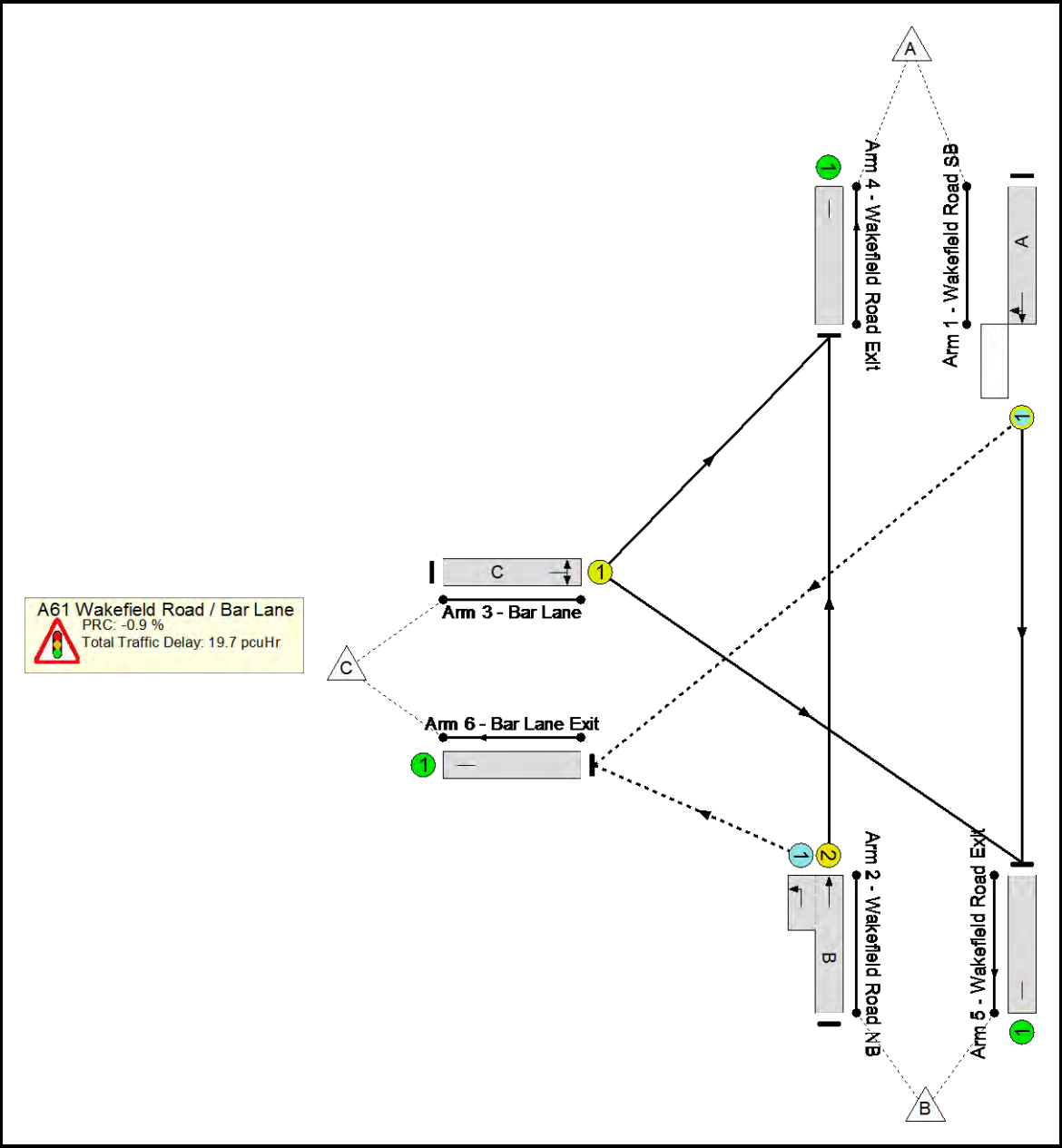


Stage Timings

Stage	1	2
Duration	46	27
Change Point	0	54

Signal Timings Diagram





Full Input Data And Results

Network Results

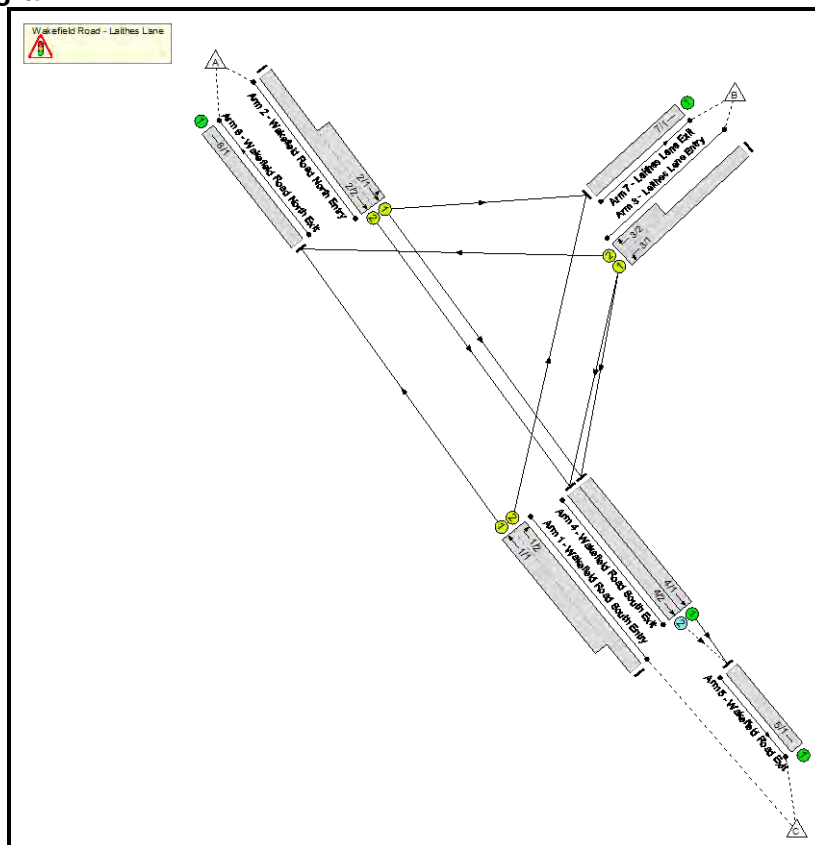
Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: 2017 Existing	-	-	N/A	-	-		-	-	-	-	-	-	90.8%
A61 Wakefield Road / Bar Lane	-	-	N/A	-	-		-	-	-	-	-	-	90.8%
1/1	Wakefield Road SB Ahead Right	O	N/A	N/A	A		1	46	-	580	1940	1013	57.2%
2/2+2/1	Wakefield Road NB Ahead Left	U+O	N/A	N/A	B -		1	49	-	1106	1995:1985	1220	90.6%
3/1	Bar Lane Left Right	U	N/A	N/A	C		1	29	-	508	1678	559	90.8%
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: 2017 Existing	-	-	459	94	1	10.3	9.4	0.0	19.7	-	-	-	-
A61 Wakefield Road / Bar Lane	-	-	459	94	1	10.3	9.4	0.0	19.7	-	-	-	-
1/1	580	580	36	0	1	2.4	0.7	0.0	3.0	18.8	9.8	0.7	10.5
2/2+2/1	1106	1106	423	94	0	3.9	4.5	-	8.3	27.1	21.7	4.5	26.2
3/1	508	508	-	-	-	4.0	4.2	-	8.3	58.8	12.1	4.2	16.4
C1			PRC for Signalled Lanes (%):	-0.9	Total Delay for Signalled Lanes (pcuHr):			19.65	Cycle Time (s): 90				
			PRC Over All Lanes (%):	-0.9	Total Delay Over All Lanes(pcuHr):			19.65					

Full Input Data And Results

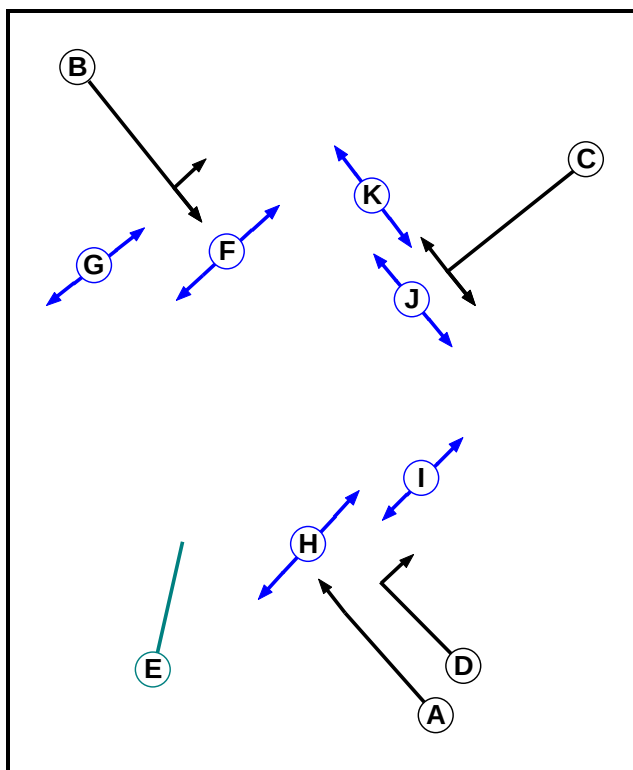
User and Project Details

Project:	Former William Freeman Works, Wakefield Road
Title:	Wakefield Road - Laithes Lane
Location:	
File name:	Wakefield Road - Laithes Lane.lsg3x
Author:	John Turner
Company:	Bryan G Hall
Address:	
Notes:	

Network Layout Diagram



Phase Diagram



Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		7	7
E	Dummy		7	7
F	Pedestrian		7	7
G	Pedestrian		7	7
H	Pedestrian		7	7
I	Pedestrian		7	7
J	Pedestrian		7	7
K	Pedestrian		7	7

Full Input Data And Results

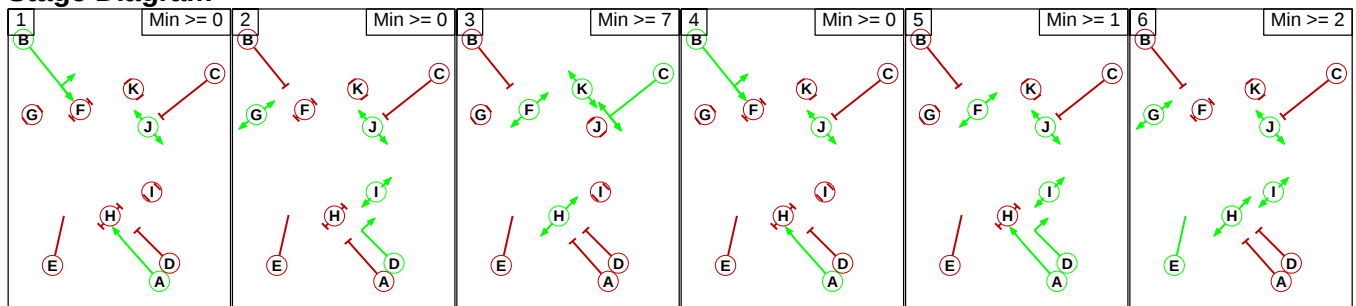
Phase Intergreens Matrix

Terminating Phase	Starting Phase											
		A	B	C	D	E	F	G	H	I	J	K
	A		-	6	-	5	-	8	5	-	-	-
	B	-		8	5	5	5	-	-	9	-	7
	C	5	5		5	5	-	8	-	7	5	-
	D	-	7	5		5	-	-	5	-	-	7
	E	5	5	5	5		-	-	-	-	-	6
	F	-	8	-	-	-		10	-	-	-	-
	G	6	-	6	-	-	-		-	-	-	-
	H	8	-	-	6	-	-	-		-	-	-
	I	-	7	7	-	-	-	-	-		-	-
	J	-	-	7	-	-	-	-	-	-		-
	K	-	7	-	7	7	-	-	-	-	-	

Phases in Stage

Stage No.	Phases in Stage
1	A B J
2	D G I J
3	C F H K
4	A B J
5	A D F I J
6	E G H I J

Stage Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Change

From Stage	To Stage					
	1	2	3	4	5	6
	1		9	8	0	9
	2	7		7	7	6
	3	8	10		8	8
	4	0	9	8		9
	5	8	10	7	8	
	6	8	6	7	8	8

Full Input Data And Results

Give-Way Lane Input Data

Junction: Wakefield Road - Laithes Lane											
Lane	Movement	Max Flow when Giving Way (PCU/Hr)	Min Flow when Giving Way (PCU/Hr)	Opposing Lane	Opp. Lane Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	Non-Blocking Storage (PCU)	RTF	Right Turn Move up (s)	Max Turns in Intergreen (PCU)
4/2 (Wakefield Road South Exit)	5/1 (Ahead)	1439	0	4/1	1.09	All	-	-	-	-	-

Full Input Data And Results

Lane Input Data

Junction: Wakefield Road - Laithes Lane												
Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (Wakefield Road South Entry)	U	A	2	3	22.6	Geom	-	3.25	0.00	Y	Arm 6 Ahead	Inf
1/2 (Wakefield Road South Entry)	U	D	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 7 Right	17.00
2/1 (Wakefield Road North Entry)	U	B	2	3	9.6	Geom	-	3.50	0.00	Y	Arm 4 Ahead	Inf
											Arm 7 Left	20.00
2/2 (Wakefield Road North Entry)	U	B	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 4 Ahead	Inf
3/1 (Laithes Lane Entry)	U	C	2	3	60.0	Geom	-	3.30	0.00	Y	Arm 4 Left	14.00
3/2 (Laithes Lane Entry)	U	C	2	3	6.1	Geom	-	3.30	0.00	Y	Arm 6 Right	18.00
4/1 (Wakefield Road South Exit)	U		2	3	17.4	Geom	-	3.20	0.00	Y	Arm 5 Ahead	Inf
4/2 (Wakefield Road South Exit)	O		2	3	17.4	Geom	-	3.20	0.00	Y	Arm 5 Ahead	Inf
5/1 (Wakefield Road Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1 (Wakefield Road North Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1 (Laithes Lane Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
4: '2023 Base AM'	07:45	08:45	01:00	
5: '2023 Base PM'	16:45	17:45	01:00	
6: '2023 Base Saturday'	11:45	12:45	01:00	

Scenario 4: '2023 Base AM' (FG4: '2023 Base AM', Plan 1: 'Network Control Plan 1')
Traffic Flows, Desired
Desired Flow :

	Destination				
Origin		A	B	C	Tot.
	A	0	348	817	1165
	B	360	0	133	493
	C	715	163	0	878
	Tot.	1075	511	950	2536

Traffic Lane Flows

Lane	Scenario 4: 2023 Base AM
Junction: Wakefield Road - Laithes Lane	
1/1 (short)	715
1/2 (with short)	878(In) 163(Out)
2/1 (short)	583
2/2 (with short)	1165(In) 582(Out)
3/1 (with short)	493(In) 133(Out)
3/2 (short)	360
4/1	301
4/2	649
5/1	950
6/1	1075
7/1	511

Lane Saturation Flows

Junction: Wakefield Road - Laithes Lane								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Wakefield Road South Entry)	3.25	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1940	1940
1/2 (Wakefield Road South Entry)	3.25	0.00	Y	Arm 7 Right	17.00	100.0 %	1783	1783
2/1 (Wakefield Road North Entry)	3.50	0.00	Y	Arm 4 Ahead	Inf	40.3 %	1881	1881
				Arm 7 Left	20.00	59.7 %		
2/2 (Wakefield Road North Entry)	3.50	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1965	1965
3/1 (Laithes Lane Entry)	3.30	0.00	Y	Arm 4 Left	14.00	100.0 %	1757	1757
3/2 (Laithes Lane Entry)	3.30	0.00	Y	Arm 6 Right	18.00	100.0 %	1795	1795
4/1 (Wakefield Road South Exit)	3.20	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1935	1935
4/2 (Wakefield Road South Exit)	3.20	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1935	1935
5/1 (Wakefield Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Wakefield Road North Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Laithes Lane Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 5: '2023 Base PM' (FG5: '2023 Base PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination				
Origin		A	B	C	Tot.
	A	0	362	717	1079
	B	382	0	154	536
	C	902	186	0	1088
	Tot.	1284	548	871	2703

Traffic Lane Flows

Lane	Scenario 5: 2023 Base PM
Junction: Wakefield Road - Laithes Lane	
1/1 (short)	902
1/2 (with short)	1088(In) 186(Out)
2/1 (short)	540
2/2 (with short)	1079(In) 539(Out)
3/1 (with short)	536(In) 154(Out)
3/2 (short)	382
4/1	255
4/2	616
5/1	871
6/1	1284
7/1	548

Lane Saturation Flows

Junction: Wakefield Road - Laithes Lane														
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)						
1/1 (Wakefield Road South Entry)	3.25	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1940	1940						
1/2 (Wakefield Road South Entry)	3.25	0.00	Y	Arm 7 Right	17.00	100.0 %	1783	1783						
2/1 (Wakefield Road North Entry)	3.50	0.00	Y	Arm 4 Ahead	Inf	33.0 %	1871	1871						
				Arm 7 Left	20.00	67.0 %								
2/2 (Wakefield Road North Entry)	3.50	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1965	1965						
3/1 (Laithes Lane Entry)	3.30	0.00	Y	Arm 4 Left	14.00	100.0 %	1757	1757						
3/2 (Laithes Lane Entry)	3.30	0.00	Y	Arm 6 Right	18.00	100.0 %	1795	1795						
4/1 (Wakefield Road South Exit)	3.20	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1935	1935						
4/2 (Wakefield Road South Exit)	3.20	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1935	1935						
5/1 (Wakefield Road Exit Lane 1)							Infinite Saturation Flow						Inf	Inf
6/1 (Wakefield Road North Exit Lane 1)							Infinite Saturation Flow						Inf	Inf
7/1 (Laithes Lane Exit Lane 1)	Infinite Saturation Flow						Inf	Inf						

Full Input Data And Results

Scenario 6: '2023 Base Saturday' (FG6: '2023 Base Saturday', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination				
Origin		A	B	C	Tot.
	A	0	296	763	1059
	B	284	0	178	462
	C	820	206	0	1026
	Tot.	1104	502	941	2547

Traffic Lane Flows

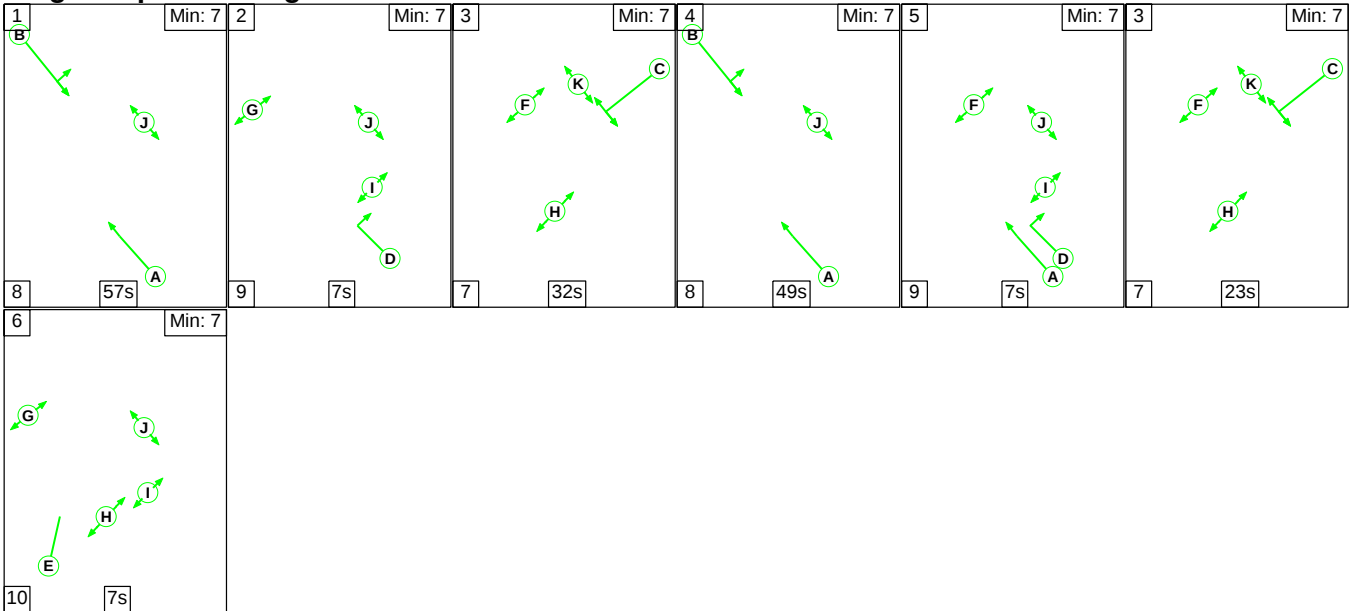
Lane	Scenario 6: 2023 Base Saturday
Junction: Wakefield Road - Laithes Lane	
1/1 (short)	820
1/2 (with short)	1026(In) 206(Out)
2/1 (short)	530
2/2 (with short)	1059(In) 529(Out)
3/1 (with short)	462(In) 178(Out)
3/2 (short)	284
4/1	323
4/2	618
5/1	941
6/1	1104
7/1	502

Lane Saturation Flows

Junction: Wakefield Road - Laithes Lane								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Wakefield Road South Entry)	3.25	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1940	1940
1/2 (Wakefield Road South Entry)	3.25	0.00	Y	Arm 7 Right	17.00	100.0 %	1783	1783
2/1 (Wakefield Road North Entry)	3.50	0.00	Y	Arm 4 Ahead	Inf	44.2 %	1886	1886
2/2 (Wakefield Road North Entry)	3.50	0.00	Y	Arm 7 Left	20.00	55.8 %	1886	1886
2/2 (Wakefield Road North Entry)	3.50	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1965	1965
3/1 (Laithes Lane Entry)	3.30	0.00	Y	Arm 4 Left	14.00	100.0 %	1757	1757
3/2 (Laithes Lane Entry)	3.30	0.00	Y	Arm 6 Right	18.00	100.0 %	1795	1795
4/1 (Wakefield Road South Exit)	3.20	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1935	1935
4/2 (Wakefield Road South Exit)	3.20	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1935	1935
5/1 (Wakefield Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Wakefield Road North Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Laithes Lane Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 4: '2023 Base AM' (FG4: '2023 Base AM', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

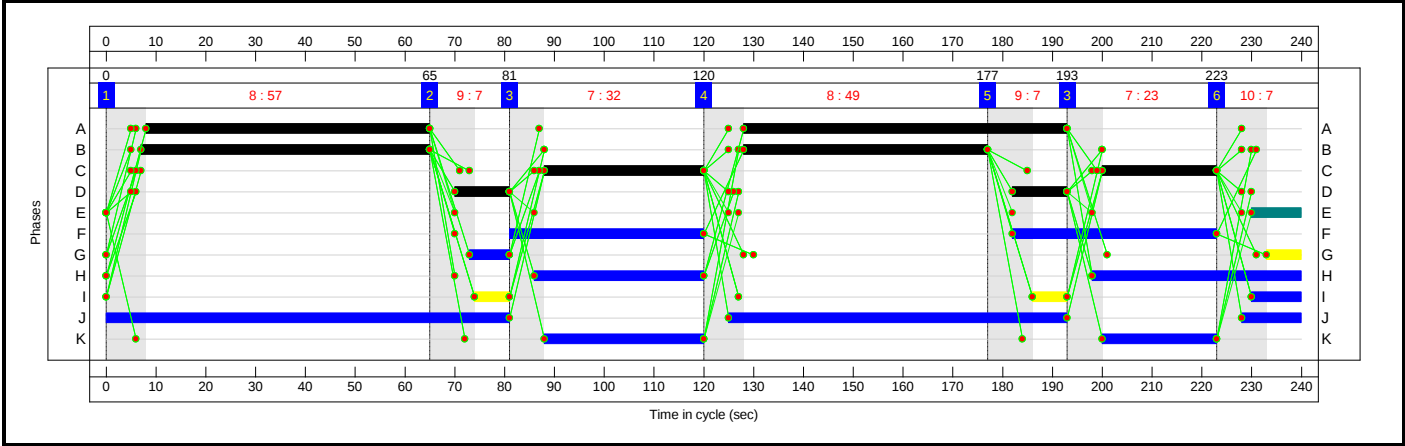


Full Input Data And Results

Stage Timings

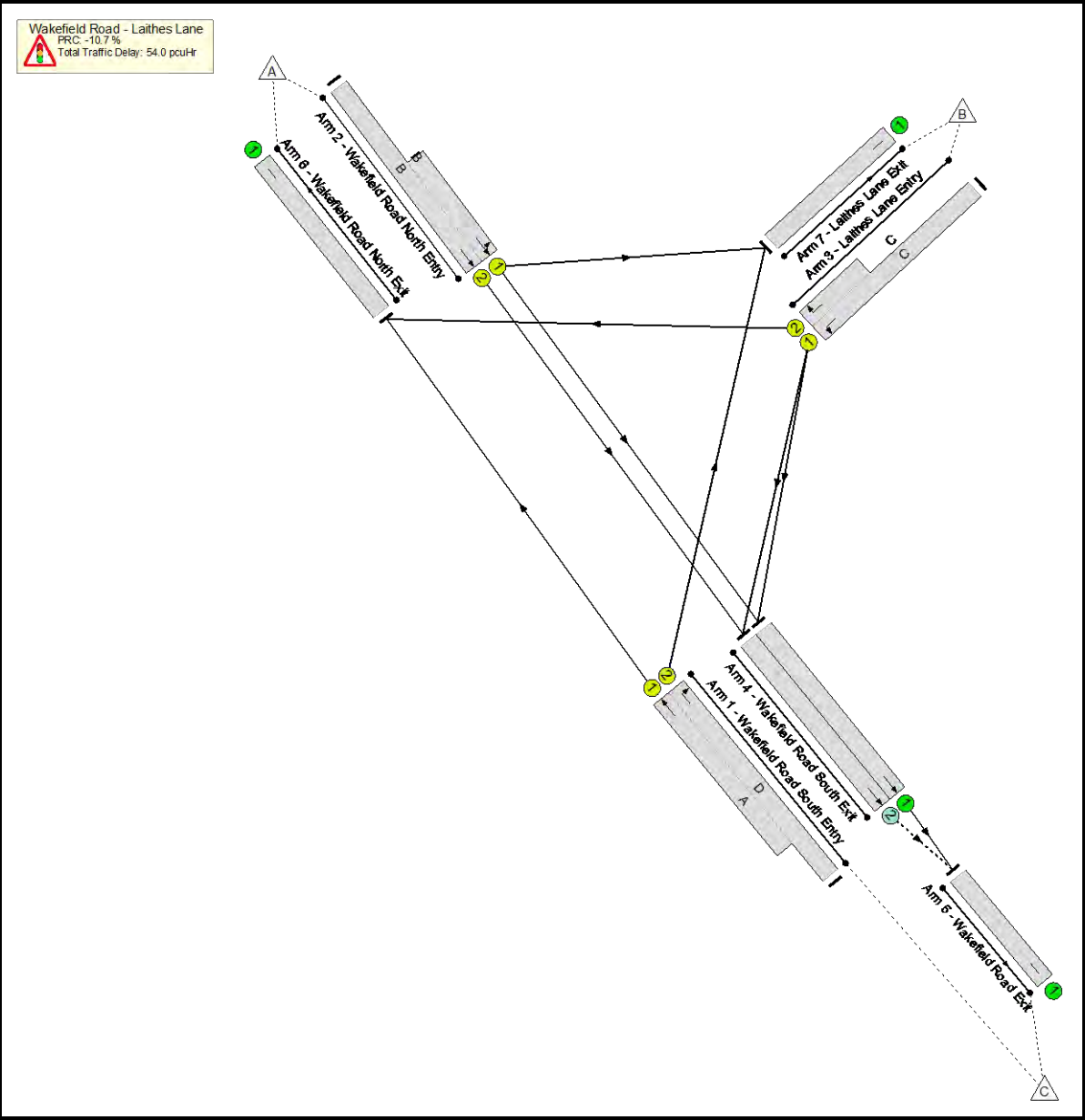
Stage	1	2	3	4	5	3	6
Duration	57	7	32	49	7	23	7
Change Point	0	65	81	120	177	193	223

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

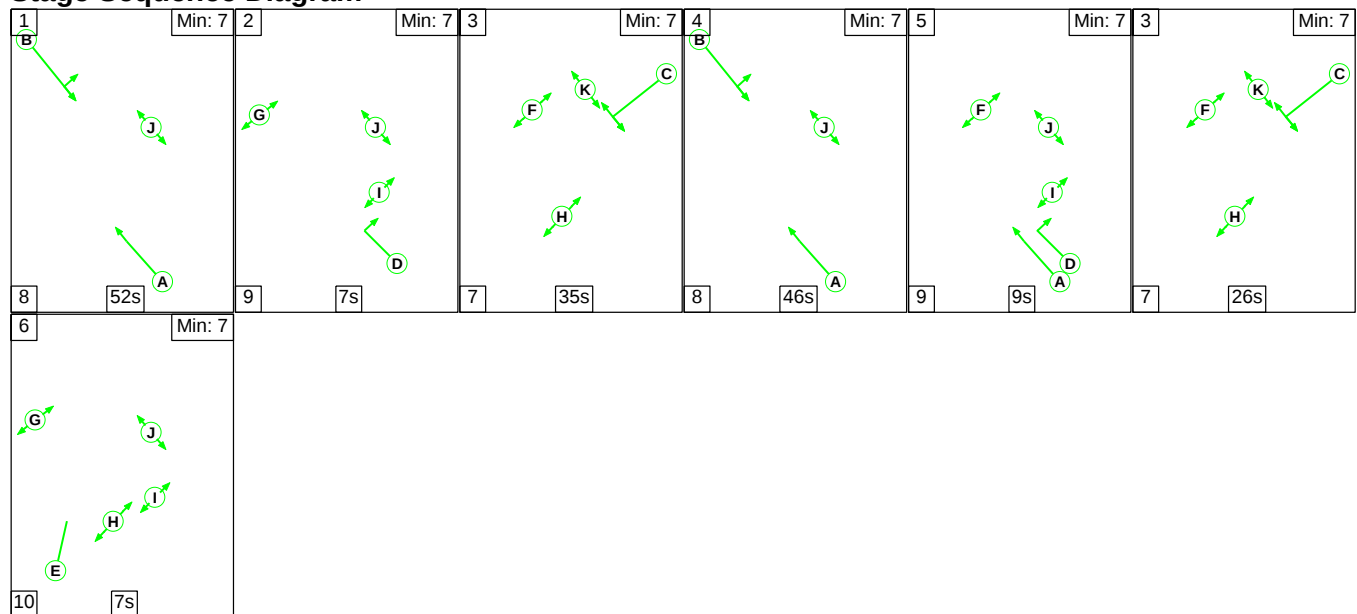
Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Wakefield Road - Laithes Lane	-	-	N/A	-	-		-	-	-	-	-	-	99.6%
Wakefield Road - Laithes Lane	-	-	N/A	-	-		-	-	-	-	-	-	99.6%
1/2+1/1	Wakefield Road South Entry Ahead Right	U	N/A	N/A	D A		2	22:122	-	878	1783:1940	1121	78.3%
2/2+2/1	Wakefield Road North Entry Ahead Left	U	N/A	N/A	B		2	107	-	1165	1965:1881	1169	99.6%
3/1+3/2	Laithes Lane Entry Left Right	U	N/A	N/A	C		2	55	-	493	1757:1795	495	99.6%
4/1	Wakefield Road South Exit Ahead	U	N/A	N/A	-		-	-	-	301	1935	1935	15.6%
4/2	Wakefield Road South Exit Ahead	O	N/A	N/A	-		-	-	-	649	1935	1111	58.4%
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Wakefield Road - Laithes Lane	-	-	649	0	0	24.7	29.3	0.0	54.0	-	-	-	-
Wakefield Road - Laithes Lane	-	-	649	0	0	24.7	29.3	0.0	54.0	-	-	-	-
1/2+1/1	878	878	-	-	-	6.9	1.8	-	8.6	35.4	19.5	1.8	21.2
2/2+2/1	1165	1165	-	-	-	9.1	16.0	-	25.2	77.8	31.8	16.0	47.9
3/1+3/2	493	493	-	-	-	6.2	10.6	-	16.8	122.8	16.5	10.6	27.1
4/1	301	301	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
4/2	649	649	649	0	0	2.6	0.7	-	3.3	18.1	20.1	0.7	20.8

Full Input Data And Results

C1	PRC for Signalled Lanes (%):	-10.7	Total Delay for Signalled Lanes (pcuHr):	50.62	Cycle Time (s):	240
	PRC Over All Lanes (%):	-10.7	Total Delay Over All Lanes(pcuHr):	53.98		

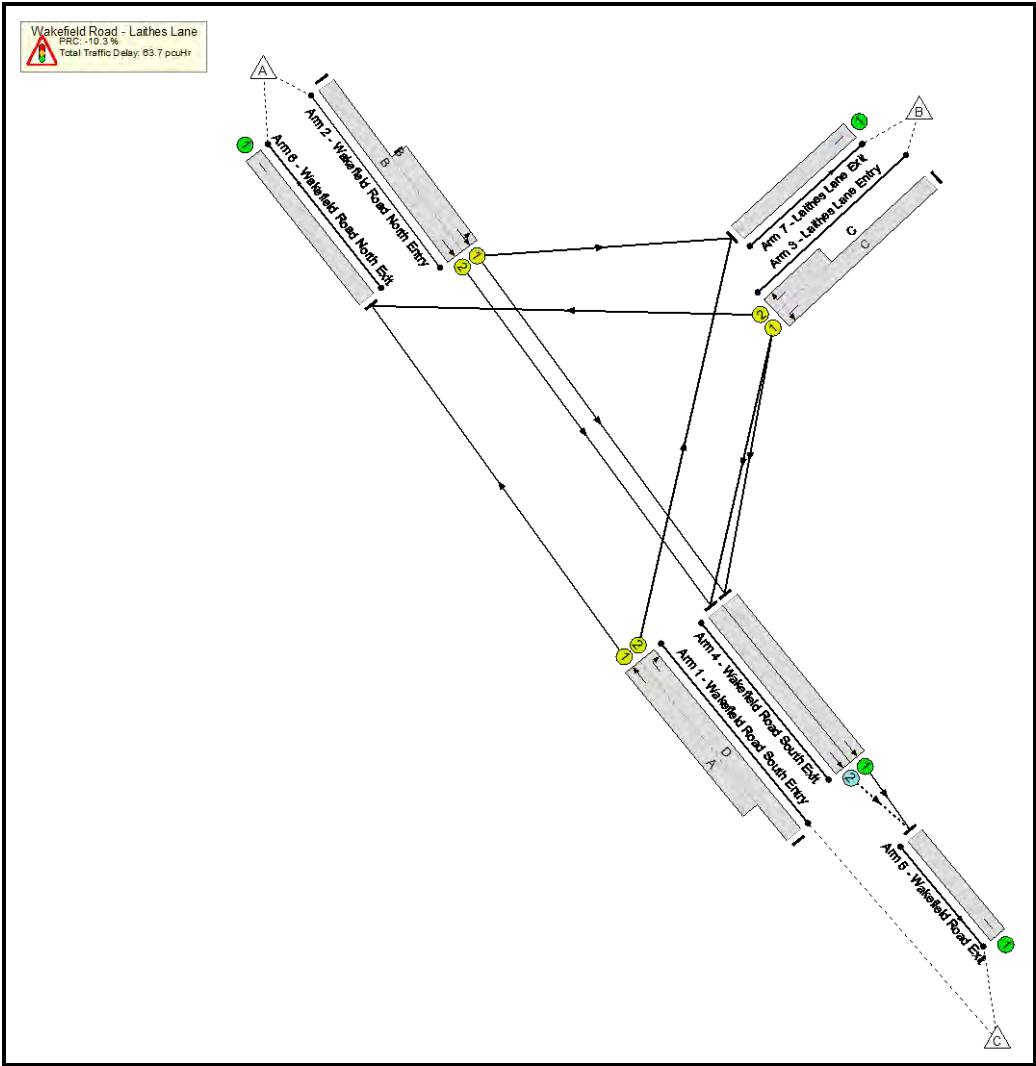
Stage Sequence Diagram



Stage	1	2	3	4	5	3	6
Duration	52	7	35	46	9	26	7
Change Point	0	60	76	118	172	190	223

Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Wakefield Road - Laithes Lane	-	-	N/A	-	-		-	-	-	-	-	-	99.3%
Wakefield Road - Laithes Lane	-	-	N/A	-	-		-	-	-	-	-	-	99.3%
1/2+1/1	Wakefield Road South Entry Ahead Right	U	N/A	N/A	D A		2	24:116	-	1088	1783:1940	1096	99.3%
2/2+2/1	Wakefield Road North Entry Ahead Left	U	N/A	N/A	B		2	99	-	1079	1965:1871	1104	97.8%
3/1+3/2	Laithes Lane Entry Left Right	U	N/A	N/A	C		2	61	-	536	1757:1795	546	98.2%
4/1	Wakefield Road South Exit Ahead	U	N/A	N/A	-		-	-	-	255	1935	1935	13.2%
4/2	Wakefield Road South Exit Ahead	O	N/A	N/A	-		-	-	-	616	1935	1161	53.1%
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Wakefield Road - Laithes Lane	-	-	616	0	0	27.6	36.1	0.0	63.7	-	-	-	-
Wakefield Road - Laithes Lane	-	-	616	0	0	27.6	36.1	0.0	63.7	-	-	-	-
1/2+1/1	1088	1088	-	-	-	10.4	14.7	-	25.1	83.1	34.1	14.7	48.8
2/2+2/1	1079	1079	-	-	-	9.0	11.4	-	20.4	67.9	28.2	11.4	39.6
3/1+3/2	536	536	-	-	-	6.4	9.4	-	15.8	106.1	17.5	9.4	26.9
4/1	255	255	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
4/2	616	616	616	0	0	1.8	0.6	-	2.4	14.0	18.6	0.6	19.1

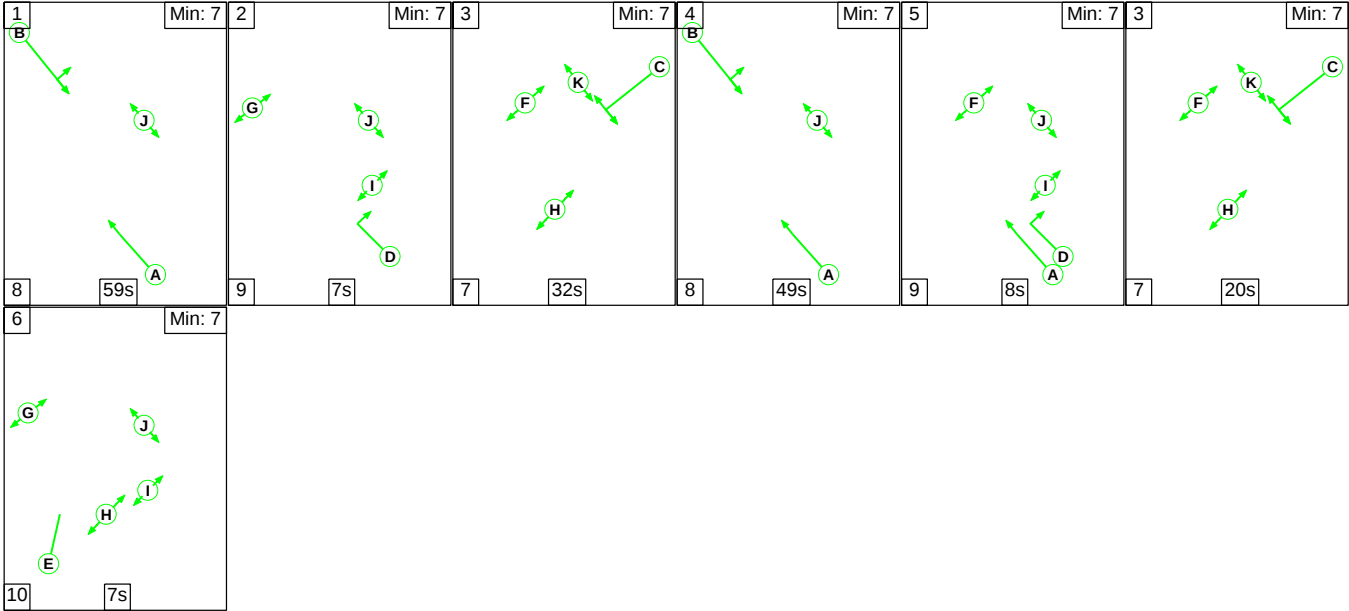
Full Input Data And Results

C1	PRC for Signalled Lanes (%):	-10.3	Total Delay for Signalled Lanes (pcuHr):	61.25	Cycle Time (s):	240
	PRC Over All Lanes (%):	-10.3	Total Delay Over All Lanes(pcuHr):	63.73		

Full Input Data And Results

Scenario 6: '2023 Base Saturday' (FG6: '2023 Base Saturday', Plan 1: 'Network Control Plan 1')

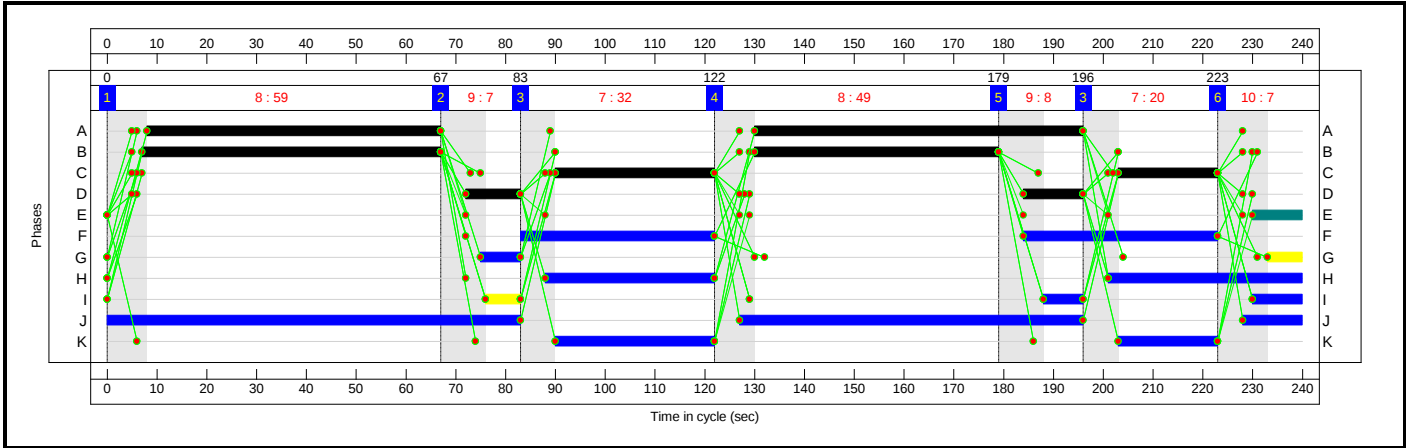
Stage Sequence Diagram



Stage Timings

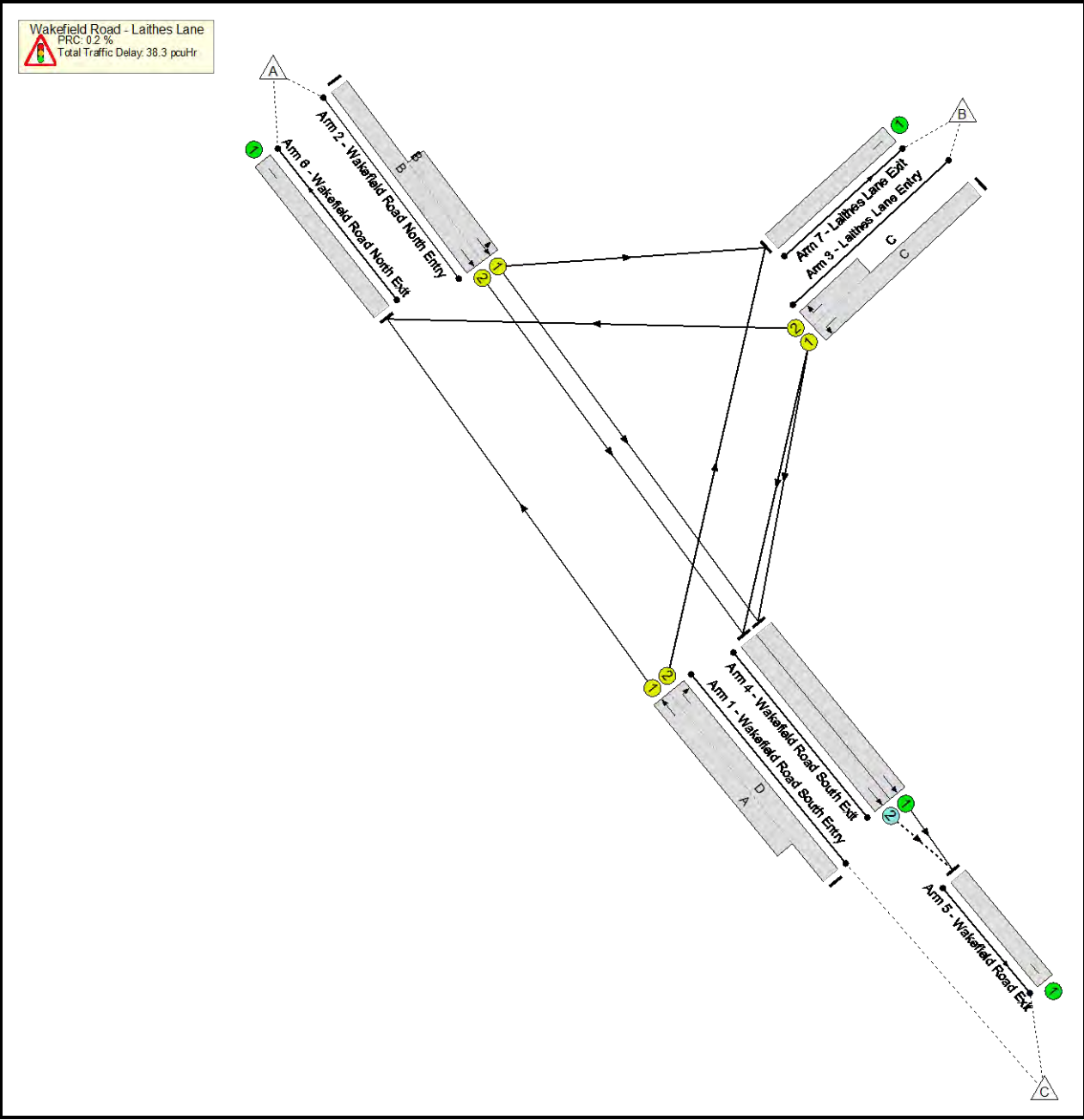
Stage	1	2	3	4	5	3	6
Duration	59	7	32	49	8	20	7
Change Point	0	67	83	122	179	196	223

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Wakefield Road - Laithes Lane	-	-	N/A	-	-		-	-	-	-	-	-	89.8%
Wakefield Road - Laithes Lane	-	-	N/A	-	-		-	-	-	-	-	-	89.8%
1/2+1/1	Wakefield Road South Entry Ahead Right	U	N/A	N/A	D A		2	23:125	-	1026	1783:1940	1143	89.8%
2/2+2/1	Wakefield Road North Entry Ahead Left	U	N/A	N/A	B		2	109	-	1059	1965:1886	1186	89.3%
3/1+3/2	Laithes Lane Entry Left Right	U	N/A	N/A	C		2	52	-	462	1757:1795	519	89.0%
4/1	Wakefield Road South Exit Ahead	U	N/A	N/A	-		-	-	-	323	1935	1935	16.7%
4/2	Wakefield Road South Exit Ahead	O	N/A	N/A	-		-	-	-	618	1935	1087	56.9%
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Wakefield Road - Laithes Lane	-	-	618	0	0	26.0	12.4	0.0	38.3	-	-	-	-
Wakefield Road - Laithes Lane	-	-	618	0	0	26.0	12.4	0.0	38.3	-	-	-	-
1/2+1/1	1026	1006	-	-	-	10.7	4.1	-	14.8	51.8	25.2	4.1	29.3
2/2+2/1	1059	1059	-	-	-	7.3	3.9	-	11.2	38.2	21.9	3.9	25.8
3/1+3/2	462	462	-	-	-	5.6	3.6	-	9.2	71.6	13.1	3.6	16.7
4/1	323	323	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
4/2	618	618	618	0	0	2.4	0.7	-	3.1	17.8	18.2	0.7	18.9

Full Input Data And Results

C1	PRC for Signalled Lanes (%):	0.2	Total Delay for Signalled Lanes (pcuHr):	35.18	Cycle Time (s):	240
	PRC Over All Lanes (%):	0.2	Total Delay Over All Lanes(pcuHr):	38.34		

Junctions 9			
ARCADY 9 - Roundabout Module			
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Filename: A61 Wakefield Road-A633 Rotherham Road mini-Roundabout.j9

Path: Y:\2014\14-101 to 14-125\14-114 Former William Freeman Works, Mapplewell\Technical\2017 Transport Assessment\Junction Modelling\Junctions 9

Report generation date: 08/01/2018 09:03:23

«2023 Base, AM

- »Junction Network
- »Arms
- »Traffic Demand
- »Origin-Destination Data
- »Vehicle Mix
- »Results

Summary of junction performance

	AM			
	Queue (PCU)	Delay (s)	RFC	LOS
2023 Base				
1 - A61 North	1.4	4.67	0.59	A
2 - A633 Rotherham Road	9.9	75.26	0.94	F
3 - A61 South	1.3	8.71	0.57	A

There are warnings associated with this model run - see the 'Data Errors and Warnings' tables.

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

File summary

File Description

Title	A61 Wakefield Road/A633 Rotherham Road
Location	Mapplewell, Barnsley
Site number	
Date	29/11/2017
Version	
Status	(new file)
Identifier	
Client	Netherton Building and Construction
Jobnumber	14-114
Enumerator	BRYANGHALL\design
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Mini-roundabout model	Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
JUNCTIONS 9			0.85	36.00	20.00

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2023 Base	AM	ONE HOUR	07:30	09:00	15

2023 Base, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	22.20	C

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Arm	Name	Description
1	A61 North	
2	A633 Rotherham Road	
3	A61 South	

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
1 - A61 North	4.50	4.50	6.50	27.0	20.00	20.00	0.0	✓
2 - A633 Rotherham Road	4.00	4.00	6.20	6.0	9.70	2.00	0.0	✓
3 - A61 South	4.20	4.20	5.10	1.5	20.00	20.00	0.0	✓

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - A61 North	0.901	1905
2 - A633 Rotherham Road	0.556	970
3 - A61 South	0.840	1381

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

Traffic Demand

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A61 North		✓	994	100.000
2 - A633 Rotherham Road		✓	456	100.000
3 - A61 South		✓	502	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To			
		1 - A61 North	2 - A633 Rotherham Road	3 - A61 South
1 - A61 North		0	277	717
2 - A633 Rotherham Road		456	0	0
3 - A61 South		461	41	0

Vehicle Mix

Heavy Vehicle Percentages

From	To			
		1 - A61 North	2 - A633 Rotherham Road	3 - A61 South
1 - A61 North		0	0	0
2 - A633 Rotherham Road		0	0	0
3 - A61 South		0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1 - A61 North	0.59	4.67	1.4	A
2 - A633 Rotherham Road	0.94	75.26	9.9	F
3 - A61 South	0.57	8.71	1.3	A

Main Results for each time segment

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	748	31	1878	0.399	746	0.7	3.174	A
2 - A633 Rotherham Road	343	538	671	0.512	339	1.0	10.724	B
3 - A61 South	378	339	1096	0.345	376	0.5	4.987	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	894	37	1872	0.477	893	0.9	3.672	A
2 - A633 Rotherham Road	410	644	612	0.670	406	1.9	17.189	C
3 - A61 South	451	406	1039	0.434	450	0.8	6.102	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	1094	45	1865	0.587	1092	1.4	4.649	A
2 - A633 Rotherham Road	502	788	532	0.944	478	7.9	52.433	F
3 - A61 South	553	478	979	0.565	551	1.3	8.365	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	1094	45	1865	0.587	1094	1.4	4.674	A
2 - A633 Rotherham Road	502	789	531	0.945	494	9.9	75.262	F
3 - A61 South	553	494	966	0.572	553	1.3	8.706	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	894	37	1872	0.477	896	0.9	3.694	A
2 - A633 Rotherham Road	410	646	611	0.671	441	2.2	24.471	C
3 - A61 South	451	441	1010	0.447	453	0.8	6.484	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	748	31	1877	0.399	749	0.7	3.193	A
2 - A633 Rotherham Road	343	541	670	0.513	348	1.1	11.329	B
3 - A61 South	378	348	1089	0.347	379	0.5	5.080	A

Junctions 9			
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Filename: A61 Wakefield Road-A633 Rotherham Road mini-Roundabout.j9

Path: Y:\2014\14-101 to 14-125\14-114 Former William Freeman Works, Mapplewell\Technical\2017 Transport Assessment\Junction Modelling\Junctions 9

Report generation date: 08/01/2018 09:03:57

«2023 Base, PM

- »Junction Network
- »Arms
- »Traffic Demand
- »Origin-Destination Data
- »Vehicle Mix
- »Results

Summary of junction performance

	PM			
	Queue (PCU)	Delay (s)	RFC	LOS
2023 Base				
1 - A61 North	1.2	4.25	0.54	A
2 - A633 Rotherham Road	1.8	15.03	0.65	C
3 - A61 South	7.1	30.23	0.89	D

There are warnings associated with this model run - see the 'Data Errors and Warnings' tables.

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

File summary

File Description

Title	A61 Wakefield Road/A633 Rotherham Road
Location	Mapplewell, Barnsley
Site number	
Date	29/11/2017
Version	
Status	(new file)
Identifier	
Client	Netherton Building and Construction
Jobnumber	14-114
Enumerator	BRYANGHALL\design
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Mini-roundabout model	Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
JUNCTIONS 9			0.85	36.00	20.00

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2023 Base	PM	ONE HOUR	16:30	18:00	15

2023 Base, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 1 and 3 have 81% of the total flow for the roundabout for one or more time segments]
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	16.33	C

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Arm	Name	Description
1	A61 North	
2	A633 Rotherham Road	
3	A61 South	

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
1 - A61 North	4.50	4.50	6.50	27.0	20.00	20.00	0.0	✓
2 - A633 Rotherham Road	4.00	4.00	6.20	6.0	9.70	2.00	0.0	✓
3 - A61 South	4.20	4.20	5.10	1.5	20.00	20.00	0.0	✓

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - A61 North	0.901	1905
2 - A633 Rotherham Road	0.556	970
3 - A61 South	0.840	1381

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

Traffic Demand

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A61 North		✓	898	100.000
2 - A633 Rotherham Road		✓	400	100.000
3 - A61 South		✓	818	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		1 - A61 North	2 - A633 Rotherham Road	3 - A61 South
From				
	1 - A61 North	0	423	475
	2 - A633 Rotherham Road	400	0	0
	3 - A61 South	748	70	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		1 - A61 North	2 - A633 Rotherham Road	3 - A61 South
From				
	1 - A61 North	0	0	0
	2 - A633 Rotherham Road	0	0	0
	3 - A61 South	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1 - A61 North	0.54	4.25	1.2	A
2 - A633 Rotherham Road	0.65	15.03	1.8	C
3 - A61 South	0.89	30.23	7.1	D

Main Results for each time segment

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	676	52	1858	0.364	674	0.6	3.035	A
2 - A633 Rotherham Road	301	356	772	0.390	299	0.6	7.569	A
3 - A61 South	616	299	1130	0.545	611	1.2	6.879	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	807	63	1849	0.437	806	0.8	3.454	A
2 - A633 Rotherham Road	360	427	733	0.491	358	0.9	9.580	A
3 - A61 South	735	358	1080	0.681	732	2.1	10.242	B

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	989	76	1837	0.538	987	1.2	4.228	A
2 - A633 Rotherham Road	440	522	680	0.648	437	1.8	14.640	B
3 - A61 South	901	437	1013	0.889	883	6.4	24.923	C

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	989	77	1836	0.539	989	1.2	4.248	A
2 - A633 Rotherham Road	440	523	679	0.648	440	1.8	15.032	C
3 - A61 South	901	440	1011	0.891	898	7.1	30.225	D

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	807	65	1847	0.437	809	0.8	3.471	A
2 - A633 Rotherham Road	360	428	732	0.491	363	1.0	9.831	A
3 - A61 South	735	363	1076	0.683	755	2.2	11.840	B

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	676	53	1857	0.364	677	0.6	3.053	A
2 - A633 Rotherham Road	301	358	771	0.391	302	0.6	7.708	A
3 - A61 South	616	302	1127	0.547	620	1.2	7.159	A

Junctions 9			
ARCADY 9 - Roundabout Module			
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Filename: A61 Wakefield Road-A633 Rotherham Road mini-Roundabout.j9

Path: Y:\2014\14-101 to 14-125\14-114 Former William Freeman Works, Mapplewell\Technical\2017 Transport Assessment\Junction Modelling\Junctions 9

Report generation date: 08/01/2018 09:04:32

«2023 Base, Saturday

- »Junction Network
- »Arms
- »Traffic Demand
- »Origin-Destination Data
- »Vehicle Mix
- »Results

Summary of junction performance

	Saturday			
	Queue (PCU)	Delay (s)	RFC	LOS
2023 Base				
1 - A61 North	1.4	4.69	0.59	A
2 - A633 Rotherham Road	2.7	23.28	0.74	C
3 - A61 South	3.5	16.08	0.78	C

There are warnings associated with this model run - see the 'Data Errors and Warnings' tables.

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

File summary

File Description

Title	A61 Wakefield Road/A633 Rotherham Road
Location	Mapplewell, Barnsley
Site number	
Date	29/11/2017
Version	
Status	(new file)
Identifier	
Client	Netherton Building and Construction
Jobnumber	14-114
Enumerator	BRYANGHALL\design
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Mini-roundabout model	Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
JUNCTIONS 9			0.85	36.00	20.00

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2023 Base	Saturday	ONE HOUR	11:30	13:00	15

2023 Base, Saturday

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 1 and 3 have 81% of the total flow for the roundabout for one or more time segments]
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	12.06	B

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Arm	Name	Description
1	A61 North	
2	A633 Rotherham Road	
3	A61 South	

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
1 - A61 North	4.50	4.50	6.50	27.0	20.00	20.00	0.0	✓
2 - A633 Rotherham Road	4.00	4.00	6.20	6.0	9.70	2.00	0.0	✓
3 - A61 South	4.20	4.20	5.10	1.5	20.00	20.00	0.0	✓

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - A61 North	0.901	1905
2 - A633 Rotherham Road	0.556	970
3 - A61 South	0.840	1381

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

Traffic Demand

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A61 North		✓	986	100.000
2 - A633 Rotherham Road		✓	388	100.000
3 - A61 South		✓	727	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		1 - A61 North	2 - A633 Rotherham Road	3 - A61 South
From	1 - A61 North	0	349	637
	2 - A633 Rotherham Road	388	0	0
	3 - A61 South	674	53	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		1 - A61 North	2 - A633 Rotherham Road	3 - A61 South
From	1 - A61 North	0	0	0
	2 - A633 Rotherham Road	0	0	0
	3 - A61 South	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1 - A61 North	0.59	4.69	1.4	A
2 - A633 Rotherham Road	0.74	23.28	2.7	C
3 - A61 South	0.78	16.08	3.5	C

Main Results for each time segment

11:30 - 11:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	742	40	1869	0.397	740	0.7	3.180	A
2 - A633 Rotherham Road	292	478	704	0.415	289	0.7	8.617	A
3 - A61 South	547	289	1138	0.481	544	0.9	6.025	A

11:45 - 12:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	886	47	1862	0.476	885	0.9	3.681	A
2 - A633 Rotherham Road	349	572	652	0.535	347	1.1	11.738	B
3 - A61 South	654	347	1089	0.600	651	1.5	8.181	A

12:00 - 12:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	1086	58	1853	0.586	1084	1.4	4.666	A
2 - A633 Rotherham Road	427	700	581	0.735	421	2.6	21.824	C
3 - A61 South	800	421	1027	0.780	793	3.3	14.964	B

12:15 - 12:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	1086	58	1853	0.586	1086	1.4	4.693	A
2 - A633 Rotherham Road	427	701	580	0.736	427	2.7	23.279	C
3 - A61 South	800	427	1022	0.783	800	3.5	16.078	C

12:30 - 12:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	886	48	1862	0.476	888	0.9	3.707	A
2 - A633 Rotherham Road	349	574	651	0.536	355	1.2	12.380	B
3 - A61 South	654	355	1083	0.604	661	1.6	8.688	A

12:45 - 13:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A61 North	742	40	1869	0.397	743	0.7	3.202	A
2 - A633 Rotherham Road	292	480	703	0.415	294	0.7	8.840	A
3 - A61 South	547	294	1134	0.483	550	0.9	6.189	A

Junctions 8				
PICADY 8 - Priority Intersection Module				
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Filename: Left Turn from Rotherham Road to Wakefield Road.arc8

Path: Y:\2014\14-101 to 14-125\14-114 Former William Freeman Works, Mapplewell\Technical\2017 Transport Assessment\Junction Modelling\Junctions 8\Left Turn from Rotherham Road to Wakefield Road

Report generation date: 08/01/2018 09:12:30

« (Default Analysis Set) - 2023 Base, AM

- » Junction Network
- » Arms
- » Traffic Flows
- » Entry Flows
- » Turning Proportions
- » Vehicle Mix
- » Results

Summary of junction performance

	AM			
	Queue (PCU)	Delay (s)	RFC	LOS
A1 - 2023 Base				
Stream B-AC	0.39	9.14	0.28	A
Stream C-A	-	-	-	-
Stream C-B	0.00	0.00	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 - 2017 Existing, AM" model duration: 07:30 - 09:00

"D2 - 2017 Existing, PM" model duration: 16:30 - 18:00

"D3 - 2017 Existing, Saturday" model duration: 16:30 - 18:00

"D4 - 2023 Base, AM " model duration: 07:30 - 09:00

"D5 - 2023 Base, PM" model duration: 16:30 - 18:00

"D6 - 2023 Base, Saturday" model duration: 16:30 - 18:00

"D7 - 2023 Predicted, AM" model duration: 07:30 - 09:00

"D8 - 2023 Predicted, PM" model duration: 16:30 - 18:00

"D9 - 2023 Predicted, Saturday" model duration: 16:30 - 18:00

"D10 - 2023 Predicted with Lidl, AM" model duration: 07:30 - 09:00

"D11 - 2023 Predicted with Lidl, PM" model duration: 16:30 - 18:00

"D12 - 2023 Predicted with Lidl, Saturday" model duration: 16:30 - 18:00

Run using Junctions 8.0.5.523 at 08/01/2018 09:12:29

File summary

Title	Left Turn from Rotherham Road to Wakefield Road Southbound
Location	Mapplewell, Barnsley
Site Number	
Date	29/11/2017
Version	
Status	(new file)
Identifier	
Client	Netherton Building and Construction
Jobnumber	14-114
Enumerator	johnturner
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	-Min	perMin

(Default Analysis Set) - 2023 Base, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2023 Base, AM	2023 Base	AM		ONE HOUR	07:30	09:00	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	A,B,C	9.14	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description	Arm Type
A61 North	A	A61 North		Major
Rotherham Road Left Turn	B	Rotherham Road Left Turn		Minor
A61 South	C	A61 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)
A61 South	8.00		0.00		2.20	0.00		

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)
Rotherham Road Left Turn	One lane	5.00										0	15

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	582.214	0.097	0.245	0.154	0.350
1	B-C	760.204	0.106	0.269	-	-
1	C-B	573.963	0.203	0.203	-	-

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 (%)
A61 North	ONE HOUR	✓	717.00	100.000
Rotherham Road Left Turn	ONE HOUR	✓	140.00	100.000
A61 South	ONE HOUR	✓	461.00	100.000

Turning Proportions

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

	To			
		A61 North	Rotherham Road Left Turn	A61 South
From	A61 North	0.000	0.000	717.000
	Rotherham Road Left Turn	0.000	0.000	140.000
	A61 South	461.000	0.000	0.000

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

	To			
		A61 North	Rotherham Road Left Turn	A61 South
From	A61 North	0.00	0.00	1.00
	Rotherham Road Left Turn	0.00	0.00	1.00
	A61 South	1.00	0.00	0.00

Vehicle Mix

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

	To			
		A61 North	Rotherham Road Left Turn	A61 South
From	A61 North	1.000	1.000	1.000
	Rotherham Road Left Turn	1.000	1.000	1.000
	A61 South	1.000	1.000	1.000

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

	To			
		A61 North	Rotherham Road Left Turn	A61 South
From	A61 North	0.0	0.0	0.0
	Rotherham Road Left Turn	0.0	0.0	0.0
	A61 South	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-A-C	0.28	9.14	0.39	A
C-A	-	-	-	-
C-B	0.00	0.00	0.00	A
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (07:30-07:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	105.40	104.58	0.00	615.05	0.171	0.20	7.040	A
C-A	347.06	347.06	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	464.37	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	539.80	539.80	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	125.86	125.60	0.00	586.87	0.214	0.27	7.801	A
C-A	414.43	414.43	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	443.09	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	644.57	644.57	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	154.14	153.68	0.00	547.91	0.281	0.39	9.120	A
C-A	507.57	507.57	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	413.68	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	789.43	789.43	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	154.14	154.13	0.00	547.91	0.281	0.39	9.141	A
C-A	507.57	507.57	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	413.68	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	789.43	789.43	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	125.86	126.31	0.00	586.87	0.214	0.28	7.825	A
C-A	414.43	414.43	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	443.09	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	644.57	644.57	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	105.40	105.67	0.00	615.05	0.171	0.21	7.070	A
C-A	347.06	347.06	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	464.37	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	539.80	539.80	0.00	-	-	-	-	-

Junctions 8				
PICADY 8 - Priority Intersection Module				
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Filename: Left Turn from Rotherham Road to Wakefield Road.arc8

Path: Y:\2014\14-101 to 14-125\14-114 Former William Freeman Works, Mapplewell\Technical\2017 Transport Assessment\Junction Modelling\Junctions 8\Left Turn from Rotherham Road to Wakefield Road

Report generation date: 08/01/2018 09:12:53

« (Default Analysis Set) - 2023 Base, PM

- » Junction Network
- » Arms
- » Traffic Flows
- » Entry Flows
- » Turning Proportions
- » Vehicle Mix
- » Results

Summary of junction performance

	PM			
	Queue (PCU)	Delay (s)	RFC	LOS
A1 - 2023 Base				
Stream B-AC	0.12	6.50	0.11	A
Stream C-A	-	-	-	-
Stream C-B	0.00	0.00	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 - 2017 Existing, AM" model duration: 07:30 - 09:00

"D2 - 2017 Existing, PM" model duration: 16:30 - 18:00

"D3 - 2017 Existing, Saturday" model duration: 16:30 - 18:00

"D4 - 2023 Base, AM" model duration: 07:30 - 09:00

"D5 - 2023 Base, PM " model duration: 16:30 - 18:00

"D6 - 2023 Base, Saturday" model duration: 16:30 - 18:00

"D7 - 2023 Predicted, AM" model duration: 07:30 - 09:00

"D8 - 2023 Predicted, PM" model duration: 16:30 - 18:00

"D9 - 2023 Predicted, Saturday" model duration: 16:30 - 18:00

"D10 - 2023 Predicted with Lidl, AM" model duration: 07:30 - 09:00

"D11 - 2023 Predicted with Lidl, PM" model duration: 16:30 - 18:00

"D12 - 2023 Predicted with Lidl, Saturday" model duration: 16:30 - 18:00

Run using Junctions 8.0.5.523 at 08/01/2018 09:12:53

File summary

Title	Left Turn from Rotherham Road to Wakefield Road Southbound
Location	Mapplewell, Barnsley
Site Number	
Date	29/11/2017
Version	
Status	(new file)
Identifier	
Client	Netherton Building and Construction
Jobnumber	14-114
Enumerator	johnturner
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	-Min	perMin

(Default Analysis Set) - 2023 Base, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2023 Base, PM	2023 Base	PM		ONE HOUR	16:30	18:00	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	A,B,C	6.50	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description	Arm Type
A61 North	A	A61 North		Major
Rotherham Road Left Turn	B	Rotherham Road Left Turn		Minor
A61 South	C	A61 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)
A61 South	8.00		0.00		2.20	0.00		

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)
Rotherham Road Left Turn	One lane	5.00										0	15

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	582.214	0.097	0.245	0.154	0.350
1	B-C	760.204	0.106	0.269	-	-
1	C-B	573.963	0.203	0.203	-	-

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 (%)
A61 North	ONE HOUR	✓	475.00	100.000
Rotherham Road Left Turn	ONE HOUR	✓	60.00	100.000
A61 South	ONE HOUR	✓	748.00	100.000

Turning Proportions

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

	To			
		A61 North	Rotherham Road Left Turn	A61 South
From	A61 North	0.000	0.000	475.000
	Rotherham Road Left Turn	0.000	0.000	60.000
	A61 South	748.000	0.000	0.000

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

	To			
		A61 North	Rotherham Road Left Turn	A61 South
From	A61 North	0.00	0.00	1.00
	Rotherham Road Left Turn	0.00	0.00	1.00
	A61 South	1.00	0.00	0.00

Vehicle Mix

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

	To			
		A61 North	Rotherham Road Left Turn	A61 South
From	A61 North	1.000	1.000	1.000
	Rotherham Road Left Turn	1.000	1.000	1.000
	A61 South	1.000	1.000	1.000

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

	To			
		A61 North	Rotherham Road Left Turn	A61 South
From	A61 North	0.0	0.0	0.0
	Rotherham Road Left Turn	0.0	0.0	0.0
	A61 South	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-A-C	0.11	6.50	0.12	A
C-A	-	-	-	-
C-B	0.00	0.00	0.00	A
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (16:30-16:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	45.17	44.88	0.00	664.04	0.068	0.07	5.811	A
C-A	563.13	563.13	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	501.36	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	357.60	357.60	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	53.94	53.87	0.00	645.37	0.084	0.09	6.086	A
C-A	672.44	672.44	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	487.26	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	427.02	427.02	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	66.06	65.95	0.00	619.57	0.107	0.12	6.500	A
C-A	823.56	823.56	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	467.78	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	522.98	522.98	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	66.06	66.06	0.00	619.57	0.107	0.12	6.503	A
C-A	823.56	823.56	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	467.78	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	522.98	522.98	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	53.94	54.05	0.00	645.37	0.084	0.09	6.088	A
C-A	672.44	672.44	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	487.26	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	427.02	427.02	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	45.17	45.24	0.00	664.04	0.068	0.07	5.820	A
C-A	563.13	563.13	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	501.36	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	357.60	357.60	0.00	-	-	-	-	-

Junctions 8				
PICADY 8 - Priority Intersection Module				
Version: 8.0.5.523 [19102,19/06/2015] © Copyright TRL Limited, 2018				
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Filename: Left Turn from Rotherham Road to Wakefield Road.arc8

Path: Y:\2014\14-101 to 14-125\14-114 Former William Freeman Works, Mapplewell\Technical\2017 Transport Assessment\Junction Modelling\Junctions 8\Left Turn from Rotherham Road to Wakefield Road

Report generation date: 08/01/2018 09:13:19

« (Default Analysis Set) - 2023 Base, Saturday

- » Junction Network
- » Arms
- » Traffic Flows
- » Entry Flows
- » Turning Proportions
- » Vehicle Mix
- » Results

Summary of junction performance

	Saturday			
	Queue (PCU)	Delay (s)	RFC	LOS
A1 - 2023 Base				
Stream B-AC	0.16	7.28	0.13	A
Stream C-A	-	-	-	-
Stream C-B	0.00	0.00	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 - 2017 Existing, AM" model duration: 07:30 - 09:00

"D2 - 2017 Existing, PM" model duration: 16:30 - 18:00

"D3 - 2017 Existing, Saturday" model duration: 16:30 - 18:00

"D4 - 2023 Base, AM" model duration: 07:30 - 09:00

"D5 - 2023 Base, PM" model duration: 16:30 - 18:00

"D6 - 2023 Base, Saturday " model duration: 16:30 - 18:00

"D7 - 2023 Predicted, AM" model duration: 07:30 - 09:00

"D8 - 2023 Predicted, PM" model duration: 16:30 - 18:00

"D9 - 2023 Predicted, Saturday" model duration: 16:30 - 18:00

"D10 - 2023 Predicted with Lidl, AM" model duration: 07:30 - 09:00

"D11 - 2023 Predicted with Lidl, PM" model duration: 16:30 - 18:00

"D12 - 2023 Predicted with Lidl, Saturday" model duration: 16:30 - 18:00

Run using Junctions 8.0.5.523 at 08/01/2018 09:13:18

File summary

Title	Left Turn from Rotherham Road to Wakefield Road Southbound
Location	Mapplewell, Barnsley
Site Number	
Date	29/11/2017
Version	
Status	(new file)
Identifier	
Client	Netherton Building and Construction
Jobnumber	14-114
Enumerator	johnturner
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	-Min	perMin

(Default Analysis Set) - 2023 Base, Saturday

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2023 Base, Saturday	2023 Base	Saturday		ONE HOUR	16:30	18:00	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	A,B,C	7.28	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description	Arm Type
A61 North	A	A61 North		Major
Rotherham Road Left Turn	B	Rotherham Road Left Turn		Minor
A61 South	C	A61 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)
A61 South	8.00		0.00		2.20	0.00		

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)
Rotherham Road Left Turn	One lane	5.00										0	15

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	582.214	0.097	0.245	0.154	0.350
1	B-C	760.204	0.106	0.269	-	-
1	C-B	573.963	0.203	0.203	-	-

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 (%)
A61 North	ONE HOUR	✓	637.00	100.000
Rotherham Road Left Turn	ONE HOUR	✓	70.00	100.000
A61 South	ONE HOUR	✓	674.00	100.000

Turning Proportions

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

	To			
		A61 North	Rotherham Road Left Turn	A61 South
From	A61 North	0.000	0.000	637.000
	Rotherham Road Left Turn	0.000	0.000	70.000
	A61 South	674.000	0.000	0.000

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

	To			
		A61 North	Rotherham Road Left Turn	A61 South
From	A61 North	0.00	0.00	1.00
	Rotherham Road Left Turn	0.00	0.00	1.00
	A61 South	1.00	0.00	0.00

Vehicle Mix

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

	To			
		A61 North	Rotherham Road Left Turn	A61 South
From	A61 North	1.000	1.000	1.000
	Rotherham Road Left Turn	1.000	1.000	1.000
	A61 South	1.000	1.000	1.000

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

	To			
		A61 North	Rotherham Road Left Turn	A61 South
From	A61 North	0.0	0.0	0.0
	Rotherham Road Left Turn	0.0	0.0	0.0
	A61 South	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-A-C	0.13	7.28	0.16	A
C-A	-	-	-	-
C-B	0.00	0.00	0.00	A
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (16:30-16:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	52.70	52.34	0.00	631.24	0.083	0.09	6.214	A
C-A	507.42	507.42	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	476.60	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	479.57	479.57	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	62.93	62.83	0.00	606.21	0.104	0.11	6.625	A
C-A	605.91	605.91	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	457.70	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	572.65	572.65	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	77.07	76.91	0.00	571.60	0.135	0.15	7.275	A
C-A	742.09	742.09	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	431.57	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	701.35	701.35	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	77.07	77.07	0.00	571.60	0.135	0.16	7.278	A
C-A	742.09	742.09	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	431.57	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	701.35	701.35	0.00	-	-	-	-	-

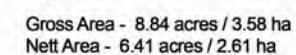
Main results: (17:30-17:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	62.93	63.08	0.00	606.21	0.104	0.12	6.631	A
C-A	605.91	605.91	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	457.70	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	572.65	572.65	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	52.70	52.80	0.00	631.24	0.083	0.09	6.226	A
C-A	507.42	507.42	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	476.60	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	479.57	479.57	0.00	-	-	-	-	-

APPENDIX BGH 11



Name	Bed No	Sq.Ft	No Units	Total Sq.Ft
Kingsley	4	1615	8	12920
Sailsbury	4	1237	7	8659
Leedale	4	1205	13	15665
Hampton	3	839	2	1678
Allington +	3	1033	7	7231
Rochester	4	1065	8	8520
Whitwell	4	1195	9	10755
Bolberry	3	1011	16	16176

Affordable				
Edge	3	839	8	6712
Alto	2	731	4	2924

Total	82	91240
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Nett Area	6.46 acres
	2.61 ha
Gross Area	8.84 acres
	3.58 hectares
Nett Coverage	14124 Sq.Ft/Acre
Nett Density	31 DPH