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MEADOWLANDS

Transport Statement

22/12/2014

Confidentiality: Public

Quality Management

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Remarks	First Issue	Second Issue		
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MEADOWLANDS

Transport Statement

22/12/2014

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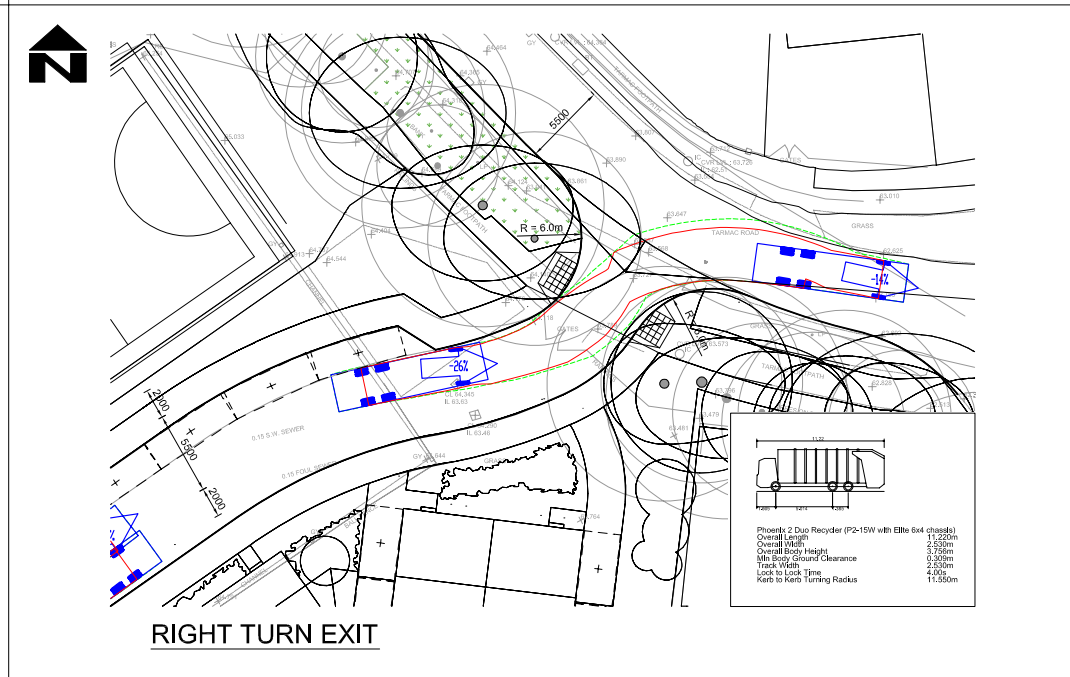
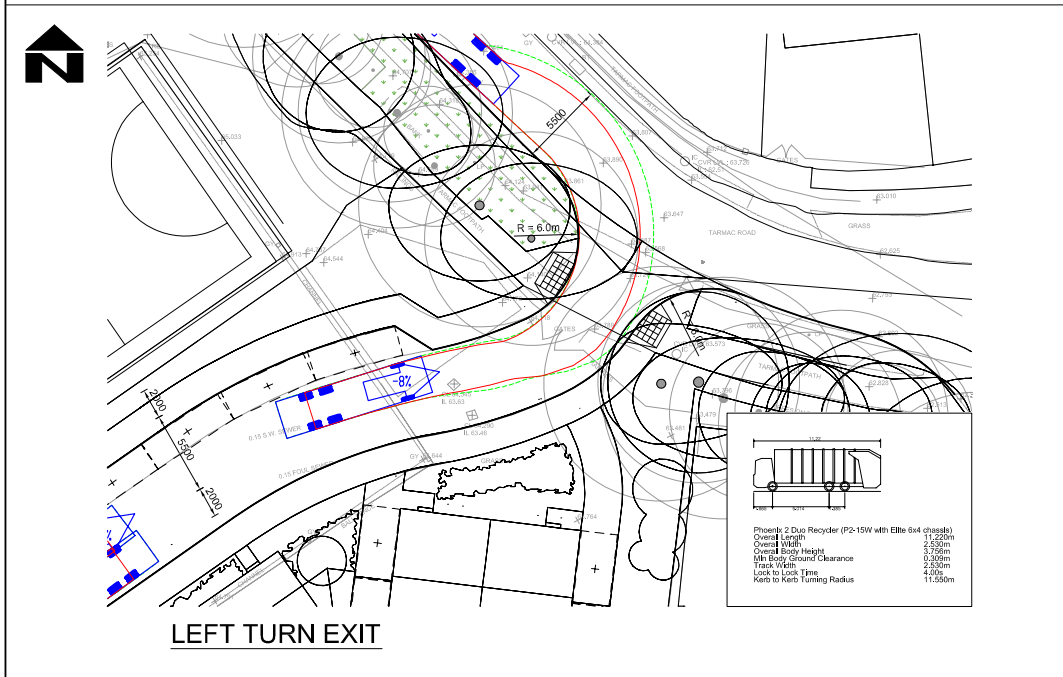
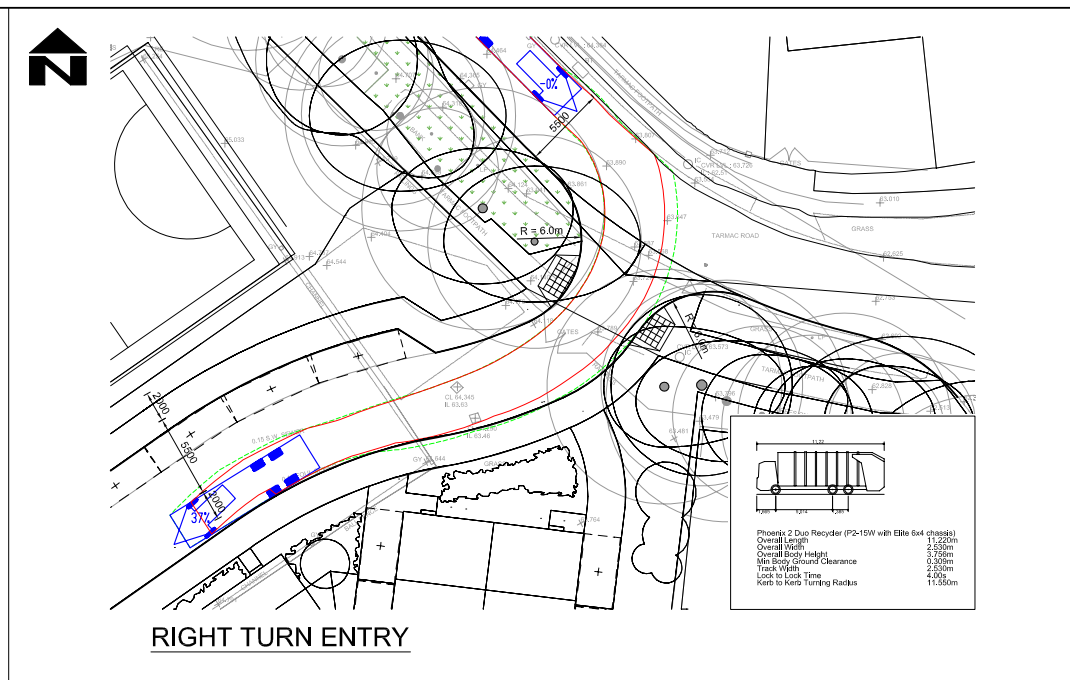
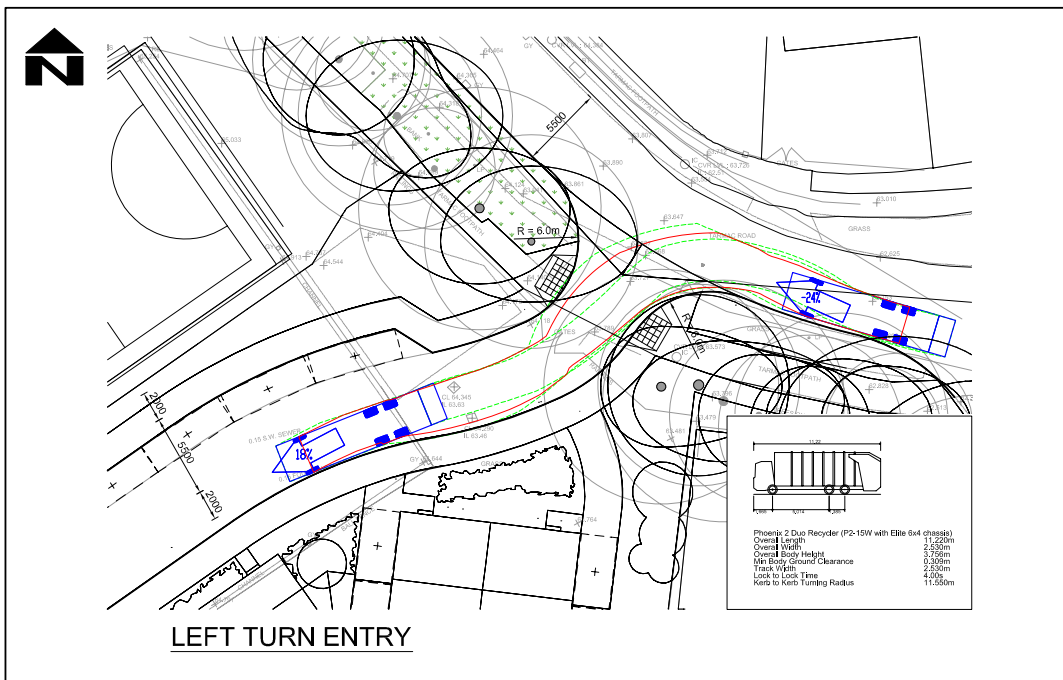
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Table of Contents

1	Introduction.....	5
1.1	Background	5
1.2	Policy Context and Methodology	5
1.3	Summary	8
2	Existing Conditions	10
2.1	Introduction.....	10
2.2	Site Location and Local Highway Network	10
2.3	Pedestrian Network.....	10
2.4	Cycle Network.....	12
2.5	Public Transport.....	12
2.6	Personal Safety	13
2.7	Committed Development.....	14
3	Development Proposals	15
3.1	Introduction.....	15
3.2	Development Access	15
3.3	Car and Cycle Parking Standards	15
3.4	Pedestrian and Cyclist Access	16
3.5	Travel Plan	17
4	Highway Impacts.....	18
4.1	Introduction.....	18
4.2	Assessment Methodology	18
4.3	Trip Generation.....	18
4.4	Vehicular Distribution and Assignment	19
4.5	Vehicle Impact Assessment	19
4.6	Summary.....	21
5	Transport Contributions.....	22
5.1	Introduction.....	22
5.2	Financial Contribution	22
5.3	Community Infrastructure Regulation 2010.....	22
6	Conclusions.....	23
	Figures	24
	Appendix A – Havant Borough Council (HBC) Scoping Correspondence.....	25
	Appendix B – Personal Injury Accident Data	26
	Appendix C – HCC Drawing 502728/001 Rev D (Proposed Site Layout)	27
	Appendix D – HCC Drawing 502728/SK1 Rev D (Site Access Arrangement).....	28
	Appendix E – HCC Drawing 502728/SK4 Rev A (Swept Path Analysis at Site Access)	29
	Appendix F – Junctions 8 Model Output (Woodcroft Lane/ Lovedean Lane Junction).....	30
	Appendix G – Woodcroft Farm’s Drawing 21834/004/SK001 Rev A for Lovedean Lane/ Milton Road Mini-Roundabout)	31
	Appendix H – Junctions 8 Model Output (Lovedean Lane/ Milton Road Mini-Roundabout).....	32

Appendix E – HCC Drawing 502728/SK4 Rev A (Swept Path Analysis at Site Access)



A Drawing amended to suit revised layout		09/08/12	RD	SF	DD
REV	AMENDMENT	DATE	DRAWN	CMD	APPRO

CLIENT
HAMPSHIRE COUNTY COUNCIL
CULTURE, COMMUNITIES AND BUSINESS SERVICES
PROPERTY SERVICES

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DRAWN R.D.	SCHEME MEADOWLAND SCHOOL HAVANT	DRAWING TITLE VEHICLE TRACKING
CAD R.D.		
CHECKED S.F.	JOB No. R.J502728.06	ISS. stamp 08 Aug 2012 at 4:42pm
APPROVED D.D.	SCALE @ A3 1:250	SHEET No. 1 OF 4
	DATE MAY 12	DWG No. 502728/SK4
		REV A

Appendix F – Junctions 8 Model Output (Woodcroft Lane/ Lovedean Lane Junction)

Junctions 8							
PICADY 8 - Priority Intersection Module							
Version: 8.0.2.316 [14 Feb 2013] © Copyright TRL Limited, 2014							
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Filename: Lovedean Lane Woodcroft Lane Priority Junction.arc8

Path: N:\ESE Framework\#HCC TC - Meadowlands TA\Design and Analysis\Woodcroft Farm\Woodcroft Farm junction assessment

Report generation date: 22/12/2014 18:42:39

- » Woodcroft Lane/ Lovedean Lane Priority Junction - 2018 Base, AM
- » Woodcroft Lane/ Lovedean Lane Priority Junction - 2018 Base, PM
- » Woodcroft Lane/ Lovedean Lane Priority Junction - 2018 Base + Dev, AM
- » Woodcroft Lane/ Lovedean Lane Priority Junction - 2018 Base + Dev, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
Woodcroft Lane/ Lovedean Lane Priority Junction - 2018 Base								
Stream B-AC	0.13	9.95	0.11	A	0.11	10.12	0.10	B
Stream C-A	-	-	-	-	-	-	-	-
Stream C-B	0.02	6.68	0.02	A	0.00	6.92	0.00	A
Stream A-B	-	-	-	-	-	-	-	-
Stream A-C	-	-	-	-	-	-	-	-
Woodcroft Lane/ Lovedean Lane Priority Junction - 2018 Base + Dev								
Stream B-AC	0.19	10.58	0.16	B	0.13	10.32	0.12	B
Stream C-A	-	-	-	-	-	-	-	-
Stream C-B	0.02	6.71	0.02	A	0.01	6.98	0.01	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 - 2018 Base, AM" model duration: 08:00 - 09:00

"D2 - 2018 Base, PM" model duration: 17:00 - 18:00

"D3 - 2018 Base + Dev, AM" model duration: 08:00 - 09:00

"D4 - 2018 Base + Dev, PM" model duration: 17:00 - 18:00

Run using Junctions 8.0.2.316 at 22/12/2014 18:42:38

File summary

File Description

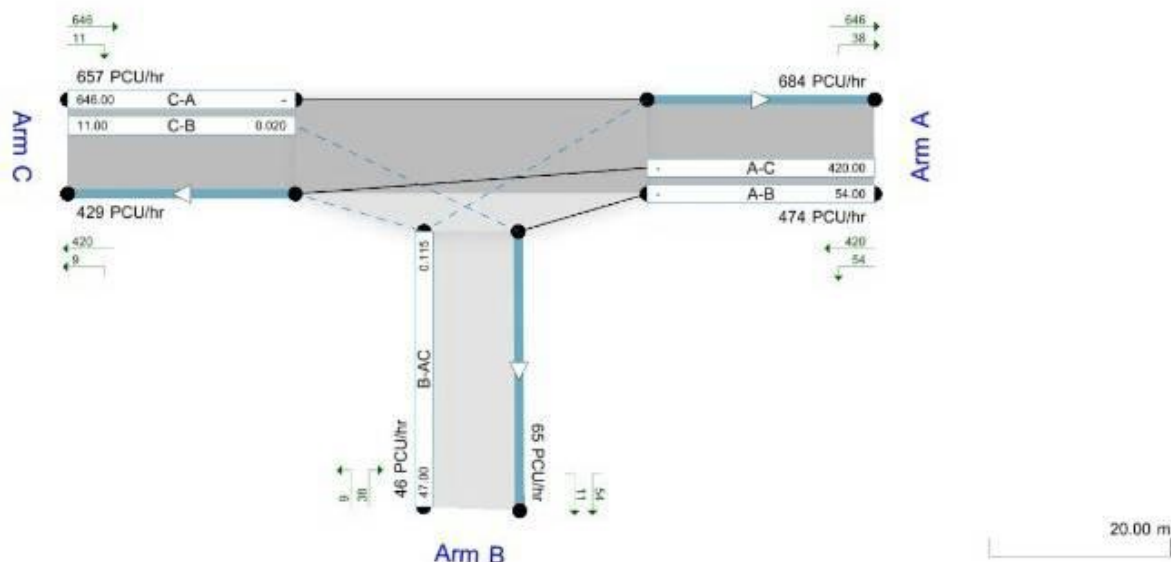
Title	Woodcroft Lane/ Lovedean Lane Priority Junction
Location	Waterlooville
Site Number	
Date	01/12/2014
Version	
Status	Existing Layout
Identifier	
Client	
Jobnumber	
Enumerator	
Description	

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



Total percents show modelled flow through the junction entry and exit flows (PCU/hr).
 Streams (upstream) show Total Demand (PCU/hr). Streams (downstream) show RFC (%).
 Time Segment: (08:00-08:15)
 Showing Analysis Set: "A1 - Woodcroft Lane/ Lovedean Lane Priority Junction". Demand Set: "D1 - 2018 Base, AM"

The junction diagram reflects the last run of ARCADY.

Woodcroft Lane/ Lovedean Lane Priority Junction - 2018 Base, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set (s)	Specific Demand Set(s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
Woodcroft Lane/ Lovedean Lane Priority Junction	N/A		✓	✓	D1,D2,D3,D4		100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2018 Base, AM	2018 Base	AM		DIRECT	08:00	09:00	60	15				✓		

Junction Network

Junctions

Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
(untitled)	T-Junction	Two-way	A,B,C		9.33	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm Type
A	Lovedean Lane (S)		Major
B	Woodcroft Lane		Minor
C	Lovedean Lane (N)		Major

Major Arm Geometry

Arm	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)
C	7.30		0.00	✓	3.10	55.00		

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

Minor Arm Geometry

Arm	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)
B	One lane	3.48										25	180

Pedestrian Crossings

Arm	Crossing Type
A	None
B	None
C	None

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	601.525	0.103	0.261	0.164	0.373
1	B-C	772.682	0.112	0.282	-	-
1	C-B	665.154	0.243	0.243	-	-

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

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	DIRECT	✓	N/A	100.000
B	DIRECT	✓	N/A	100.000
C	DIRECT	✓	N/A	100.000

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Junction 1 (for whole period)

	To		
	A	B	C
From	A	0.000	54.000
	B	38.000	0.000
	C	646.000	11.000

Turning Proportions (PCU) - Junction 1 (for whole period)

	To		
	A	B	C
From	A	0.00	0.11
	B	0.81	0.00
	C	0.98	0.02

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

	To			
		A	B	C
	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
From	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

	To			
		A	B	C
	A	0.000	0.000	0.000
	B	0.000	0.000	0.000
From	C	0.000	0.000	0.000

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
B-AC	0.11	9.95	0.13	A	47.00	47.00	7.66	9.77	0.13	7.66	9.77
C-A	-	-	-	-	646.00	646.00	-	-	-	-	-
C-B	0.02	6.68	0.02	A	11.00	11.00	1.21	6.61	0.02	1.21	6.61
A-B	-	-	-	-	54.00	54.00	-	-	-	-	-
A-C	-	-	-	-	420.00	420.00	-	-	-	-	-

Main Results for each time segment

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	47.00	11.75	46.49	0.00	408.80	0.115	0.00	0.13	9.922	A
C-A	646.00	161.50	646.00	0.00	-	-	-	-	-	-
C-B	11.00	2.75	10.92	0.00	549.91	0.020	0.00	0.02	6.679	A
A-B	54.00	13.50	54.00	0.00	-	-	-	-	-	-
A-C	420.00	105.00	420.00	0.00	-	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	47.00	11.75	47.00	0.00	408.77	0.115	0.13	0.13	9.950	A
C-A	646.00	161.50	646.00	0.00	-	-	-	-	-	-
C-B	11.00	2.75	11.00	0.00	549.91	0.020	0.02	0.02	6.679	A
A-B	54.00	13.50	54.00	0.00	-	-	-	-	-	-
A-C	420.00	105.00	420.00	0.00	-	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	47.00	11.75	47.00	0.00	408.77	0.115	0.13	0.13	9.950	A
C-A	646.00	161.50	646.00	0.00	-	-	-	-	-	-
C-B	11.00	2.75	11.00	0.00	549.91	0.020	0.02	0.02	6.679	A
A-B	54.00	13.50	54.00	0.00	-	-	-	-	-	-
A-C	420.00	105.00	420.00	0.00	-	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	47.00	11.75	47.00	0.00	408.77	0.115	0.13	0.13	9.950	A
C-A	646.00	161.50	646.00	0.00	-	-	-	-	-	-
C-B	11.00	2.75	11.00	0.00	549.91	0.020	0.02	0.02	6.679	A
A-B	54.00	13.50	54.00	0.00	-	-	-	-	-	-
A-C	420.00	105.00	420.00	0.00	-	-	-	-	-	-

Queueing Delay Results for each time segment

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

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	1.84	0.12	9.922	A	A
C-A	-	-	-	-	-
C-B	0.29	0.02	6.679	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

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

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	1.93	0.13	9.950	A	A
C-A	-	-	-	-	-
C-B	0.30	0.02	6.679	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

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

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	1.94	0.13	9.950	A	A
C-A	-	-	-	-	-
C-B	0.31	0.02	6.679	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

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

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	1.94	0.13	9.950	A	A
C-A	-	-	-	-	-
C-B	0.31	0.02	6.679	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Woodcroft Lane/ Lovedean Lane Priority Junction - 2018 Base, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set (s)	Specific Demand Set(s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
Woodcroft Lane/ Lovedean Lane Priority Junction	N/A		✓	✓	D1,D2,D3,D4		100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2018 Base, PM	2018 Base	PM		DIRECT	17:00	18:00	60	15				✓		

Junction Network

Junctions

Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
(untitled)	T-Junction	Two-way	A,B,C		10.04	B

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm Type
A	Lovedean Lane (S)		Major
B	Woodcroft Lane		Minor
C	Lovedean Lane (N)		Major

Major Arm Geometry

Arm	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)
C	7.30		0.00	✓	3.10	55.00		

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

Minor Arm Geometry

Arm	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)
B	One lane	3.48										25	180

Pedestrian Crossings

Arm	Crossing Type
A	None
B	None
C	None

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	601.525	0.103	0.261	0.164	0.373
1	B-C	772.682	0.112	0.282	-	-
1	C-B	665.154	0.243	0.243	-	-

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

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	DIRECT	✓	N/A	100.000
B	DIRECT	✓	N/A	100.000
C	DIRECT	✓	N/A	100.000

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Junction 1 (for whole period)

	To			
		A	B	C
From	A	0.000	34.000	557.000
	B	37.000	0.000	2.000
	C	394.000	1.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

	To			
		A	B	C
From	A	0.00	0.06	0.94
	B	0.95	0.00	0.05
	C	1.00	0.00	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

	To			
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

	To			
		A	B	C
From	A	0.000	0.000	0.000
	B	0.000	0.000	0.000
	C	0.000	0.000	0.000

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
B-AC	0.10	10.12	0.11	B	39.00	39.00	6.46	9.94	0.11	6.46	9.94
C-A	-	-	-	-	394.00	394.00	-	-	-	-	-
C-B	0.00	6.92	0.00	A	1.00	1.00	0.11	6.85	0.00	0.11	6.85
A-B	-	-	-	-	34.00	34.00	-	-	-	-	-
A-C	-	-	-	-	557.00	557.00	-	-	-	-	-

Main Results for each time segment

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	39.00	9.75	38.57	0.00	394.78	0.099	0.00	0.11	10.094	B
C-A	394.00	98.50	394.00	0.00	-	-	-	-	-	-
C-B	1.00	0.25	0.99	0.00	521.46	0.002	0.00	0.00	6.916	A
A-B	34.00	8.50	34.00	0.00	-	-	-	-	-	-
A-C	557.00	139.25	557.00	0.00	-	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	39.00	9.75	39.00	0.00	394.77	0.099	0.11	0.11	10.118	B
C-A	394.00	98.50	394.00	0.00	-	-	-	-	-	-
C-B	1.00	0.25	1.00	0.00	521.46	0.002	0.00	0.00	6.916	A
A-B	34.00	8.50	34.00	0.00	-	-	-	-	-	-
A-C	557.00	139.25	557.00	0.00	-	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	39.00	9.75	39.00	0.00	394.77	0.099	0.11	0.11	10.118	B
C-A	394.00	98.50	394.00	0.00	-	-	-	-	-	-
C-B	1.00	0.25	1.00	0.00	521.46	0.002	0.00	0.00	6.916	A
A-B	34.00	8.50	34.00	0.00	-	-	-	-	-	-
A-C	557.00	139.25	557.00	0.00	-	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	39.00	9.75	39.00	0.00	394.77	0.099	0.11	0.11	10.118	B
C-A	394.00	98.50	394.00	0.00	-	-	-	-	-	-
C-B	1.00	0.25	1.00	0.00	521.46	0.002	0.00	0.00	6.916	A
A-B	34.00	8.50	34.00	0.00	-	-	-	-	-	-
A-C	557.00	139.25	557.00	0.00	-	-	-	-	-	-

Queueing Delay Results for each time segment

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

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	1.56	0.10	10.094	B	B
C-A	-	-	-	-	-
C-B	0.03	0.00	6.916	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

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

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	1.63	0.11	10.118	B	B
C-A	-	-	-	-	-
C-B	0.03	0.00	6.916	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

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

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	1.64	0.11	10.118	B	B
C-A	-	-	-	-	-
C-B	0.03	0.00	6.916	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

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

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	1.64	0.11	10.118	B	B
C-A	-	-	-	-	-
C-B	0.03	0.00	6.916	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Woodcroft Lane/ Lovedean Lane Priority Junction - 2018 Base + Dev, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set (s)	Specific Demand Set(s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
Woodcroft Lane/ Lovedean Lane Priority Junction	N/A		✓	✓	D1,D2,D3,D4		100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2018 Base + Dev, AM	2018 Base + Dev	AM		DIRECT	08:00	09:00	60	15				✓		

Junction Network

Junctions

Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
(untitled)	T-Junction	Two-way	A,B,C		9.97	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm Type
A	Lovedean Lane (S)		Major
B	Woodcroft Lane		Minor
C	Lovedean Lane (N)		Major

Major Arm Geometry

Arm	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)
C	7.30		0.00	✓	3.10	55.00		

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

Minor Arm Geometry

Arm	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)
B	One lane	3.48										25	180

Pedestrian Crossings

Arm	Crossing Type
A	None
B	None
C	None

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	601.525	0.103	0.261	0.164	0.373
1	B-C	772.682	0.112	0.282	-	-
1	C-B	665.154	0.243	0.243	-	-

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

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	DIRECT	✓	N/A	100.000
B	DIRECT	✓	N/A	100.000
C	DIRECT	✓	N/A	100.000

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
From		A	B	C
	A	0.000	58.000	420.000
	B	53.000	0.000	11.000
	C	646.000	12.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
From		A	B	C
	A	0.00	0.12	0.88
	B	0.83	0.00	0.17
	C	0.98	0.02	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
From		A	B	C
	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

	To			
		A	B	C
	A	0.000	0.000	0.000
	B	0.000	0.000	0.000
From	C	0.000	0.000	0.000

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
B-AC	0.16	10.58	0.19	B	64.00	64.00	11.06	10.37	0.18	11.06	10.37
C-A	-	-	-	-	646.00	646.00	-	-	-	-	-
C-B	0.02	6.71	0.02	A	12.00	12.00	1.33	6.63	0.02	1.33	6.63
A-B	-	-	-	-	58.00	58.00	-	-	-	-	-
A-C	-	-	-	-	420.00	420.00	-	-	-	-	-

Main Results for each time segment

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	64.00	16.00	63.26	0.00	404.38	0.158	0.00	0.19	10.533	B
C-A	646.00	161.50	646.00	0.00	-	-	-	-	-	-
C-B	12.00	3.00	11.91	0.00	548.93	0.022	0.00	0.02	6.703	A
A-B	58.00	14.50	58.00	0.00	-	-	-	-	-	-
A-C	420.00	105.00	420.00	0.00	-	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	64.00	16.00	63.99	0.00	404.35	0.158	0.19	0.19	10.576	B
C-A	646.00	161.50	646.00	0.00	-	-	-	-	-	-
C-B	12.00	3.00	12.00	0.00	548.93	0.022	0.02	0.02	6.703	A
A-B	58.00	14.50	58.00	0.00	-	-	-	-	-	-
A-C	420.00	105.00	420.00	0.00	-	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	64.00	16.00	64.00	0.00	404.35	0.158	0.19	0.19	10.576	B
C-A	646.00	161.50	646.00	0.00	-	-	-	-	-	-
C-B	12.00	3.00	12.00	0.00	548.93	0.022	0.02	0.02	6.703	A
A-B	58.00	14.50	58.00	0.00	-	-	-	-	-	-
A-C	420.00	105.00	420.00	0.00	-	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	64.00	16.00	64.00	0.00	404.35	0.158	0.19	0.19	10.576	B
C-A	646.00	161.50	646.00	0.00	-	-	-	-	-	-
C-B	12.00	3.00	12.00	0.00	548.93	0.022	0.02	0.02	6.706	A
A-B	58.00	14.50	58.00	0.00	-	-	-	-	-	-
A-C	420.00	105.00	420.00	0.00	-	-	-	-	-	-

Queueing Delay Results for each time segment

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

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	2.65	0.18	10.533	B	B
C-A	-	-	-	-	-
C-B	0.32	0.02	6.703	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

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

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	2.79	0.19	10.576	B	B
C-A	-	-	-	-	-
C-B	0.33	0.02	6.703	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

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

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	2.80	0.19	10.576	B	B
C-A	-	-	-	-	-
C-B	0.34	0.02	6.703	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

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

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	2.81	0.19	10.576	B	B
C-A	-	-	-	-	-
C-B	0.34	0.02	6.706	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Woodcroft Lane/ Lovedean Lane Priority Junction - 2018 Base + Dev, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set (s)	Specific Demand Set(s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
Woodcroft Lane/ Lovedean Lane Priority Junction	N/A		✓	✓	D1,D2,D3,D4		100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2018 Base + Dev, PM	2018 Base + Dev	PM		DIRECT	17:00	18:00	60	15				✓		

Junction Network

Junctions

Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
(untitled)	T-Junction	Two-way	A,B,C		10.11	B

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm Type
A	Lovedean Lane (S)		Major
B	Woodcroft Lane		Minor
C	Lovedean Lane (N)		Major

Major Arm Geometry

Arm	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)
C	7.30		0.00	✓	3.10	55.00		

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

Minor Arm Geometry

Arm	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)
B	One lane	3.48										25	180

Pedestrian Crossings

Arm	Crossing Type
A	None
B	None
C	None

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	601.525	0.103	0.261	0.164	0.373
1	B-C	772.682	0.112	0.282	-	-
1	C-B	665.154	0.243	0.243	-	-

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

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	DIRECT	✓	N/A	100.000
B	DIRECT	✓	N/A	100.000
C	DIRECT	✓	N/A	100.000

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	45.000	557.000
	B	43.000	0.000	3.000
	C	394.000	3.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.07	0.93
	B	0.93	0.00	0.07
	C	0.99	0.01	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	0.000	0.000
	B	0.000	0.000	0.000
	C	0.000	0.000	0.000

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
B-AC	0.12	10.32	0.13	B	46.00	46.00	7.76	10.13	0.13	7.76	10.13
C-A	-	-	-	-	394.00	394.00	-	-	-	-	-
C-B	0.01	6.98	0.01	A	3.00	3.00	0.35	6.91	0.01	0.35	6.91
A-B	-	-	-	-	45.00	45.00	-	-	-	-	-
A-C	-	-	-	-	557.00	557.00	-	-	-	-	-

Main Results for each time segment

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	46.00	11.50	45.48	0.00	394.96	0.116	0.00	0.13	10.285	B
C-A	394.00	98.50	394.00	0.00	-	-	-	-	-	-
C-B	3.00	0.75	2.98	0.00	518.78	0.006	0.00	0.01	6.978	A
A-B	45.00	11.25	45.00	0.00	-	-	-	-	-	-
A-C	557.00	139.25	557.00	0.00	-	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	46.00	11.50	46.00	0.00	394.95	0.116	0.13	0.13	10.316	B
C-A	394.00	98.50	394.00	0.00	-	-	-	-	-	-
C-B	3.00	0.75	3.00	0.00	518.78	0.006	0.01	0.01	6.978	A
A-B	45.00	11.25	45.00	0.00	-	-	-	-	-	-
A-C	557.00	139.25	557.00	0.00	-	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	46.00	11.50	46.00	0.00	394.95	0.116	0.13	0.13	10.316	B
C-A	394.00	98.50	394.00	0.00	-	-	-	-	-	-
C-B	3.00	0.75	3.00	0.00	518.78	0.006	0.01	0.01	6.978	A
A-B	45.00	11.25	45.00	0.00	-	-	-	-	-	-
A-C	557.00	139.25	557.00	0.00	-	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	46.00	11.50	46.00	0.00	394.95	0.116	0.13	0.13	10.316	B
C-A	394.00	98.50	394.00	0.00	-	-	-	-	-	-
C-B	3.00	0.75	3.00	0.00	518.78	0.006	0.01	0.01	6.978	A
A-B	45.00	11.25	45.00	0.00	-	-	-	-	-	-
A-C	557.00	139.25	557.00	0.00	-	-	-	-	-	-

Queueing Delay Results for each time segment

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

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	1.87	0.12	10.285	B	B
C-A	-	-	-	-	-
C-B	0.08	0.01	6.978	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

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

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	1.96	0.13	10.316	B	B
C-A	-	-	-	-	-
C-B	0.09	0.01	6.978	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

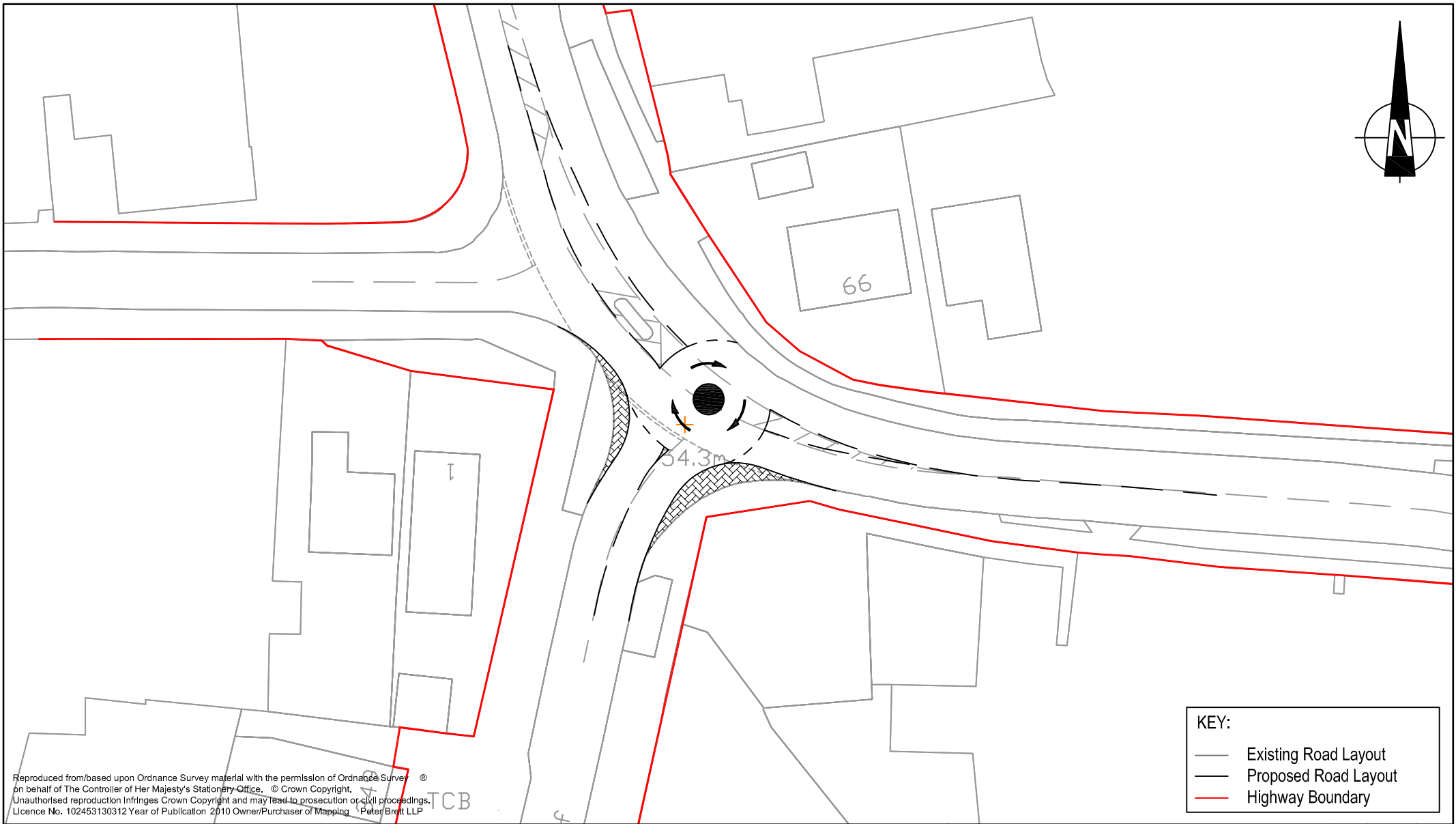
Queueing Delay results: (17:30-17:45)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	1.97	0.13	10.316	B	B
C-A	-	-	-	-	-
C-B	0.09	0.01	6.978	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

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

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	1.97	0.13	10.316	B	B
C-A	-	-	-	-	-
C-B	0.09	0.01	6.978	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Appendix G – Woodcroft Farm’s Drawing
21834/004/SK001 Rev A for Lovedean
Lane/ Milton Road Mini-Roundabout)



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Client



SCALING NOTE: Do not scale from this drawing. If in doubt, ask.
UTILITIES NOTE: The position of any existing public or private sewers, utility services, plant or apparatus shown on this drawing is believed to be correct, but no warranty to this is expressed or implied. Other such plant or apparatus may also be present but not shown. The Contractor is therefore advised to undertake his own investigation where the presence of any existing sewers, services, plant or apparatus may affect his operations.

WOODCROFT FARM, HAVANT
LOVEDEAN LANE - MILTON ROAD
MINI- ROUNDABOUT OPTION

A	Junction Layout ammended	JH	18.01.11	DT
Mark	Revision	Drawn	Date	Chkd
Drawing Status				
DRAFT				
Date of 1st Issue	17-05-10	Drawing Number		Revision
A4 Scale	1:500	21834-004-SK001		A
Drawn by	JH			
Checked by	DT			

Appendix H – Junctions 8 Model Output (Lovedean Lane/ Milton Road Mini-Roundabout)

Junctions 8	
ARCADY 8 - Roundabout Module	
Version: 8.0.2.316 [14 Feb 2013] © Copyright TRL Limited, 2014	
For sales and distribution information, program advice and maintenance, contact TRL: Tel: +44 (0)1344 770758 E-mail: software@trl.co.uk Web: http://www.trlsoftware.co.uk	
The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution	

Filename: Lovedean Lane Milton Road Proposed Mini-Roundabout.arc8
Path: N:\EISE Framework\#HCC TC - Meadowlands TA\Design and Analysis
Report generation date: 22/12/2014 18:38:07

- » Lovedean Lane/ Woodcroft Lane Mini-Roundabout - 2018 Baseline, AM
- » Lovedean Lane/ Woodcroft Lane Mini-Roundabout - 2018 Baseline, PM
- » Lovedean Lane/ Woodcroft Lane Mini-Roundabout - 2018 Baseline + Dev, AM
- » Lovedean Lane/ Woodcroft Lane Mini-Roundabout - 2018 Baseline + Dev, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
Lovedean Lane/ Woodcroft Lane Mini-Roundabout - 2018 Baseline								
Arm A	0.99	11.69	0.50	B	2.28	16.85	0.70	C
Arm B	2.49	17.70	0.72	C	3.46	23.67	0.78	C
Arm C	10.52	58.35	0.93	F	1.31	11.03	0.57	B
Lovedean Lane/ Woodcroft Lane Mini-Roundabout - 2018 Baseline + Dev								
Arm A	1.02	11.91	0.51	B	2.34	17.18	0.70	C
Arm B	2.55	18.01	0.72	C	3.73	25.23	0.79	D
Arm C	13.24	71.83	0.95	F	1.35	11.24	0.58	B

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

'D5 - 2018 Baseline, AM' model duration: 08:00 - 09:00
 'D6 - 2018 Baseline, PM' model duration: 17:00 - 18:00
 'D9 - 2018 Baseline + Dev, AM' model duration: 08:00 - 09:00
 'D10 - 2018 Baseline + Dev, PM' model duration: 17:00 - 18:00

Run using Junctions 8.0.2.316 at 22/12/2014 18:38:05

File summary

File Description

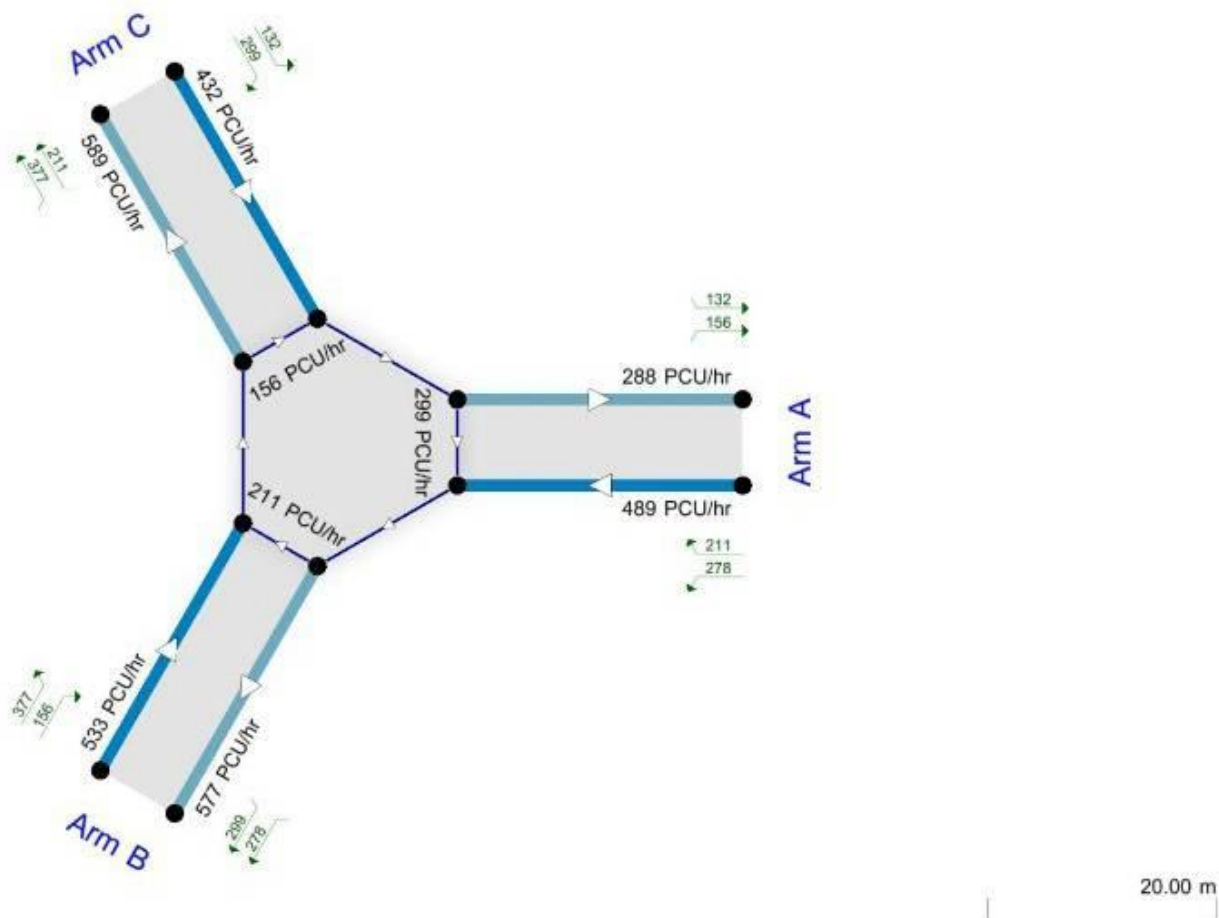
Title	Proposed Lovedean Lane Milton Road Mini Roundabout
Location	Waterlooville
Site Number	
Date	01/12/2014
Version	
Status	Proposed Layout
Identifier	
Client	
Jobnumber	
Enumerator	
Description	

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



Text overlays show modelled flow through the junction (entry and exit flows, PCU/hr).

Time Segment: (08:00-08:15)

Showing Analysis Set: "A1 - Lovelock Lane/ Woodcroft Lane Mini-Roundabout "; Demand Set: "D5 - 2018 Baseline, AM "

The junction diagram reflects the last run of ARCADY.

Lovedean Lane/ Woodcroft Lane Mini-Roundabout - 2018 Baseline, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set (s)	Specific Demand Set(s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
Lovedean Lane/ Woodcroft Lane Mini-Roundabout	ARCADY		✓	✓	D5,D6,D9,D10		100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2018 Baseline, AM	2018 Baseline	AM		DIRECT	08:00	09:00	60	15				✓		

Junction Network

Junctions

Name	Junction Type	Arm Order	Junction Delay (s)	Junction LOS
Proposed Lovedean Lane _Milton Road Junction	Mini-roundabout	A,B,C	34.97	D

Junction Network Options

Driving Side	Lighting	Road Surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Arm	Name	Description
A	Lovedean Lane (E)	
B	Milton Road	
C	Lovedean Lane (W)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
A	0.00	99999.00		0.00
B	0.00	99999.00		0.00
C	0.00	99999.00		0.00

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
A	3.50	3.50	3.50	0.00	9.50	6.45	0.00	
B	3.40	3.40	3.80	0.01	7.60	4.61	0.00	
C	3.60	3.60	3.70	0.01	10.10	9.04	0.00	

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

Pedestrian Crossings

Arm	Crossing Type
A	None
B	None
C	None

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
A		(calculated)	(calculated)	0.530	867.722
B		(calculated)	(calculated)	0.524	801.364
C		(calculated)	(calculated)	0.537	843.094

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

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

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	DIRECT	✓	N/A	100.000
B	DIRECT	✓	N/A	100.000
C	DIRECT	✓	N/A	100.000

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Junction 04 (for whole period)

	To		
	A	B	C
	A	0.000	150.000
	B	189.000	0.000
From	C	213.000	475.000
			0.000

Turning Proportions (PCU) - Junction 04 (for whole period)

	To			
		A	B	C
From	A	0.00	0.49	0.51
	B	0.37	0.00	0.63
	C	0.31	0.69	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 04 (for whole period)

	To			
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 04 (for whole period)

	To			
		A	B	C
From	A	0.000	0.000	0.000
	B	0.000	0.000	0.000
	C	0.000	0.000	0.000

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
A	0.50	11.69	0.99	B	309.00	309.00	57.56	11.18	0.96	57.61	11.19
B	0.72	17.70	2.49	C	515.00	515.00	142.10	16.56	2.37	142.36	16.59
C	0.93	58.35	10.52	F	688.00	688.00	511.85	44.64	8.53	516.33	45.03

Main Results for each time segment

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

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A	309.00	77.25	305.21	389.07	453.91	0.00	627.30	605.36	0.493	0.00	0.95	11.053	B
B	515.00	128.75	505.53	602.07	157.05	0.00	719.00	638.01	0.716	0.00	2.37	16.222	C
C	688.00	172.00	657.45	477.05	185.52	0.00	743.55	717.46	0.925	0.00	7.64	34.455	D

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

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A	309.00	77.25	308.86	399.93	470.65	0.00	618.44	605.36	0.500	0.95	0.98	11.619	B
B	515.00	128.75	514.67	620.58	158.93	0.00	718.02	638.01	0.717	2.37	2.45	17.629	C
C	688.00	172.00	681.70	484.72	188.88	0.00	741.75	717.46	0.928	7.64	9.21	51.619	F

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

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A	309.00	77.25	308.96	400.96	472.77	0.00	617.32	605.36	0.501	0.98	0.99	11.671	B
B	515.00	128.75	514.89	622.75	158.98	0.00	717.99	638.01	0.717	2.45	2.48	17.682	C
C	688.00	172.00	684.77	484.91	188.96	0.00	741.71	717.46	0.928	9.21	10.02	55.989	F

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

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A	309.00	77.25	308.98	401.36	473.61	0.00	616.87	605.36	0.501	0.99	0.99	11.690	B
B	515.00	128.75	514.94	623.60	158.99	0.00	717.99	638.01	0.717	2.48	2.49	17.700	C
C	688.00	172.00	685.99	484.95	188.98	0.00	741.70	717.46	0.928	10.02	10.52	58.345	F

Queueing Delay Results for each time segment

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	13.30	0.89	11.053	B	B
B	31.52	2.10	16.222	C	B
C	84.80	5.65	34.455	D	C

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	14.56	0.97	11.619	B	B
B	36.28	2.42	17.629	C	B
C	127.95	8.53	51.619	F	D

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	14.80	0.99	11.671	B	B
B	37.00	2.47	17.682	C	B
C	144.78	9.65	55.989	F	E

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	14.90	0.99	11.690	B	B
B	37.30	2.49	17.700	C	B
C	154.33	10.29	58.345	F	E

Lovedean Lane/ Woodcroft Lane Mini-Roundabout - 2018 Baseline, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set (s)	Specific Demand Set(s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
Lovedean Lane/ Woodcroft Lane Mini-Roundabout	ARCADY		✓	✓	D5,D6,D9,D10		100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2018 Baseline, PM	2018 Baseline	PM		DIRECT	17:00	18:00	60	15				✓		

Junction Network

Junctions

Name	Junction Type	Arm Order	Junction Delay (s)	Junction LOS
Proposed Lovedean Lane _Milton Road Junction	Mini-roundabout	A,B,C	17.65	C

Junction Network Options

Driving Side	Lighting	Road Surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Arm	Name	Description
A	Lovedean Lane (E)	
B	Milton Road	
C	Lovedean Lane (W)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
A	0.00	99999.00		0.00
B	0.00	99999.00		0.00
C	0.00	99999.00		0.00

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
A	3.50	3.50	3.50	0.00	9.50	6.45	0.00	
B	3.40	3.40	3.80	0.01	7.60	4.61	0.00	
C	3.60	3.60	3.70	0.01	10.10	9.04	0.00	

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

Pedestrian Crossings

Arm	Crossing Type
A	None
B	None
C	None

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
A		(calculated)	(calculated)	0.530	867.722
B		(calculated)	(calculated)	0.524	801.364
C		(calculated)	(calculated)	0.537	843.094

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

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

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	DIRECT	✓	N/A	100.000
B	DIRECT	✓	N/A	100.000
C	DIRECT	✓	N/A	100.000

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Junction 04 (for whole period)

	To		
	A	B	C
From	A	0.000	283.000
	B	160.000	0.000
	C	130.000	301.000

Turning Proportions (PCU) - Junction 04 (for whole period)

	To			
		A	B	C
From	A	0.00	0.57	0.43
	B	0.30	0.00	0.70
	C	0.30	0.70	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 04 (for whole period)

	To			
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 04 (for whole period)

	To			
		A	B	C
From	A	0.000	0.000	0.000
	B	0.000	0.000	0.000
	C	0.000	0.000	0.000

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
A	0.70	16.85	2.28	C	495.00	495.00	130.50	15.82	2.18	130.73	15.85
B	0.78	23.67	3.46	C	539.00	539.00	192.66	21.45	3.21	193.18	21.50
C	0.57	11.03	1.31	B	431.00	431.00	76.44	10.64	1.27	76.51	10.65

Main Results for each time segment

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

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A	495.00	123.75	486.31	284.69	297.43	0.00	710.18	595.20	0.697	0.00	2.17	15.536	C
B	539.00	134.75	526.31	575.46	208.28	0.00	692.14	667.68	0.779	0.00	3.17	20.396	C
C	431.00	107.75	425.89	578.35	156.23	0.00	759.27	736.75	0.568	0.00	1.28	10.644	B

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

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A	495.00	123.75	494.70	289.75	300.94	0.00	708.33	595.20	0.699	2.17	2.25	16.792	C
B	539.00	134.75	538.26	583.76	211.87	0.00	690.25	667.68	0.781	3.17	3.36	23.412	C
C	431.00	107.75	430.91	590.35	159.78	0.00	757.36	736.75	0.569	1.28	1.30	11.019	B

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

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A	495.00	123.75	494.90	289.91	300.98	0.00	708.31	595.20	0.699	2.25	2.27	16.837	C
B	539.00	134.75	538.73	583.92	211.96	0.00	690.21	667.68	0.781	3.36	3.43	23.602	C
C	431.00	107.75	430.97	590.77	159.92	0.00	757.29	736.75	0.569	1.30	1.31	11.028	B

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

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A	495.00	123.75	494.95	289.96	300.99	0.00	708.30	595.20	0.699	2.27	2.28	16.850	C
B	539.00	134.75	538.86	583.96	211.98	0.00	690.20	667.68	0.781	3.43	3.46	23.669	C
C	431.00	107.75	430.99	590.88	159.96	0.00	757.27	736.75	0.569	1.31	1.31	11.031	B

Queueing Delay Results for each time segment

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	29.13	1.94	15.536	C	B
B	40.74	2.72	20.396	C	C
C	17.85	1.19	10.644	B	B

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	33.28	2.22	16.792	C	B
B	49.30	3.29	23.412	C	C
C	19.38	1.29	11.019	B	B

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	33.92	2.26	16.837	C	B
B	50.95	3.40	23.602	C	C
C	19.57	1.30	11.028	B	B

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	34.18	2.28	16.850	C	B
B	51.67	3.44	23.669	C	C
C	19.64	1.31	11.031	B	B

Lovedean Lane/ Woodcroft Lane Mini-Roundabout - 2018 Baseline + Dev, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set (s)	Specific Demand Set(s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
Lovedean Lane/ Woodcroft Lane Mini-Roundabout	ARCADY		✓	✓	D5,D6,D9,D10		100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2018 Baseline + Dev, AM	2018 Baseline + Dev	AM		DIRECT	08:00	09:00	60	15				✓		

Junction Network

Junctions

Name	Junction Type	Arm Order	Junction Delay (s)	Junction LOS
Proposed Lovedean Lane _Milton Road Junction	Mini-roundabout	A,B,C	41.49	E

Junction Network Options

Driving Side	Lighting	Road Surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Arm	Name	Description
A	Lovedean Lane (E)	
B	Milton Road	
C	Lovedean Lane (W)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
A	0.00	99999.00		0.00
B	0.00	99999.00		0.00
C	0.00	99999.00		0.00

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
A	3.50	3.50	3.50	0.00	9.50	6.45	0.00	
B	3.40	3.40	3.80	0.01	7.60	4.61	0.00	
C	3.60	3.60	3.70	0.01	10.10	9.04	0.00	

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

Pedestrian Crossings

Arm	Crossing Type
A	None
B	None
C	None

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
A		(calculated)	(calculated)	0.530	867.722
B		(calculated)	(calculated)	0.524	801.364
C		(calculated)	(calculated)	0.537	843.094

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

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

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	DIRECT	✓	N/A	100.000
B	DIRECT	✓	N/A	100.000
C	DIRECT	✓	N/A	100.000

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Junction 04 (for whole period)

From	To		
	A	B	C
	A	0.000	150.000
	B	189.000	0.000
From	C	218.000	485.000
			0.000

Turning Proportions (PCU) - Junction 04 (for whole period)

	To			
		A	B	C
From	A	0.00	0.48	0.52
	B	0.36	0.00	0.64
	C	0.31	0.69	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 04 (for whole period)

	To			
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 04 (for whole period)

	To			
		A	B	C
From	A	0.000	0.000	0.000
	B	0.000	0.000	0.000
	C	0.000	0.000	0.000

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
A	0.51	11.91	1.02	B	310.00	310.00	58.68	11.36	0.98	58.74	11.37
B	0.72	18.01	2.55	C	518.00	518.00	145.19	16.82	2.42	145.46	16.85
C	0.95	71.83	13.24	F	703.00	703.00	614.94	52.48	10.25	622.02	53.09

Main Results for each time segment

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

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A	310.00	77.50	306.14	392.54	460.69	0.00	623.71	605.25	0.497	0.00	0.96	11.198	B
B	518.00	129.50	508.33	608.83	158.01	0.00	718.50	637.54	0.721	0.00	2.42	16.455	C
C	703.00	175.75	667.77	480.87	185.47	0.00	743.58	718.28	0.945	0.00	8.81	37.847	E

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

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A	310.00	77.50	309.85	404.06	478.74	0.00	614.16	605.25	0.505	0.96	1.00	11.819	B
B	518.00	129.50	517.65	628.66	159.92	0.00	717.50	637.54	0.722	2.42	2.51	17.933	C
C	703.00	175.75	693.92	488.70	188.87	0.00	741.75	718.28	0.948	8.81	11.08	60.308	F

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

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A	310.00	77.50	309.96	405.35	481.43	0.00	612.73	605.25	0.506	1.00	1.01	11.886	B
B	518.00	129.50	517.88	631.41	159.98	0.00	717.47	637.54	0.722	2.51	2.54	17.991	C
C	703.00	175.75	697.83	488.90	188.96	0.00	741.71	718.28	0.948	11.08	12.37	67.498	F

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

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A	310.00	77.50	309.98	405.90	482.61	0.00	612.10	605.25	0.506	1.01	1.02	11.913	B
B	518.00	129.50	517.94	632.60	159.99	0.00	717.46	637.54	0.722	2.54	2.55	18.008	C
C	703.00	175.75	699.54	488.95	188.98	0.00	741.70	718.28	0.948	12.37	13.24	71.831	F

Queueing Delay Results for each time segment

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	13.52	0.90	11.198	B	B
B	32.13	2.14	16.455	C	B
C	94.80	6.32	37.847	E	D

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	14.84	0.99	11.819	B	B
B	37.07	2.47	17.933	C	B
C	151.10	10.07	60.308	F	E

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	15.11	1.01	11.886	B	B
B	37.84	2.52	17.991	C	B
C	176.61	11.77	67.498	F	E

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	15.22	1.01	11.913	B	B
B	38.16	2.54	18.008	C	B
C	192.44	12.83	71.831	F	E

Lovedean Lane/ Woodcroft Lane Mini-Roundabout - 2018 Baseline + Dev, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set (s)	Specific Demand Set(s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
Lovedean Lane/ Woodcroft Lane Mini-Roundabout	ARCADY		✓	✓	D5,D6,D9,D10		100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2018 Baseline + Dev, PM	2018 Baseline + Dev	PM		DIRECT	17:00	18:00	60	15				✓		

Junction Network

Junctions

Name	Junction Type	Arm Order	Junction Delay (s)	Junction LOS
Proposed Lovedean Lane _Milton Road Junction	Mini-roundabout	A,B,C	18.40	C

Junction Network Options

Driving Side	Lighting	Road Surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Arm	Name	Description
A	Lovedean Lane (E)	
B	Milton Road	
C	Lovedean Lane (W)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
A	0.00	99999.00		0.00
B	0.00	99999.00		0.00
C	0.00	99999.00		0.00

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
A	3.50	3.50	3.50	0.00	9.50	6.45	0.00	
B	3.40	3.40	3.80	0.01	7.60	4.61	0.00	
C	3.60	3.60	3.70	0.01	10.10	9.04	0.00	

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

Pedestrian Crossings

Arm	Crossing Type
A	None
B	None
C	None

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
A		(calculated)	(calculated)	0.530	867.722
B		(calculated)	(calculated)	0.524	801.364
C		(calculated)	(calculated)	0.537	843.094

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

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

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	DIRECT	✓	N/A	100.000
B	DIRECT	✓	N/A	100.000
C	DIRECT	✓	N/A	100.000

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Junction 04 (for whole period)

	To		
	A	B	C
From	A	0.000	283.000
	B	160.000	0.000
	C	134.000	303.000

Turning Proportions (PCU) - Junction 04 (for whole period)

	To			
		A	B	C
From	A	0.00	0.57	0.43
	B	0.29	0.00	0.71
	C	0.31	0.69	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 04 (for whole period)

	To			
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 04 (for whole period)

	To			
		A	B	C
From	A	0.000	0.000	0.000
	B	0.000	0.000	0.000
	C	0.000	0.000	0.000

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
A	0.70	17.18	2.34	C	498.00	498.00	133.59	16.10	2.23	133.83	16.12
B	0.79	25.23	3.73	D	547.00	547.00	206.66	22.67	3.44	207.26	22.73
C	0.58	11.24	1.35	B	437.00	437.00	78.86	10.83	1.31	78.94	10.84

Main Results for each time segment

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

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A	498.00	124.50	489.11	288.41	299.35	0.00	709.17	596.50	0.702	0.00	2.22	15.787	C
B	547.00	136.75	533.43	577.29	211.16	0.00	690.63	666.31	0.792	0.00	3.39	21.375	C
C	437.00	109.25	431.73	588.56	156.03	0.00	759.37	738.52	0.575	0.00	1.32	10.825	B

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

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A	498.00	124.50	497.68	293.71	302.93	0.00	707.27	596.50	0.704	2.22	2.30	17.111	C
B	547.00	136.75	546.12	585.75	214.86	0.00	688.69	666.31	0.794	3.39	3.61	24.891	C
C	437.00	109.25	436.90	601.24	159.74	0.00	757.38	738.52	0.577	1.32	1.34	11.225	B

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

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A	498.00	124.50	497.90	293.90	302.98	0.00	707.25	596.50	0.704	2.30	2.33	17.160	C
B	547.00	136.75	546.68	585.92	214.95	0.00	688.64	666.31	0.794	3.61	3.69	25.159	D
C	437.00	109.25	436.97	601.73	159.91	0.00	757.29	738.52	0.577	1.34	1.35	11.234	B

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

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A	498.00	124.50	497.95	293.95	302.99	0.00	707.24	596.50	0.704	2.33	2.34	17.176	C
B	547.00	136.75	546.84	585.96	214.98	0.00	688.63	666.31	0.794	3.69	3.73	25.229	D
C	437.00	109.25	436.99	601.86	159.95	0.00	757.27	738.52	0.577	1.35	1.35	11.237	B

Queueing Delay Results for each time segment

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	29.74	1.98	15.787	C	B
B	43.17	2.88	21.375	C	C
C	18.38	1.23	10.825	B	B

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	34.07	2.27	17.111	C	B
B	52.89	3.53	24.891	C	C
C	20.00	1.33	11.225	B	B

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	34.75	2.32	17.160	C	B
B	54.87	3.66	25.159	D	C
C	20.20	1.35	11.234	B	B

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	35.03	2.34	17.176	C	B
B	55.73	3.72	25.229	D	C
C	20.28	1.35	11.237	B	B

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